The 16th Biennial Congress of the Asian Australasian Federation of Interventional and Therapeutic Neuroradiology

AAFITN Bangkok 2025

INR in A Changing World

21-23 August 2025

e-Proceedings Booklet

TRUE ICON HALL, 7th Floor, ICONSIAM, Bangkok, Thailand

www.aafitn2025.com

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Content

Welcome message from the President of Asian-Australian Federation Of Interventional and Therapeutic Neuroradiology (AAFITN)

On behalf of the organizing committee and council members of the Asian-Australian Federation Of Interventional and Therapeutic Neuroradiology (AAFITN), I would like to extend our warm welcome to each and every one to the 16th Biennale Congress of AAFITN from 21st to 23th August 2025 in the dynamic, beautiful and vibrant Bangkok, Thailand. It will be held at prestigious True Icon Hall, ICONSIAM, Bangkok.

The organizing presidents are very warm, courageous and beautiful ladies, Clinical Prof Anchalee Churojana and President Prof Emeritus Sirintara (Pongpech) Singhara Na Ayudhaya. They are icons in the field of neurointervention and have put up a very exciting and stimulating program that promises to be not just stimulating but enlightening gathering of minds in our field. Of course, it is a great time to meet and greet friends from near and far.

Over the 3 days, we have the unique opportunity to come together as a community of professionals, scholars, and enthusiasts in the field of Interventional and Therapeutic Neuroradiology and share dedication to the pursuit of knowledge and innovation has brought us here, uniting us in a common purpose to explore, collaborate, and advance the frontiers of our field including researchers from across Asia, Australasia, and beyond. We have been promoting Women in INR to emphasize inclusivity and sustainability since 2018 at the 13th Biennale Congress of AAFITN in Kota Kinabalu, Sabah, Malaysia. We have been since then incorporating this important event into our meeting and I look forward to everyone's participation at this platform, so please make time for it.

We all know of the differences and gaps pertaining to the diverse situation in region from multiplicity of religion, political, economic, and ethical standpoints, but we must not lose sight of the main goals of delivering the best for our patients. We should persevere to join hands to achieve this by further development of our society with great friendship and support across all boarders and barriers. Our Industry partners have been very supportive in our initiatives and without which it would have been an uphill challenge to achieve our goals. Nevertheless, this is an ongoing process with newer developments and techniques in our very exiting field and I look forward to seeing this bear fruits soon! I also welcome our newer member countries who are here to join the initiative.

I encourage you to take advantage of the informal networking opportunities. The connections you make here can lead to collaborations, lifelong friendships, and the exchange of ideas that could potentially shape the future of Interventional and Therapeutic Neuroradiology in this region.

I extend my heartfelt gratitude to our vendors, volunteers, and the organizing committee for their tireless efforts in making this event possible. Their dedication to ensuring a seamless and enriching experience for all of us deserves our utmost appreciation.

Once again, I welcome everyone to the 16th Biennale Congress of AAFITN from from 21st to 23th August 2025 in the vibrant city Bangkok, Thailand

Jeyaledchumy Mahadevan, M.D.
President of AAFITN 2023-2025


Welcome message from the Congress President and Co-President of AAFITN 2025

Dear Esteemed Colleagues and Distinguished Guests,

It is with great honor and immense pleasure that we extend a warm and heartfelt welcome to all participants of the 16th Biennial Congress of the Asian Australasian Federation of Interventional and Therapeutic Neuroradiology (AAFITN), to be held from 21st to 23rd August 2025 at the prestigious True Icon Hall, ICONSIAM, in the magnificent city of Bangkok, Thailand.

This Congress represents a momentous occasion for our global community, and it is with great anticipation that we look forward to uniting leading experts, clinicians, and researchers from across Asia, Australasia, and beyond. With a carefully designed program featuring expert-led lectures, interactive workshops, and collaborative sessions, we aim to foster an inspiring environment of learning, discovery, and meaningful dialogue. In addition, we are proud to emphasize the theme of inclusivity and sustainability through initiatives like “Women in INR,” which underscores our commitment to advancing diversity and empowering excellence in our field.

Bangkok, with its harmonious blend of rich cultural heritage and state-of-the-art infrastructure, provides an ideal setting for such a distinguished gathering. Beyond intellectual enrichment, we hope this congress will also provide unforgettable cultural and social experiences, leaving you with cherished memories and new connections.

We eagerly anticipate the privilege of meeting you in person in 2025, as we come together to inspire progress and shape the future of neuroradiology.

With warmest regards,

Anchalee Churojana, M.D.
Clinical Professor,
Congress president of AAFITN 2025

Sirintara (Pongpech) Singhara Na Ayudhaya, M.D.
Professor,
Co-Congress president of AAFITN 2025

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General Information

Welcome to the 16th Biennial Congress of the Asian Australasian Federation of Interventional and Therapeutic Neuroradiology (AAFITN). We are pleased to host you for an engaging and inspiring event. Please find below essential information to help you navigate the congress smoothly.

Congress Venue

Venue: True Icon Hall, the 7th and 8th floor of ICONSIAM
Address: 299 ICONSIAM Shopping Center, 7th floor, Charoennakhon road, Klongtonsai Subdistrict, Klongsan District, 10600 Bangkok, Thailand
Phone: +66(0) 2 037 7999
Website: https://www.trueiconhall.com/en

Registration Desk

- Location: Main lobby, 7th floor, True Icon Hall
- Opening Hours:
  - o Thursday 21 Aug 2025 07:00 - 17:00
  - o Friday 22 Aug 2025 07:00 - 17:00
  - o Saturday 23 Aug 2025 07:00 - 16:00

Please bring a valid ID to collect your badge and congress materials. Your official participant name badge is required for admission to the Congress. For security reasons, participants are requested to wear their badge at all times.

Opening Ceremony

- Date & Time: Aug 21, 2025 at 09:00 - 09:30
- Location: Hall 1

Coffee Breaks & Lunch

- Coffee Breaks: Served twice daily (approx. 10:30 - 11:00 and 15:10 - 15:40)
- Lunch box: 12:10 - 13:00
  Vegetarian and other dietary options will be available.

Wi-Fi Access

- Network Name: @trueiconhall_freeWifi
  - Fill passport no. or ID and email
  - Accept terms and conditions then press log-in
  - Press "connect"
- Password:
  Wi-Fi is available throughout the venue.

Help & Information

- For assistance, please visit the Hospitality Desk near the Registration Area.

Emergency & First Aid

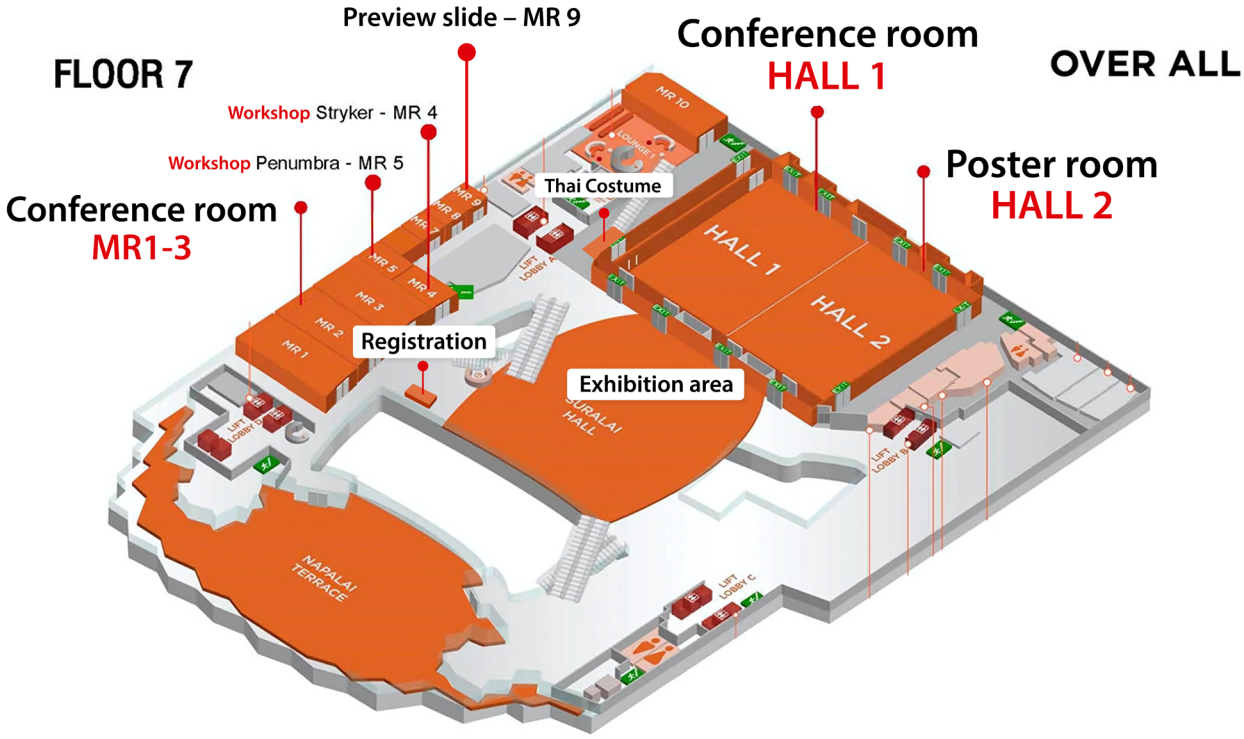
- Contact venue counter is located at 7th floor, in front of the exhibition hall nearby escalator.
- For emergencies, contact venue staff: + 66 631951799

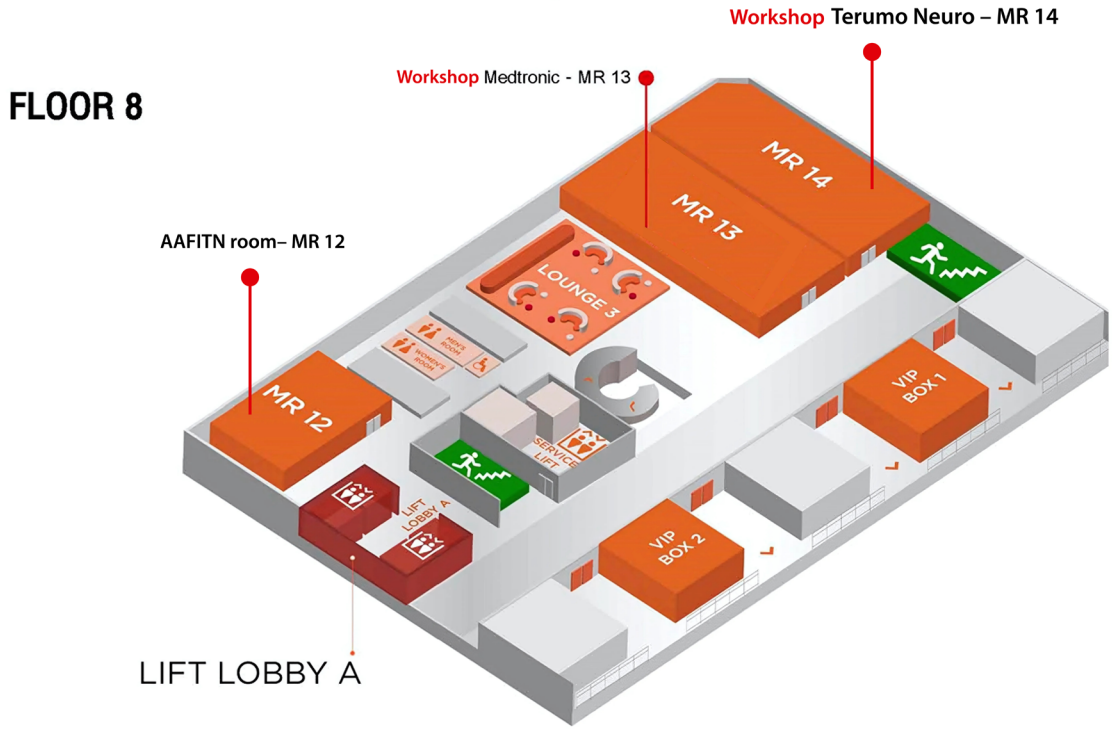
Photography & Media

- Photos and videos may be taken during the congress for promotional purposes.
  If you prefer not to appear, inform the Registration Desk.

Directory

Room	21 Aug	22 Aug	23 Aug
MR 4 (7th fl.)	Stryker	Stryker	Stryker
MR 5 (7th fl.)	-	Penumdra, Inc.	-
MR 13 (8th fl.)	Medtronic	Medtronic	Medtronic
MR 14 (8th fl.)	Terumo Neuro	Terumo Neuro	Terumo Neuro





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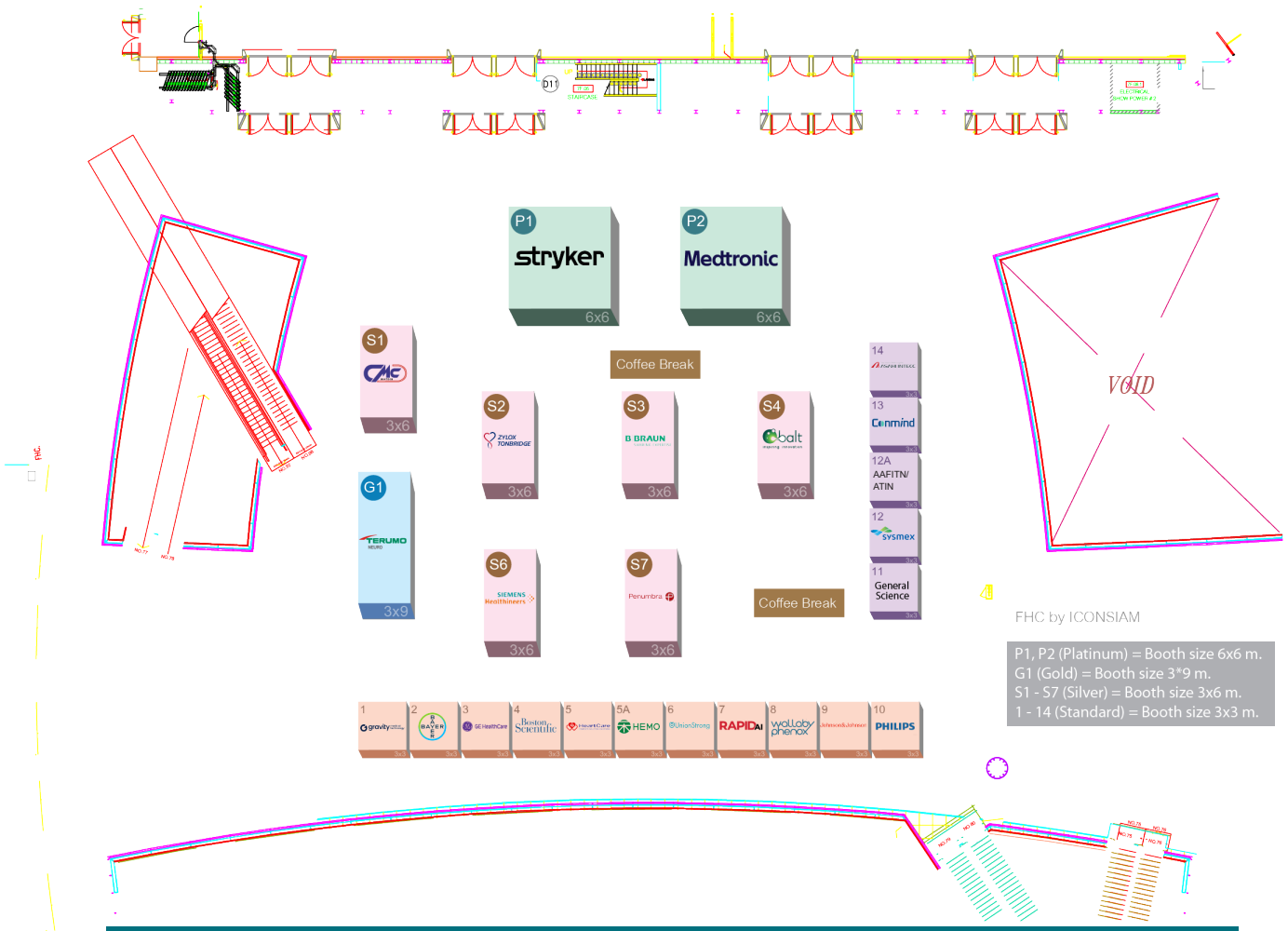

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Program at a Glance

Time/Date	August 21, Thursday	August 22, Friday	August 23, Saturday
7.30-8.00	Registration	Plenary lecture 2 Brain BAVM/ Spinal vascular diseases (Timo Krings, Adnan Siddiqui)	Plenary lecture 4 DAVF (Michihiro Tanaka, Timo Krings, Shigeru Miyachi, Khairul Azmi Abd Kadir)
8.00-9.00	Honorary lecture The Past, Present and Future of AAFITN (Ling Feng, Suthisak Suthipongchai, Anil Karapurkar, Shigeru Miyachi, Jeyaledchumy Mahadevan)		
9.00-9.30	Opening ceremony		
9.30-10.30	Women in INR (Sirintara Singhara Na Ayudhaya, Jeyaledchumy Mahadevan, Rie Aoki, Saima Ahmad, Cindy Sadikin, Sun Xuan, Anchalee Churojana)	Sponsor symposium 3, 4	Sponsor symposium 5 Sponsor symposium 6
10.30-11.00	Coffee break/ Booth exhibition/ Poster presentation		
11.00-12.10	Plenary lecture 1 Anatomy/ Stroke session 1 (In Sup Choi, Adnan Siddiqui, Shigeru Miyachi)	Room 1 Brain BAVM session (Shakir Husain, Timo Krings) Free papers Room 2 Spinal vascular session (Cuong Tran Chi, Hong Qi Zhang) Free papers	Room 1 DAVF session (Chao Bao Luo) Free Papers Room 2 AI/ Trauma/ Stroke session 4 (Patrick A. Brouwer, Vitor Mendes Pereira) Free papers
12.10-13.00	Lunch / Booth exhibition/ Poster presentation		
13.00-13.40	Sponsor symposium 1, 2	Plenary lecture 3 Anatomy/ Dissection/ Pediatric (In Sup Choi, Kittisak Unsrisong, Sirintara Singhara Na Ayudhaya) Free papers	Clinical Pearls Case Sharing: Do or Don't (Yong Sam Shin, Winston Lim, Cuong Tran Chi, Mynzhyl Berdikhohayer, Uday S Limaye, Yi-Bin Fang, Chao Bao Luo, Thaweesak Aurboonyawat)
13.40-15.10	Room 1 Aneurysm/ AI session 1 (George Kwok Chu Wong, Hong Qi Zhang, Hyun-Seung Kang, Mynzhyl Berdikhohayer) Room 2 Stroke/ Venous Stroke session 2 (Ashutosh Jadhav, Tudor Jovin, Patrick A. Brouwer, Uday S Limaye)		Awards, Presentation of the 17th AAFITN Congress & Closing Ceremony
15.10-15.40	Coffee break/ Booth exhibition/ Poster presentation		
15.30-16.30			@ MR 1-3 General Assembly ATIN meeting
15.40-17.30	Room 1 Aneurysm session 2 (Julian Han, Hyun-Seung Kang, Shigeru Miyachi, Hoe Fai Wong) Free papers Room 2 Stroke session 3 (Kajan Ranabhat, Anil Gopinathan, Vudang Luu, Kairul Azmi Abd Kadir, Wasan Akarathanawat, Shailesh B Gaikwad) Free papers	MR 1-3 ICAD/ Technique/ Rare Diseases (Hoe Fai Wong, Yi-Bin Fang, Anil Gopinathan) Free papers	
16.00-17.30		@ MR 12 Executive committee of AAFITN meeting	
18.30-21.30		Gala Dinner	

Full Program

Thursday 21 Aug 2025

07.30-08.00	Registration	
	Hall 1	
08.00-09.00	**Honorary Lecture: The Past, Present, and Future of AAFITN** Moderator: Anchalee Churojana (Thailand), Sirintara Singhara Na Ayudhaya (Thailand)	Ling Feng (People's Republic of China), Suthisak Suthipongchai (Thailand), Anil Karapurkar (India), Shigeru Miyachi (Japan), Jeyaledchumy Mahadevan (Malaysia)
09.00-09.30	Opening Ceremony Moderator: Phumtham Limwattananon (Thailand), Tiplada Boonchai (Thailand)	
	Women in INR Moderator: Sirintara Singhara Na Ayudhaya (Thailand), Jeyaledchumy Mahadevan (Malaysia)	
09.30-09.35	**Introduction to the Challenges of Sustainability for Women in INR: An Asian Perspective (5 mins)**	Sirintara Singhara Na Ayudhaya (Thailand), Jeyaledchumy Mahadevan (Malaysia)
09.35-09.43	**Situation in the People's Republic of China (8 mins)**	Sun Xuan (People's Republic of China)
09.43-09.51	**Situation in Japan (8 mins)**	Rie Aoki (Japan)
09.51-09.59	**Situation in Southeast Asia (8 mins)**	Sirintara Singhara Na Ayudhaya (Thailand), Jeyaledchumy Mahadevan (Malaysia)
09.59-10.07	**Situation in the South Asia (8 mins)**	Saima Ahmad (Pakistan)
10.07-10.15	**Situation in Indonesia (8 mins)**	Cindy Sadikin (Indonesia)
10.15-10.23	**AAFITN Survey Results, Common Situations, and Challenges that We Should Share Together; Proposal of Some Solutions (8 min)**	Sirintara Singhara Na Ayudhaya (Thailand), Anchalee Churojana (Thailand), Jeyaledchumy Mahadevan (Malaysia)
10.23-10.30	**Open Discussion (7min)**	
10.30-11.00	Coffee break / Booth exhibition / Poster presentation	
	Anatomy/ Stroke Moderator: George Kwok Chu Wong (Hong Kong Special Administrative Region, PRC), Ornkamol Chailerd (Thailand)	
11.00-11.20	**Vertebrobasilar Vascular Anatomy and Variants**	In Sup Choi (USA)
11.20-11.40	**What Clots Can Tell Us: Results from a Thousand Thrombectomies**	Adnan Siddiqui (USA)
11.40-12.00	**CAS with Double Balloon Protection: Seatbelt and Airbag Technique**	Shigeru Miyachi (Japan)
12.00-12.10	Q&A	
12.10-13.00	Lunch	
13.00-13.20	Sponsor symposium 1: **Next Generation Flow Diverter: Surpass Elite Early Experience with 6 months follow up** Moderator: Hae Woong Jeong (South Korea), Boonrerk Sangpetngam (Thailand)	Yong Sam Shin (South Korea)
13.20-13.40	Sponsor symposium 2: **Experience using Novel distal access technologies** Moderator: Hae Woong Jeong (South Korea), Boonrerk Sangpetngam (Thailand)	Ittichai Sakarunchai (Thailand)

Full Program

Thursday 21 Aug 2025

	Hall 1	MR 1-3
	Aneurysm / AI Moderator: Hae Woong Jeong (South Korea), Boonrerk Sangpetngam (Thailand)	**Stroke/ Venous Stroke** Moderator: Cuong Tran Chi (Vietnam), Thanaboon Worakijthamrongchai (Thailand)
13.40-14.00	**Subarachnoid Hemorrhage: Current Evidence** George Kwok Chu Wong (Hong Kong Special Administrative Region, PRC)	**Current Randomized Controlled Trials (RCTs) in MeVO** Ashutosh Jadhav (USA)
14.00-14.20	**AI-Assisted Aneurysm Treatment: Surface-Modified Flow Diverters** Hong Qi Zhang (People's Republic of China)	**Low ASPECTS in Anterior Circulation Stroke: Update in Practice** Tudor Jovin (USA)
14.20-14.40	**Intra-saccular Devices: Risks, Benefits, and Cost-Effectiveness Compared to Conventional Coil Embolization** Hyun-Seung Kang (South Korea)	**A Critical Appraisal of Strict Guidelines and Notified Body Regulations for Ischemic Stroke and their Impact on Clinical Trials** Patrick A Brouwer (USA)
14.40-15.00	**Modern Mastery: Advanced Endovascular Techniques for MCA Aneurysm Treatment** Mynzhyl Berdikhohayer (Kazakhstan)	**Venous Stroke: Insights into the Efficacy of Thrombectomy** Uday S Limaye (India)
15.00-15.10	Q&A	Q&A
15.10-15.40	Coffee break / Booth exhibition / Poster presentation	

	Hall 1	MR 1-3
	Aneurysm Moderator: Feng-Chi Chang (Republic of China (Taiwan)), Phumtham Limwattananon (Thailand)	**Stroke** Moderator: Kajan Ranabhat (Nepal), Wasan Akarathanawat (Thailand)
15.40-16.00	**How to Deal with a Wide-Neck Bifurcation Aneurysm** Julian Han (Singapore)	
16.00-16.20	**Endovascular Treatment of Vertebrobasilar Dissection: SAC vs. FDS** Hyun-Seung Kang (South Korea)	**Mechanical Thrombectomy and Stroke System in My Country** Kajan Ranabhat (Nepal), Anil Gopinathan (Singapore), Vu Dang Luu (Vietnam), Kairul Azmi Abd Kadir (Malaysia), Wasan Akarathanawat (Thailand), Shailesh B Gaikwad (India)
16.20-16.40	**Distal Approach Techniques Using Flow Diverters for Challenging Giant Aneurysms** Shigeru Miyachi (Japan)	
16.40-17.00	**Feasibility and Initial Experience with the Flow Modulation Device for Intracranial Aneurysms** Hoe Fai Wong (Republic of China (Taiwan))	
17.00-17.07	**A-054** **Outcome Analysis and Concept Development to Identify the Most Appropriate Woven EndoBridge (WEB) Size Based on the Different Shapes of Cerebral Aneurysms** Dae Chul Suh (South Korea)	**A-105** **Deep Learning-Based Automated DWI Infarct Area Identification for Mechanical Thrombectomy Decision Support in Acute Ischemic Stroke** Wittawat Takong (Thailand)
17.07-17.14	**A-064** **Technical tips and clinical aspects of WEB insertion for wide neck bifurcation aneurysm** Shingo Matsuda (Japan)	**A-045** **A Retrospective Analysis of Mechanical Thrombectomy for Primary Medium Vessel Occlusion at a Single Institution** Michihisa Narikiyo (Japan)
17.14-17.21	**A-096** **Three-Dimensional Mapping of ICA Remodeling After Flow Diverter Deployment: The Role of ICA segments and Pre-treatment Angulation** I-Chang Su (Republic of China (Taiwan))	**A-007** **Influence of Cerebral Microbleeds on Hemorrhagic Transformation after Successful Thrombectomy with Acute Ischemic Stroke from Large Artery Occlusion** Seung Young Chung (South Korea)
17.21-17.30	Q&A	Q&A

Full Program

Friday 22 Aug 2025

Hall 1

Brain AVM/ Spinal vascular diseases
Moderator: Shakir Husain (India), Ekawut Chankaew (Thailand)

08.00-08.20	**Vessel Wall Imaging in Brain AVMs: What It Teaches Us About AVM Pathology**	Timo Krings (USA)
08.20-08.40	**Predictors of AVM Outcome**	Adnan Siddiqui (USA)
08.40-09.00	**Spinal Vascular Anatomy**	Timo Krings (USA)
09.00-09.20	**Spinal CSF-Venous Fistula: Anatomy, Diagnosis, and Management**	Adnan Siddiqui (USA)
09.20-09.40	**Spinal CSF-Venous Fistula: Technique in Endovascular Treatment**	Adnan Siddiqui (USA)
09.40-10.00	**Sponsor symposium 3: Setting The Benchmark for Flow Diversion Excellence with INSPIRE-A Data** Moderator: Jarturon Tantivatana (Thailand)	Tariq Matin (India)
10.00-10.20	**Sponsor symposium 4: Contemporary Results of Mechanical Thrombectomy and Impact of First-Line technique on Outcome: The INSPIRE-S Global Registry** Moderator: Jarturon Tantivatana (Thailand)	Tudor G. Jovin (USA)
10.20-10.30	Q&A	
10.30-11.00	Coffee break / Booth exhibition / Poster presentation	

	Hall 1	MR 1-3
	Brain AVM Moderator: Lakmalie Paranahewa (Sri Lanka), Jarturon Tantivatana (Thailand)	**Spinal vascular diseases** Moderator: Winston Lim (Singapore), Pakrit Jittapiromsak (Thailand)
11.00-11.20	**Angioarchitecture of Brain AVMs: Concepts, Techniques, and Outcomes of Combined Transarterial and Transvenous Embolization** Shakir Husain (India)	**Spinal Vascular Diseases: Evolving Techniques in Modern Management** Cuong Tran Chi (Vietnam)
11.20-11.40	**Transvenous Approach for AVM Treatment** Timo Krings (USA)	**Spinal Cord AVMs: When and How Surgery Plays a Role** Hong Qi Zhang (People's Republic of China)
11.40-11.47	**A-023** **Angioarchitectural Features of Cerebral Arteriovenous Malformations and Their Relationship with Epileptic Seizures: A Cross-Sectional Study in a Tertiary Hospital in Surabaya, Indonesia** Jovian Philip Swatan (Indonesia)	**A-076** **Association Between Spinal Vascular Malformation and Spinal Dysraphism: A Case Series** Abdullah Alhindi (Saudi Arabia)
11.47-11.54	**A-053** **Factors associated with Rupture of Flow-Related Aneurysms in Arteriovenous Malformations** Jirat Greetawee (Thailand)	**A-102** **Filum Terminale Arteriovenous Fistula in Association with Degenerative Lumbosacral Spinal Canal Stenosis: Report of 3 Cases and Review of the Literature** Prasert Iampreechakul (Thailand)
11.54-12.01	**A-111** **Ten-Year Experience in the Management and Outcomes of Ruptured Cerebral Arteriovenous Malformations at Siriraj Hospital** Siriprapa Monsathaporn (Thailand)	**A-080** **Spinal Dural and Epidural AVF Treatment Outcomes: Angiographic Cure and Functional Recovery** Raweenut Beangklang (Thailand)
12.01-12.10	Q&A	Q&A
12.10-13.00	Lunch	

Full Program

Friday 22 Aug 2025

Hall 1

	Anatomy/ Dissection/ Pediatric Moderator: Yong Sam Shin (South Korea), Kittisak Unsrisong (Thailand)	
13.00-13.20	**Ophthalmic Artery: Anastomoses and Variants**	In Sup Choi (USA)
13.20-13.40	**Dissection of Intracranial Arteries: Clinical Presentation and Management**	In Sup Choi (USA)
13.40-14.00	**Angiographic Anatomy and Parenchymal Distribution of Cerebral Perforating Arteries**	Kittisak Unsrisong (Thailand)
14.00-14.20	**Pediatric Intracranial AVF: Pathogenesis and Management**	Sirintara Singhara Na Ayudhaya (Thailand)
14.20-14.27	A-089 **A Case of Choroidal Type Vein of Galen Aneurysmal Malformation Presenting With Subarachnoid Hemorrhage in Adulthood During Follow-Up**	Kotaro Ueda (Japan)
14.27-14.34	A-058 **Intraarterial Chemotherapy in Retinoblastoma**	Umair Rashid Chaudhry (Pakistan)
14.34-14.41	A-097 **Impact of Magnified 3D Rotational Angiography on Eye Lens Radiation Dose and Image Quality: A Phantom and Pilot Cohort Study**	Ahmed Albaqshi (Saudi Arabia)
14.41-14.48	A-071 **Evaluation of Carotid Plaque Characterization Using Dual-Energy CT**	Sakyo Hirai (Japan)
14.48-14.55	A-070 **Anatomical Fixation of the Internal Carotid Artery bythe Stylopharyngeus Muscle Leading to Kinking After Carotid Artery Stenting**	Keita Fujii (Japan)
14.55-15.02	A-030 **A Study of a Previously Unrecognized C1 Intraosseous Vein: Analysis Using CT-Digital Subtraction Venography**	Takahiro Iinuma (Japan)
15.00-15.10	Q&A	
15.10-15.40	Coffee break/Booth exhibition/Poster presentation	

MR 1-3

	ICAD/ Technique/ Rare Diseases Moderator: Pakorn Jiarakongmun (Thailand), Sarun Jotikasthira (Thailand)
15.40-16.00	**Managing AIS in the Presence of ICAD: Strategies for Optimal Outcomes** Hoe Fai Wong (Republic of China (Taiwan))
16.00-16.20	**The Role of Transradial Access in Modern Neurointervention: Techniques and Benefits** Yi-Bin Fang (People's Republic of China)
16.20-16.40	**Reconstructive Strategies for Direct Carotid-Cavernous Fistulas in the Post-Detachable Balloon Era** Anil Gopinathan (Singapore)
16.40-16.50	Q&A
18.30-21.30	**Gala dinner**

16.00-17.30	**Executive committee of AAFITN meeting at MR 12 room, 8th floor**

Full Program

Saturday 23 Aug 2025

Hall 1

DAVF
Moderator: Uday S Limaye (India), Tiplada Boonchai (Thailand)

08.00-08.20	**Embryological Considerations of Dural AVFs**	Michihiro Tanaka (Japan)
08.20-08.40	**Functional Vascular Anatomy of the Skull Base Based on High-Resolution Cone Beam CT**	Michihiro Tanaka (Japan)
08.40-09.00	**Why Understanding Venous Anatomy is Paramount for dAVF Management**	Timo Krings (USA)
09.00-09.20	**Condylar AVF: Venous Anatomy and Treatment Approach**	Shigeru Miyachi (Japan)
09.20-09.40	**Complex Intracranial Dural AVFs: Concerning Cost-Effectiveness of Treatment**	Khairul Azmi Abd Kadir (Malaysia)
09.40-10.00	**Microneuroangiography of the Middle Meningeal Artery**	Michihiro Tanaka (Japan)
10.00-10.20	**Sponsor symposium 5: The Management of Antiplatelet Therapy for Endovascular Treatment**	Yukiko Enomoto (Japan)
10.20-10.40	**Sponsor symposium 6: WEB Intrasaccular Device: A to Z, Single Center Experience**	Keun Young Park (South Korea)
10.40-11.00	Coffee break / Booth exhibition / Poster presentation	

	Hall 1	MR 1-3
	DAVF Moderator: Umair Rashid Chaudhry (Pakistan), Yanisa Ingkapassakorn (Thailand)	**AI / Trauma / Stroke** Moderator: Vu Dang Luu (Vietnam), Kittiphop Somboonnithipol (Thailand)
11.00-11.20	**Cavernous Sinus DAVFs with Occlusion of the Inferior Petrosal Sinus: Angioarchitecture and Transvenous Embolization** Chao Bao Luo (Republic of China (Taiwan))	**What Did We (Not) Learn From The MMAe Trials For cSDH** Patrick A Brouwer (USA)
11.20-11.27	A-072 **Transvenous Embolization For Dural Arterio-Venous Fistula with Isolated Sinus** Yasunobu Nakai (Japan)	
11.27-11.34	A-060 **Central Venous Stenosis Mimicking Intracranial Venous Hypertension From Dural Arteriovenous Fistula (DAVF) / CarotidoCavernous Fistula (CCF): A Diagnostic And Therapeutic Dilemma In A Hemodialysis Patient** Si Zhao Tang (Singapore)	**Remote Robotics Technology in INR: Current Work and Future Trends** Vitor Mendes Pereira (Canada)
11.34-11.41	A-086 **Ruptured of Flow related Aneurysm in Dural Arteriovenous Fistula Supplied by the Artery of Wollschlaeger and Wollschlaeger and Bernasconi-Cassinari Artery : A rare case** Intan Sudarmadi (Indonesia)	
11.41-11.48	A-074 **Precision Under Pressure: Dual Balloon Protection and Pressure Cooker Embolisation of a High Grade Sphenoid Wing Dural Arteriovenous Fistula** Yuh Yang Leong (Malaysia)	A-027 **Comparative Evaluation of Imaging Modalities for Eligibility in Endovascular Treatment of Delayed Onset Acute Anterior Circulation Ischemic Stroke in Siriraj Hospital: A Retrospective Analysis** Pattarawit Withayasuk (Thailand)
11.48-11.55	A-044 **Sinus Preservation or Sacrifice? A Comparative Study of Single-Session Outcomes in Endovascular Treatment of Aggressive Intracranial Dural AVFs** Chayada Harnroongroj (Thailand)	A-052 **Endovascular Treatment for Carotid Blowout Syndrome: A Single-Centre Experience** Tze Phei Kee (Singapore)
11.55-12.02	A-026 **Vertebro-Vertebral Arteriovenous Fistulae: A Case Series of Endovascular Management at a Single Center** Pattarawit Withayasuk (Thailand)	A-120 **Scaling Up Thrombectomy Care in Transitioning Heath Systems: A Qualitative Study of Stroke Centres in Canada** Tanaporn Jaroenngarmsamer (Thailand)
12.02-12.10	Q&A	Q&A
12.10-13.00	Lunch	

Hall 1

Case sharing
Moderator: Yi-Bin Fang (People's Republic of China), Thaweesak Aurboonyawat (Thailand)

13.00-15.00	**Clinical Pearls: Case Sharing: Do or Don't** Yong Sam Shin (South Korea), Winston Lim (Singapore), Cuong Tran Chi (Vietnam), Mynzhyl Berdikhohayer (Kazakhstan), Uday S Limaye (India), Yi-Bin Fang (People's Republic of China), Chao Bao Luo (Republic of China (Taiwan)), Thaweesak Aurboonyawat (Thailand)	
15.00-15.30	**Awards, Presentation of the 17th AAFITN Congress & Closing Ceremony**	
15.30-16.30	**General Assembly ATIN meeting** @ MR 1-3	

Invited Speaker

Prof. Adnan H. Siddiqui, M.D., Ph.D

SUNY University at Buffalo, Buffalo, NY, United States

Leadership & Professional Appointments

2021 - present	CEO, Jacobs Institute, Buffalo, NY
2016 - present	Chief Medical Officer, Jacobs Institute, Buffalo, NY
	Vice Chairman and Professor of Neurosurgery & Radiology, SUNY University at Buffalo, NY
2013 - present	Director of Neuroendovascular Fellowship Program
2011 - present	Director of Neurosurgical Stroke Service, Kaleida Health, Buffalo, NY
2010 - present	Director of Neurosurgical Research, SUNY University at Buffalo, Buffalo, NY

Education/ Academic Profile

1992	MBBS, Aga Khan University, Karachi, Pakistan
1998	M.S. Neuroscience, University of Rochester, NY
2003	Ph.D. Neuroscience, University of Rochester, NY
2005	Residency in Neurosurgery, SUNY Upstate Medical University, Syracuse, NY
2006	Fellowship in Interventional Neuroradiology, Cerebrovascular Surgery & Neurocritical Care, Thomas Jefferson University, Philadelphia, PA

Honors

2023	University at Buffalo Distinguished Professorship
2023	Presentation of the M. Gazi Yasargil Lecture at AANS Annual Meeting
2021 - 2022	SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities
2020 - 2021	Secretary, Society of NeuroInterventional Surgery
2020 - 2021	Chair, American Association of Neurological Surgery/Congress of Neurological Surgeons, Joint Session on Cerebrovascular Surgery
2019 - 2020	Neurosurgery, Member at Large, Society of Neurointerventional Surgery
2019	Governing Council - Medical Device Epidemiology Network's (MDEpiNet) Coordinated Registry for Devices Used for Acute Ischemic Stroke Intervention (DAISI)
2014	Named Fellow of the American College of Surgeons (FACS)
2013	Named Fellow of the American Heart Association (FAHA)
2012	George Thorn Young Investigator Award, Jacobs School, University at Buffalo
2009	Governing Council - NeuroVascular Quality Initiative - Quality Outcomes Database Neurovascular (NVQI-QOD)
2004	Arnold P. Gold Foundation National Award for Humanism and Excellence in Teaching

Invited Speaker

Clin. Prof. Emeritus Anchalee Churojana, M.D.

Interventional Neuroradiology,
Department of Radiology, Faculty of
Medicine Siriraj Hospital, Mahidol University,
Bangkok, Thailand

Leadership & Professional Appointments

- Clinical Professor Emeritus
- Former Chief of Interventional Neuroradiology, Department of Radiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand
- Former Vice president: The association of Thai Interventional Neuroradiology
- Former President: Royal College of Radiology of Thailand

Education/ Academic Profile

1997 Research fellow in Interventional Neuroradiology, Bicetre Hospital, Paris, France

1996 Research Fellow in Interventional Neuroradiology, Lahey Hitchcock Medical Center, Burlington, USA

1988 Certificate in Thai Board of Radiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

1982 MD. Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Invited Speaker

Assoc. Prof. Anil Gopinathan, M.D., FRCR (Lon), FAMS

National University Hospital, Singapore

Leadership & Professional Appointments

- Associate Professor
- Lead for Neurointerventions, National University Hospital, Singapore
- Former Head of Interventional Radiology, NUH (2018 - 2024)
- Honorary Consultant Radiologist, Leeds Teaching Hospitals, UK (previous)
- Secretary, Society of Neurovascular Intervention and Surgery (Singapore)

Education/ Academic Profile

- Pioneered multiple neuro-interventional therapies in Singapore including:
- Intra-arterial chemosurgery for retinoblastoma
- Dural venous sinus stenting for idiopathic intracranial hypertension
- Middle meningeal artery embolization for chronic SDH
- Intrasaccular flow disruption for cerebral aneurysms
- Embolization of CSV-venous fistulas for IIH
- Early adopter of advanced neuro-interventions (DMVO thrombectomy, flow diversion in acute SAH, distal aneurysm treatment, reconstructive therapy for dural AVFs & direct CCFs)
- Author of 171 publications
- 2136 citations, h-index 27, i10-index 51 (Google Scholar, Mar 2025)

Speaking Engagement/ Education Event Organization

- Delivered over 100 invited lectures at international and regional conferences
- Organized multiple neuro-interventional workshops and international conferences in Singapore

Invited Speaker

Dr. Anil Karapurkar, M.D.

Department of Neuro Vascular Interventions,
Breach Candy Hospital, Mumbai, India

Leadership & Professional Appointments

- Endovascular Neurosurgeon
- President, Society of Neuro Vascular Interventions (SNVI)
- Past President, Cerebro Vascular Society of India (CVSI)
- Former Professor of Neurosurgery, KEM Hospital Seth GSMC, Mumbai.
- Examiner in Neurosurgery for Bombay and Gujarat Universities
- Examiner, FNB Neurovascular Interventions, National Board of Examinations (NBE), India

Invited Speaker

Assoc. Prof. Ashutosh P. Jadhav, M.D., Ph.D

Barrow Neurological Institute, United States

Leadership & Professional Appointments

2020 - Present	Associate Professor of Neurosurgery and Neurology, Barrow Neurological Institute, Phoenix, AZ
July 2020 - Present	Vascular and Interventional Neurologist, Honor Health, Scottsdale, AZ and Barrow Brain and Spine, Phoenix, AZ
2018 - 2020	Associate Professor of Neurological Surgery, Secondary Appointment UPSOM Stroke Institute, Pittsburgh, PA
2019 - 2020	Chief, Stroke Services, Director, UPMC Stroke Institute Division Chief, Vascular Neurology UPP Department of Neurology Pittsburgh, PA Co-Principal Investigator, Stroke Trials Network
2016 - 2020	Medical Director of Stroke Services, UPMC Mercy Hospital, Department of Neurology
2014 - 2019	Medical Director of Stroke Services, Department of Neurology UPMC Shadyside Hospital

Education/ Academic Profile

1998 - 2007	Doctorate in Medicine, Harvard Medical School-MIT, Division of Health, Sciences &Technology, Boston MA
2007 - 2008	Medicine Intern, Department of Medicine, Massachusetts General Hospital Boston, MA
2008 - 2010	Neurology Resident, Department of Neurology, Brigham and Women's Hospital / Massachusetts General Hospital Boston MA
2011 - 2014	Vascular Fellow, Department of Neurology, UPMC Vascular Neurology / Interventional, Neuroradiology Pittsburgh, PA

Honors

2019	Society and Vascular Interventional Neurology Pilot Research Grant
2018	Awarded the "Clinical Teaching Award" by the Neurology Residents
2017	Awarded the "Most Influential Mentor" by graduating Neurology Residents
2014	Awarded the "Didactic Teaching Award" by the Neurology Residents
2012	Awarded the "Clinical Teaching Award" by the Neurology Residents
2005 - 2007	Medical Scientist Training Fellowship, Harvard Stem Cell Institute (HSCI)
2001 - 2005	National Eye Institutes Training Grant for Doctoral Students
2000 - 2001	Howard Hughes Medical Institute Fellowship for Medical Students
1996 - 1998	Harvard College Scholarship for Outstanding Academic Achievement

Invited Speaker

Prof. Chao-Bao Luo, M.D., Ph.D

Taipei Veterans General Hospital,
Taipei, Republic of China (Taiwan)

Leadership & Professional Appointments

2014 - present	Division Chief, Department of Radiology, Taipei Veterans General Hospital.
2018 - Present	Professor of Radiology and Neurosurgery, National Defense Medical University, Taipei, Taiwan.
2019 - 2025, May	President of Neuroradiology Society of Taiwan.
2009 - 2018	Associated professor, National Yang-Ming University and National Defense Medical Center, School of medicine, Taipei, Taiwan.

Education/ Academic Profile

1979 - 1986	National Defense Medical University

Academic & Research Contributions

- More than 100 SCI publications and more than 35 publications of SCI as a first or corresponding author.
- Morphologic Change of Flow-Related Aneurysms in Brain Arteriovenous Malformations after Stereotactic Radiosurgery. AJNR Am J Neuroradiol. 2019 Apr;40(4):675-680
- A single-institution study of predisposing factors of patients with BAVMs to flow-related aneurysm. J Formos Med Assoc. 2019 Mar;118(3):707-712.Aggressive cavernous sinus dural arteriovenous fistula: Angioarchitecture analysis and embolization by various approaches. J Chin Med Assoc. 2016 Mar;79(3):152-8.
- Polymorphism in dural arteriovenous fistula: matrix metalloproteinase-2-1306 C/T as a potential risk factor for sinus thrombosis. J Thromb Haemost. 2018 Apr;16(4):802-808.
- Verification of bleeding points in carotid blowout syndrome using guidewire manipulation. Neuroradiology. 2018 Aug;60(8):835-841.
- Transvenous coil embolization of cavernous sinus dural arteriovenous fistula on a revised classification. World Neurosurg 2016, Aug 95:357-367.

Speaking Engagement/ Education Event Organization

- More than 100 invitations as a speaker.

Invited Speaker

Dr. Cindy Sadikin, M.D.

Universitas Nahdlatul Ulama Surabaya, Indonesia

Leadership & Professional Appointments

- Head of Department, Universitas Nahdlatul Ulama Surabaya
- Consultant Radiologist, Siloam Hospital, Surabaya, Indonesia
- Clinical expertise in radiology and echocardiography
- Scientific Committee Coordinator, 12th AAFITN (2016)

Education/ Academic Profile

- M.D., specialization in Diagnostic Radiology

Academic & Research Contributions

- Contributor to Neurointervention (Korean Society of Interventional Neuroradiology journal)

Speaking Engagement/ Education Event Organization

- Active in neurointervention conferences and academic collaborations in Southeast Asia

Invited Speaker

Prof. Cuong Tran Chi, M.D., Ph.D

Can Tho Stroke International Services General Hospital, Vietnam

Leadership & Professional Appointments

- Director of Can Tho Stroke International Services General Hospital
- Vice President of Vietnamese Interventional Radiology Society
- President of Interventional Neuroradiology Society of HCM city, Vietnam.
- Council Member of AAFITN
- Senior Consultant of Stroke and INR in Viet Nam, Indonesia and Laos

Education/ Academic Profile

May 2002 - April 2004	Had trained for Neurosurgeon specialist level 1 (Master Degree) in HCM City
April 2004 - October 2004	Had trained in Radiology Dept in Cho Ray Hospital, HCM city
November 2004 - May 2005	Had trained in interventional neuroradiology in Radiology Department in Bach Mai Hospital, Ha Noi
From May 2005	Had worked in University Medical Center Ho Chi Minh city as a neurointerventionalist
From November 2005 - April 2006	Fellow in Radiology Department Ramathibodi Hospital for neurointervention Had attended the “International Master Degree in Neurovascular Diseases” which was organized by Bicetre University (France) and Mahidol University (Thailand)
2009	Had studied advanced procedures for Stroke Management at the National Stroke Intervention Training Center at Erlanger Center Chattanooga Tennessee USA
2008 - 2012	Reseacher for PhD for Neurosurgery at University of Medicine and Pharmacy at HCM city Vietnam, and graduated in 2012.

Academic & Research Contributions

- From 2006 - now: have performed more than 5000 neurointerventional procedures including: carotid cavernous fistula, intracranial and spinal dural fistula, treatment aneurysm by coiling, treatment AVM, carotid stenting and intracranial stenting, flow-diverter stenting, treatment AIS thrombectomy

Speaking Engagement/ Education Event Organization

- Active in neurointervention conferences and academic collaborations in Southeast Asia
- Speaker in the World meeting of WFITN (The World Federation of Interventional and Therapeutic Neuroradiology): 2009, 2011, 2013, 2015, 2017, 2019, 2022, 2024
- Speaker in the meeting of AAFITN (Asian Australasian Federation of Interventional and Therapeutic Neuroradiology) 2010, 2012, 2014, 2016, 2018, 2020, 2023.
- Organizng Committee of the PLANET 2019 in Viet Nam
- Speaker of the European Stroke Winter School in Bern 2019, 2023, 2024, 2025
- Speaker for WSO & TTST Amsterdam Netherlands 2021
- Speaker for ASNR22 New York, USA 2022
- Speaker for LINNC PARIS, LINNC ASIA 2022, 2023, 2024
- Organizng Committee of the Asian Stroke Summer School 2019, 2020, 2021, 2022, 2023, 2024 in Can Tho, Viet Nam

Invited Speaker

Clin. Prof. George Kwok Chu Wong, M.D.

Division of Neurosurgery, Department of Surgery, Faculty of Medicine of the Chinese University of Hong Kong, Hong Kong Special Administrative Region, PRC

Leadership & Professional Appointments

- Clinical Professor (Honorary), Division of Neurosurgery, Department of Surgery, The Chinese University of Hong Kong
- Consultant, Prince of Wales Hospital, Hong Kong
- Council member of the AAFITN and was the President of the AAFITN Biennial Congress 2023 Hong Kong

Education / Academic Profile

- Holds medical degrees from The Chinese University of Hong Kong (M.B.Ch.B., M.D.) and surgical fellowships including FRCSEd (SN), FCSHK, and FHKAM (Surgery).

Academic & Research Contributions

- Author of over 300 publications, with notable contributions in areas such as intracranial aneurysm prevalence, virtual and augmented reality in neurosurgery, and early revascularization therapies.
- Recipient of numerous research awards, with more than 200 papers published in high-impact, peer-reviewed journals, including Stroke, Journal of Neurology, Neurosurgery & Psychiatry, Neurosurgery, and Journal of Neurosurgery.
- Clinical and research interests focus on cerebral aneurysm treatment, neurointervention, simulation-based education, and subarachnoid hemorrhage.

Speaking Engagement/ Education Event Organization

- Passionate about undergraduate and postgraduate medical education; regularly chairs workshops and courses for various professional organizations.
- Holds key positions in several international and local professional bodies, including:
  - European Stroke Organization
  - Asian Australasian Federation of Interventional and Therapeutic Neuroradiology
  - College of Surgeons of Hong Kong
  - Hong Kong Academy of Medicine
  - Hong Kong Society of Simulation in Healthcare
  - Hong Kong Society of Interventional and Therapeutic Neuroradiology

Invited Speaker

Prof. Wong Ho-Fai, M.D., Ph.D

Chang Gung Memorial Hospital (Linkou),
Republic of China (Taiwan)

Leadership & Professional Appointments

- Consultant, Department of Medical Imaging and Intervention, Chang Gung Memorial Hospital (Linkou), Taiwan
- Professor of Radiology, Chang Gung Memorial Hospital & Chang Gung University
- President of Taiwan Society for Neurovascular and Interventional Surgery (2021 - 2023)
- President of Neuroradiological Society of Taiwan (2013 - 2016)
- Vice-President of XXI Symposium Neuroradiologicum. The World Congress of Neuroradiology
- Council member of Radiological Society of Republic of China
- Council member of Neuroradiological Society of Taiwan

Education/ Academic Profile

- M.D., China Medical University (1979 - 1986)
- Internship, Chang Gung Memorial Hospital (1984 - 1986)
- Residency, Department of Medical Imaging & Intervention, Chang Gung Memorial Hospital (1986 - 1990)
- Board Certification: Diagnostic Radiology, Taiwan (1991)

Academic & Research Contributions

- Publication: Total 147 (107 SCI)

Invited Speaker

Prof. Hongqi Zhang, M.D., Ph.D

Xuanwu Hospital, the Capital Medical University, Beijing, The People's Republic of China

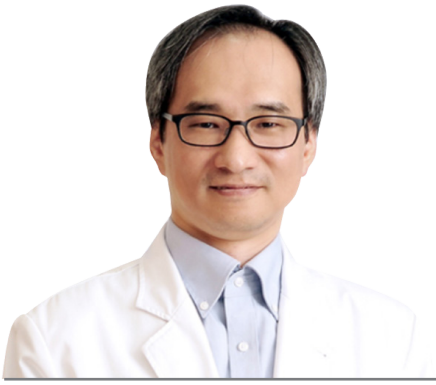
Leadership & Professional Appointments

- Chairman & Professor, Department of Neurosurgery, Xuanwu Hospital, Capital Medical University, Beijing, China
- Chairman, Chinese Continuing Education Committee of Neurosurgeons
- Chairman, Chinese Federation of Interventional Clinical Neurosciences (CFITN)
- General Secretary, Asian-Australasian Federation of Interventional and Therapeutic Neuroradiology (AAFITN)

Academic & Research Contributions

- Extensive contributions to clinical neuroscience technology transformation and continuing education in neurosurgery

Invited Speaker



Prof. Hyun-Seung Kang, M.D., Ph.D

Department of Neurosurgery, Seoul National University Hospital, Seoul National University College of Medicine, South Korea

Leadership & Professional Appointments

- Professor & Chairman, Department of Neurosurgery, Seoul National University Hospital, Seoul National University College of Medicine

Education/ Academic Profile

- 1988 - 1994 Graduated at Seoul National University College of Medicine
- 1994 - 1995 Internship, Seoul National University Hospital
- 1995 - 1999 Residency, Department of Neurosurgery, Seoul National University Hospital
- 2002 - 2003 Fellowship, Vascular section, Department of Neurosurgery, Seoul National University Hospital
- 2003 - 2005 Fellowship, Interventional Neuroradiology, Department of Radiology, Seoul National University Hospital

Academic & Research Contributions

- Publications: 269 peer-reviewed articles
- Book Chapters: Multiple contributions in neurosurgery and neurointervention
- Research Areas: Cerebral aneurysms, subarachnoid hemorrhage, neurointervention, and neurovascular biomarkers

Invited Speaker

Prof. Emeritus In Sup Choi, M.D., FACR

Tufts University School of Medicine, United States

Leadership & Professional Appointments

• 2020 - Present	Professor of Radiology Emeritus, Tufts University, School of Medicine
• 2018 - Present	Chair, Neurovascular Center, Incheon Sejong Hospital
• 1996 - present	Member, Clinical Leaders Committee Lahey Clinic
• 2006 - present	Member, Endovascular Committee Lahey Clinic

Education/ Academic Profile

• 1968 - 1972	M.D,.College of Medicine, Seoul National University, Korea
• 1979 - 1980	Chief Resident in Diagnostic Radiology, VA Medical Center, Bronx, New York
• 1980 - 1981	Fellow in Neuroradiology, Mt. Sinai Medical Center, New York, New York
• 1980	Board of Diagnostic Radiology
• 1981 - 1982	Fellow in Interventional Neuroradiology, New York University Medical Center, New York
• 1996	Board of Advanced Qualification in Neuroradiology
• 2006	MOC, Neuroradiology

Academic & Research Contributions

• 1990 - present	American Journal of Neuroradiology: Manuscript reviewer
• 1997 - present	Interventional Neuroradiology: Member of Editorial Board
• 1993 - present	Radiographics: Manuscript reviewer
• 1997 - present	American Society of Interventional and Therapeutic Neuroradiology, J oint meeting: Abstract reviewer
• 1997 - present	World Federation of Interventional and Therapeutic Neuroradiology: Abstract reviewer

Awards and Honors

• Present	Fellow, American College of Radiology (FACR)

Invited Speaker

Dr. Jeyaledchumy Mahadevan, M.D.

Pantai Hospital Kuala Lumpur, Malaysia

Leadership & Professional Appointments

- Consultant Interventional Neuroradiologist
- President, AAFITN (2024 - 2026)
- Past President, Malaysian Society of Interventional Radiologists (MYSIR)

Education/ Academic Profile

• 1984 - 1990	M.B.B.S. Mangalore University
• 1995 - 1999	M.D. Radiology, University Malaya
• Jan - Mac 1999	Training in Interventional Radiology, Mahidol University, Thailand
• 2002 - 2004	M.D. Neurovascular Disease Interventional Neuroradiology, University Paris Sud XI, Bicetre, Le Kremlin Bikremlin Bivetre, Paris France

Academic & Research Contributions

- Publications: 25+ peer-reviewed articles in leading journals including Journal of Neurointerventional Surgery, Interventional Neuroradiology, and Neuroradiology
- Book Chapters: Contributions to major textbooks on pediatric neuroradiology and cerebrovascular disorders
- Research Areas: Neurointervention, pediatric vascular malformations, stroke care, vascular anomalies, and gender equity in medicine
- International Work: Involved in global consensus guidelines and multicenter studies on AVFs, aneurysms, and stroke treatment standards

Invited Speaker

Dr. Julian Xinguang Han, M.D

National Neuroscience Institute, Singapore

Leadership & Professional Appointments

- Director / Joint Neurovascular Service / NNI
- Co-Director / Endovascular Centre / NNI
- Programme Director / Singapore Integrated Programme for Neurosurgery Residency
- Consultant / Neurosurgery / National Neuroscience Institute

Education/ Academic Profile

- MBBS, Yong Loo Lin School of Medicine, National University of Singapore (2008)
- MRCS (Ireland), Royal College of Surgeons in Ireland (2011)
- FRCS (Neurosurgery), Royal College of Surgeons of Edinburgh (2019)
- Fellowship in Neurovascular Surgery, Sunnybrook Health Sciences Centre, Toronto (2022 - 2023)
- Fellow, Academy of Medicine, Singapore (2025)

Academic & Research Contributions

- 20+ publications in high-impact journals including J Neurosurg, World Neurosurg, and Acta Neurochir
- Research focus: Neurotrauma, intracerebral hemorrhage, aneurysm management, and surgical outcomes.
- Notable work: Prognostic models, intracranial pressure as a biomarker, and outcomes of decompressive surgery and aneurysm repair.
- Active in multicenter studies and systematic reviews.

Invited Speaker

Dr. Kajan Ranabhat, M.D.

KIST Medical College and BnB Hospital, Nepal

Leadership & Professional Appointments

- Lecturer, Radiologist and Neurointerventionist, Faculty of Diagnostic and Interventional Radiology Department of Radiology. March 2021 till date
- Consultant Radiologist and Neurointerventionist, Department of Radiology. March 2021 till date

Education/ Academic Profile

- Fellowship (1 year), Interventional Neuroradiology May 2019 - April 2020
  Siriraj Center of Interventional Radiology, Siriraj Hospital, Faculty of Medicine,
  Mahidol University, Bangkok, Thailand.
- MD, Radiology (4 YEARS) East Avenue Medical Center, Manila, Philippines, December 2015,
  900 bed capacity tertiary level referral center, Department of Health Trauma center, Department of Health Eye center based on Quezon city, Manila, Philippines
- MBBS B.P. Koirala Institute of Health Sciences (BPKIHS),Dharan, Nepal, March - 2008.
  700 bedded tertiary care hospital and university with over 20 different discipline situated in eastern Nepal, serving the entire eastern region including across the border from India.
- INTERNSHIP 1 year of rotatory internship in the various departments in BPKIHS as well as in the community District Hospitals and Primary Health Centres in various rural districts in eastern Nepal,
  March 2008 to March 2009
- PCL, Biology (TU) 2 years St. Xaviers Campus ,Maitighar, Tribhuvan University, September 2001

Academic & Research Contributions

- 15+ publications in peer-reviewed journals including Annals of Medicine and Surgery, World Neurosurgery, Journal of Nepal Medical Association, and Nepal Journal of Neuroscience
- Research Focus: Neuroimaging, morphometric studies, cranial and spinal pathologies, traumatic brain injury, vascular malformations, and neurosurgical outcomes
- Notable Work: Studies on Hirayama disease, meningioma imaging, diffuse axonal injury, craniopharyngioma surgery outcomes, and morphometric analysis of craniovertebral structures
- Active in clinical research, radiologic-pathologic correlation, and population-based neuroanatomical studies

Awards and Honors

- Tuborg Excellence Award, 1999"BICC, Kathmandu, for securing fifth position in SLC Board.1999,
- Small Heaven BidhyaPadak, 1999 (GOLD MEDAL)"Chitwan,Nepal,for outstanding throughout academic records, Small Heaven secondary school, Chitwan,
- Amir SmritiSwarnaPadak, 2055 BS(GOLD MEDAL)" Chitwan, Nepal, for highest academic score in District Board exam 2055BS
- Certificate of Appreciation for standing 5th position in SLC national HMG Board exam, 2055/56"
- Late GopalPsdKayastha Award for best co-ordinator of the year 2007",
  4th installation ceremony 11th August,2007 Rotaract District 3290

Invited Speaker

Prof. Khairul Azmi Abd Kadir, M.D., Ph.D

The University Malaya Medical Centre,
Kuala Lumpur, Malaysia

Leadership & Professional Appointments

- Senior Consultant in Neurointerventional Radiology
- Head, Department of Biomedical Imaging, University Malaya Medical Centre (2015 - 2023)
- 2020 - 2024 President, Malaysian Neurointerventional Society
- 2020 - Present Global Executive Committee
- MT 2020 + Interventional Co-Chair for Malaysia

Education/ Academic Profile

- MBBS, University of Malaya, Malaysia
- Fellowship in Therapeutic and Interventional Neuroradiology, Hacettepe University Hospital, Ankara, Turkey

Academic & Research Contributions

- Corresponding Author for Endovascular Thrombectomy in Acute Ischemic Stroke - A single centre case series and review of literature. This paper was sent for publication recently to Neurology Asia Journal.

Speaking Engagement

- Key Opinions Leader in Endovascular Neurosurgery and Stroke Intervention for Microvention, Stryker, Medtronic, Balt and Penumbra
- Proctor for latest Neuro Endovascular devices
- Invited as a speaker, panelist and faculty member for highlyreputable Neuro Endovascular Meeting such as World Life Neurovascular Conference, Live Interventional, Neuroradiology & Neurosurgery Course (LINNC), iCure Stroke Meeting and Asian Australasian Federation of Interventional and Therapeutic Neuroradiology

Invited Speaker

Asst. Prof. Kittisak Unsrisong, M.D.

Department of Radiology,
Maharaj Nakorn Chiang Mai Hospital, Thailand

Leadership & Professional Appointments

- Assistant Professor, Department of Radiology, Maharaj Nakorn Chiang Mai Hospital
- Instructor, Department of Radiology. Faculty of Medicine, Chiang Mai University

Education/ Academic Profile

- 2010 Thai Board of Interventional Neuroradiology
- 2008 Diploma in Neurovascular Disease, University Paris XI, France
- 2007 Thai Board of General Radiology
- 2005 Certificate in Medical Radiation Physics and Radiobiology, Radiological Society of Thailand
- 2004 Diploma in Clinical Science (Radiology), Chiang Mai University, Thailand
- 2003 Doctor of Medicine (Honors), Chiang Mai University, Thailand
- 2008 - 2010 Fellowship in Interventional Neuroradiology, Ramathibodi Hospital, Mahidol University,Bangkok, Thailand
- 2004 - 2007 Residency training in General Radiology, Chiang Mai University, Chiang Mai, Thailand
- 2003 - 2004 Internship Maharaj Nakorn Chiang Mai Hospital, Chiang Mai, Thailand

Academic & Research Contributions

- Published in J Neurosurg Spine, Front Aging Neurosci, Sci Rep, and Asian J Neurosurg
- Focus areas: Neuroimaging, spinal AV shunts, brain tumors, cognitive aging, and AI in radiology
- Notable work includes deep learning for hemorrhage detection and MRI-based tumor characterization

Awards and Honors

- Presented at international meetings including AOCNR, INR Forum, AOCR, and AAFITN
- Topics included:
    - o Idiopathic hypertrophic pachymeningitis
    - o Foramen magnum and cranial dural AV fistulae
    - o Management of ruptured BAVM-associated aneurysms
    - o Intracranial giant aneurysm treatment strategies
    - o Impact of venous thrombosis in malignant DAVFs

Invited Speaker

Assoc. Prof. Lim Eng Hoe Winston, M.D.

Department of Diagnostic Radiology
Singapore General Hospital, Singapore

Leadership & Professional Appointments

- Senior Consultant, Department of Diagnostic Radiology, Singapore General Hospital
- Associate Professor, Duke-NUS Medical School & NUS Yong Loo Lin School of Medicine
- Director of Education, Radiological Sciences Division, Singapore General Hospital
- Director, Postgraduate Medical School, Singapore General Hospital
- Director, Singapore General Hospital Postgraduate Medical School
- Former President, Singapore Radiological Society (2006 - 2009)
- Executive Committee Member, AAFITN (Asian-Australasian Federation of Interventional and Therapeutic Neuroradiology)
- Member, WFITN (World Federation of Interventional and Therapeutic Neuroradiology)

Education/ Academic Profile

- MBBS, National University of Singapore (NUS), Class of 1985
- Fellowship in Radiology Royal College of Radiologists (FRCR)
- Subspecialty Training in Neuroradiology & Neurointervention, Oxford, United Kingdom (1996)

Academic & Research Contributions

- Focuses on neurointervention, vessel wall imaging, and functional MRI
- Extensive publications in neuroradiology, stroke, aneurysm treatment, and bilingual brain function
- Contributed to major studies on intracranial aneurysms and stroke imaging
- Research supported by national grants (NMRC, BMRC)
- Active in clinical trials and advancing neuroradiology practice

Speaking Engagement

- Presented at major international neuroradiology and neurointervention conferences
- Delivered talks on intracranial aneurysm treatment, stroke imaging, and neurointervention techniques
- Invited speaker at regional radiology and neuroradiology society meetings
- Shared expertise in advanced MRI and vessel wall imaging applications
- Participated in workshops and training sessions for radiology residents and fellows

Invited Speaker

Prof. Ling Feng, M.D. Ph.D.

Neurointerventional Center of Xuanwu Hospital affiliated to Beijing Capital Medical University (CMU) and China International Neuroscience Institute (China-INI), The People's Republic of China

Leadership & Professional Appointments

- Vice President of Chinese Medical Doctor Association 2010 - 2015
- President of Chinese Congress of Neurological Surgeons (CCNS) 2010 - 2016, Honorary President afterwards.
- Founding President and Life Honorary President of AAFITN.
- President of 9th WFITN Congress Beijing 2007
- President of WFNS Special Congress Beijing 2019
- Member of the 11th, 12th and 13th Chinese People's Political Consultative Conference 2008 - 2023
- Founding Leader of the Chinese Medical Volunteers 2017
- Founding President of Beijing Ling Feng Foundation 2017

Education/ Academic Profile

- M.D. Shanghai Second Military Medical University 1973
- Ph.D., Neurosurgery & Neuropathology Military Medical University of China 1989
  First female Ph.D. in Neurosurgery and Neuropathology in China
- Certificate in Interventional Neuroradiology - Université Paris VII, France 1982 - 1983
- Certificate in Micro - Neurosurgery - Université Paris VI, France 1982 - 1983
- Visiting Scholar - National Neuroscience Institute, London, UK 1990 - 1991

Contributions

- Launching the Chinese Medical Volunteers with over 7,600 doctors registered and footprint in 260 counties up till now.
- Carrying out medical volunteer services in poverty-stricken counties.
- Building "Rehab and Health Huts" at village level - 350 completed and more planned
- Focusing on local medical staff training: "Leave behind a medical team that will not leave."
- Supporting Lijiang Ethnic Orphanage School for 20 years with free boarding and education for 1,420 children from 26 nationalities. It has been transitioned to Lijiang Special Education School since 2020.
- Medical humanitarian missions to Ethiopia, Guinea and Myanmar.
- Trained over 600 neurosurgeons for one-month terms in China since 2012.
- Collaborating with WFNS in "Africa 100" Program: 4-year neurosurgical training in China.

Award and Honors

- National Award for Scientific and Technological Advancement
- Outstanding Contributor of Medical Science - Ministry of Health of China
- Talent of the Century - Ministry of Human Resources and Social Security
- Zhou Guangzhao Medical Award
- China Charity Award
- China Children's Charity Award

Invited Speaker

Prof. Michihiro Tanaka, M.D., Ph.D.

Department of Neurosurgery & Neuroendovascular Surgery Neuro Center, Kameda Medical Center, Chiba, Japan

Leadership & Professional Appointments

- Director of Neurosurgery and Neuroendovascular Surgery Neuro Center, Kameda Medical Center, Chiba, JAPAN
- President of World Federation of Interventional and Therapeutic Neuroradiology (WFITN) (2022 - 2024)
- Clinical Professor of Tokushima University, Tokushima (2022 -)
- Visiting Professor of Tokyo Jikeikai University School of Medicine, Tokyo (2022 -)
- Visiting Professor of Fukuoka University School of Medicine, Chikushi hospital, Fukuoka (2019 -)
- Visiting Professor of Showa University School of Medicine, Tokyo (2018 -)
- Advisory committee of Japan Pharmaceuticals and Medical Devices Agency Ministry of Health Labor and Welfare (PMDA) (2016 -)

Education/ Academic Profile

- 1985 - 1991 National Yamanashi University School of Medicine, Japan
- 1991 M.D. Japan Medical License
- 2006 Ph.D. Degree of Medical Science from Yokohama City University School of Medicine

Academic & Research Contributions

- Intracranial aneurysms, AVMs (arteriovenous malformations), Dural AVFs (arteriovenousfistulas), Head and neck tumor, Spinal cord vascular malformations, Carotid artery revascularization

Subjects of Interests

- Clinical neuroanatomy, Surgical Neuroangiography, Embryological anatomy, Minimally invasive neurosurgery, Functional vascular anatomy of the brain, Acute stroke management, Cerebral blood flow and metabolism

Invited Speaker

Prof. Berdikhojayev Mynzhylky, M.D., Ph.D

Neurosurgical Center, JSC Central Clinical Hospital,
Almaty, Kazakhstan

Leadership & Professional Appointments

- Chief of the Neurosurgical Center, JSC Central Clinical Hospital, Almaty, Kazakhstan
- Vice - president, National medical association
- President of the Association, Public Association “Society of Doctors of Vascular and Interventional Neurosurgery and Neurology Kazneuro”, Kazakhstan

Education/ Academic Profile

- Ph.D. in Public Health, Kazakhstan’s Medical University “KSPH”, Almaty (2017 - 2020)
- MBA, AlmaU University, Almaty (2020 - 2023)
- Master of Public Health, Kazakhstan’s Medical University “KSPH”, Almaty (2016 - 2017)
- Residency in Neurosurgery, Russian Military Medical Academy, Saint Petersburg, Russia (2006 - 2008)
- M.D., Karaganda State Medical Academy, Kazakhstan (1998–2004)
- Additional specialized training in Korea (Bucheon St. Mary’s Hospital, 2016), Almaty (Vascular Pathology, 2016), and Astana (Vascular Surgery, 2014).

Participation in Association

- Kazneuro
- The Kazakh association of neurosurgeons
- Kazakhstan’s society of interventional cardiologist and roentgen surgeons
- ESMINT
- ESNR

Invited Speaker

Dr. Patrick A. Brouwer, M.D

J&J MedTech Neurovascular (Cerenovus), United States

Leadership & Professional Appointments

- Head of Worldwide Medical Affairs, J&J MedTech Neurovascular (Cerenovus)
- Former Neurointerventionalist at Leiden University Medical Center, Erasmus MC (Rotterdam), and Karolinska University Hospital (Stockholm)
- President, European Society of Minimally Invasive Neurological Therapy (ESMINT), 2018 - 2020

Education/ Academic Profile

- M.D. (Cum Laude), Free University of Amsterdam
- M.Sc. in Neurovascular Studies, Paris-Sud University (Paris XI)

Academic & Research Contributions

- Over 20 years of experience as a neurointerventional clinician and scientist, with nearly 100 scientific papers or book chapters and more than 400 invited lectures globally
- Current research includes the Neuro Thromboembolic Initiative (NTI) to advance stroke care by innovating device-clot interaction and improving thrombectomy outcomes

Invited Speaker

Dr. Rie Aoki, M.D.

Tokai University School of Medicine, Tokyo, Japan

Leadership & Professional Appointments

• Senior Lecturer Tokai University School of Medicine

Education/ Academic Profile

1999 - 2005	Medical doctor degree from Faculty of Medicine, Nippon Medical School
2005	Japanese medical license
2005 - 2007	Residency in Asahi Gereral Hospital, Chiba, Japan
2007 - 2012	Fellow in Neurosurgery in Asahi General Hospital, Chiba, Japan
2011	Japanese neurosurgical society board certified neurosurgeon
2013	Japanese Society for Neuroendovascular therapy board certified neurointerventionist World Federation of Interventional Neuroradiology, Senior member
2012 - 2018	Attending neurosurgeon and endovascular surgeon in Tokai University School of Medicine, Kanagawa, Japan
2018	Attending neurosurgeon and endovascular surgeon in Tokai University School of Medicine, Tokyo, Japan
2022	Attending neurointerventionist of Japanese Society for Neuroendovascular therapy

Summary of Qualifications

• Working in a hospital with about 100 aneurysm cases per year, one of the most active centers in Tokyo. Participating in most of the endovascular work and about one third of the surgical work-Japanese board certified neurosurgeon and endovascular interventionist

Fields of Interest

• Anatomy

Specialized Fields

• Brain aneurysm, brain arteriovenous malformations and other vascular diseases

Invited Speaker

Dr. Saima Ahmad, M.D.

Farooq Hospital, Lahore, Pakistan

Leadership & Professional Appointments

- Consultant Neuro-Interventionist and Diagnostic Radiologist, Farooq Hospital (Teaching Hospital)
- Co-Chair WINN Committee
- Co-Chair Webinar Committee MENA-SINO

Education/ Academic Profile

2023	European Diploma in Ischemic Stroke Intervention (EDSI) - Issued by ESMINT & EBNI (2022 - 2023)
2019 - 2020	Fellowship in Acute Ischemic Stroke, Neuroendovascular & Spine IR - Alexandria University, Egypt (in collaboration with MENA-SINO)
2018	Neurointervention Research Fellowship - Siriraj Hospital, Mahidol University, Thailand
2017	DMRD - Diploma in Medical Radio Diagnosis, University of Lahore
2000	MBBS - Fatima Jinnah Medical University

Academic & Research Contributions

- Over 40+ peer-reviewed articles in international journals including Neurology, Stroke, Interdisciplinary Neurosurgery, AJNR, and JNS.
- PAIRS (2019 - 2024): Oral/poster presentations on gender disparity, CLOVES syndrome, pediatric neurointervention, and AVMs
- WFITN 2022 (Kyoto): Abstract on post-aneurysm cognitive outcomes
- ESMINT 2023 (France): Poster on neurointervention development in Pakistan
- LINNC Asia 2022 (Singapore): Case-based posters on AVMs, hemangiomas, embolization
- SVIN (2020 - 2023): Regular presenter on stroke, aneurysms, vascular anomalies
- World Stroke Congress 2021: Poster on aneurysm rupture predictors
- Other platforms: MENA-SINO, ESOC, BIR, MENASINO, ESNR - invited talks and posters internationally

Award and Honors

- SVIN Mission Thrombectomy: Global Access for Stroke Treatment -Regional Committee Recognition Diamond Award for year (2023 - 2024)
- LINNC Seminar 2018 - Asia Edition Grant for young practitioners Benefited from a grant, covering all expenses. 16 - 17 November 2018, at the National Museum of Singapore.
- Cerebrovascular Research and Education Foundation (CREF) Educational Grant for participation in the World Live Neurovascular Conference (WLNC) 2020 on 06-08 May 2020 in Washington DC, USA.
- Young Researcher Award - VAICON 2021
  Award for the presentation at Young Researcher Award @VAICON 2021(Venous Association of India) held from 23rd January to 24th January 2021(Virtual), India
- Pakistan MT2020+ RC presented with Global SVIN_MT2020+ Regional Committee (RC) Recognition Awards for the year 2021: MT Platinum Recognition Award

Invited Speaker

Prof. Shailesh B. Gaikwad, M.D., FNAMS, CCST

All India Institute of Medical Sciences (AIIMS), New Delhi, India

Leadership & Professional Appointments

- Professor & Head – Department of Neuroimaging & Interventional Neuroradiology
- Chief, Neurosciences Centre, All India Institute of Medical Sciences, New Delhi

Education/ Academic Profile

- MD in Radiology
- Fellowship, National Academy of Medical Sciences (2017)
- WHO Fellowship in Neurointervention (2001)
- Advanced training in Neurointerventional Radiology from multiple leading global institutions (USA, Switzerland, Turkey, South Korea, France)

Academic and Research Contributions

- Publication: 205 in peer journals
- Chapters in books: 27
- Contribution in International New Book - Frank Netter series" (Dr. Larry Cochard)-Northwestern University, Chicago, Harvard Medical School, Duke University : Year - 2011

Award and Honors

- WHO Fellowship in Neurointervention, 2001
- Fellow, National Academy of Medical Sciences, India (2017)
- Visiting Professor & Research Associate, Harvard Medical School / Brigham & Women's Hospital, USA (2009)
- Visiting Professor, Duke University, South Carolina, USA (2007)
- Chief Coordinator - Neuroradiology Workshop, Dhaka, Bangladesh
- Member, Expert Group - National Stroke Registry, ICMR, India (2019)
- Expert, Skill Development Initiative for Emerging World Countries, Maldives (2020 - ongoing)
    - Hands-on training at global centers:
      GDC Aneurysm Coiling, Seoul National University, Korea (2000)
    - Carotid Angioplasty & Stenting, Johns Hopkins University, USA (2000)
    - Onyx, Flow Diverters, Hacettepe University, Turkey (2006, 2008)
    - Gamma Knife Radiosurgery, Cleveland Clinic, USA (2011)
    - Mechanical Thrombectomy & AVM Embolization, University of Massachusetts (2009)
- Attended leading neurovascular conferences:
    - WLNC - USA (2017), Spain (2018), Turkey (2020), Brazil (2023)
    - Zurich Interventional Neuroradiology Workshop, 2004 & 2005
    - International Master Course in Neurovascular Diseases, Bicetre, France (2001)

Invited Speaker

Prof. Shakir Husain Hakim, M.D.

Neurointervention & Stroke, National Institute of Neurosciences & Hospital, Agargoan, Dhaka, Bangladesh

Leadership & Professional Appointments

- Consultant & Director, Neurointervention & Stroke, National Institute of Neurosciences & Hospital, Agargoan, Dhaka, Bangladesh
- Professor of Neurointervention at the same institute
- Former Deputy Head of Interventional Neuroradiology and Co-Director of the International Fellowship Program, University Hospital Zurich, Switzerland
- Chairman, Stroke & Neurointervention Foundation (SNIF), India

Education/ Academic Profile

- MD, DM (Neurology) - advanced medical qualifications from Bangladesh
- Fellowship in Interventional Neuroradiology, University Hospital Zurich, under a WHO/Swiss-supported program

Invited Speaker

Prof. Emeritus Sirintara (Pongpech) Singhara Na Ayudhaya, MD.

Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Leadership & Professional Appointments

- Professor of Radiology (Interventional Neuroradiology), Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
- Deputy Dean for International Relations, Faculty of Medicine, Ramathibodi Hospital, Mahidol University
- Co-Director, PLANET (Pierre Lasjaunias Neurovascular Educational Team) International Courses
- Honorary Visiting Professor, University of Medicine and Pharmacy, Ho Chi Minh City, Vietnam

Education/ Academic Profile

- M.Sc. (Honours) - Mahidol University, 1981
- M.D. (Honours) - Mahidol University, 1983
- Internship - Air Force Hospital, Bangkok, Thailand, 1984
- Board Certification in Radiology - Mahidol University / Thai Medical Council, 1987
- Certificate in Interventional Neuroradiology - Bicêtre Hospital, Paris - Sud University, France (3-year program, 1995 - 1998)
- National Board Certification in Interventional Neuroradiology, Thailand, 2006
- National Board Certification in Neuroimaging, Thailand, 2006

Award and Honors

National

- Outstanding Alumni Awards year 2014 from Rajini Alumni Association (Under the Royal Patronage)
- Outstanding Alumni Awards year 2018 from Siriraj (Medical School) Alumni Association (Under the Royal Patronage)
- Scientific committee of TSVIR since 2002, scientific chairman 2009 - 2013 and Honorable Consultant 2013 - 2018
- Scientific chairman of The Royal College of Radiologists of Thailand 2009 - 2011
- Vice President; Royal College of Radiologists of Thailand 2011 - 2013
- President ; National Board of fellowship in Interventional Neuroradiology; Thai Medical Council; since 2008 - 2017
- *Medical Experts in National Board of Environmental Committee: since 2011 - 2014*
- Outstanding Woman Award in Global Entrepreneuship year 2020, Ministry of Social Development and Human Security

International

- Honorary Member of WFITN 2019 - present
- Past President of WFITN (World Federation of Interventional and Therapeutic Neuroradiology) 2017 - 2019
- President of WFITN (World Federation of Interventional and Therapeutic Neuroradiology) 2015 - 2017
- Vice president (elected) of WFITN 2013 - 2015
- Member at large (elected) of WFITN 2011 - 2012
- General secretary of WFITN (World Federation of Interventional and Therapeutic Neuroradiology) 2008-2011
- Senior membership of WFITN since 1998
- Senior membership of AAFITN since 2000, general secretary of AAFITN since 2006, Vice president 2008 - 2010
- President of AAFITN (Asian - Australasian Federation of Interventional and Therapeutic Neuroradiology) 2010 - 2012
- L'Oreal-UNESCO for Women in Science International Awards(life science) year 2016 Candidacy from Mahidol University, Thailand
- The Certificate Course in Good Governance for Medical Executives, under the collaboration of King Prajadhipok's Institute and The Medical Council of Thailand, Class 6th
- International Women's Day of Thailand Award 2020
- Invited speaker of International conferences more than 90
- International Scientific publications (standard) more than 100

Invited Speaker

Assoc. Prof. Suthisak Suthipongchai, M.D.

Department of radiology, Faculty of medicine
Siriraj Hospital Mahidol University, Thailand

Leadership & Professional Appointments

- Professor of radiology, Department of radiology, Faculty of medicine Siriraj Hospital Mahidol University
- President of Royal College of Radiologists and Radiological Society of Thailand
- Chairman of Department of Radiology, Faculty of Medicine Siriraj Hospital, Mahidol University to 2006
- Chairman of the scientific committee of Radiological Society of Thailand & The college of radiologist of Thailand till 2005

Education/ Academic Profile

1974	M.D., Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand
1976	Graduate Dip. in Clinical Science (Radiology), Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand
1978	Diploma of the Board of Radiology (Diagnostic)
1984	Certificate of Neuroradiology, MGH Havard University, Boston MA
1984	Certificate of Neuroradiology, U.C. Sanfrancisco

Academic and Research Contributions

1979	First Intraarterial gel foam Embolization of Nasopharyngeal Angiofibroma in Thailand
1982 - 1995	Guest lecturer for the Society of Neurology of Thailand
1983 - 1988	Chief Supervisor in charge of residency training programs
1984	Research Fellow in Neuroradilogy, Massachusette General Hospital, Harvard Medical School Research Fellow in Neuroradiolgy University California, Sanfrancisco.
1985	First Intravascular Detachable Balloon Embolization of caroticocavernous sinus fistula in Thailand
1993	First Intraarterial Glue Embolization of Dural & Brain AVM inThailand.

Award and Honors

1987	Visiting Radiologist, Juntendo University Tokyo.
1988	Visiting Radiologist, Royal Melboune Hospital, University of Melboune , Australia.
1991	Visiting Radiologist, Bicetre Hospital, Paris, France.
1993	Visting radiologist, Bicetre Hospital, paris, Franc.
1994 - Present	Chief of Neuroradiology & Interventional Neuroradiology, Department of Radiology, Faculty of Medicine Siriraj, Mahidol University, Bangkok, Thailand
1995 - 2001	Visiting Radiologists, Bicetre Hospital, Paris France Chairman of the Scientific committee of the radiological society of Thailand Executive member of the Board of Scientific Committee of AOCR & AAR Advisory Board of official Journal of the WFITN J. Interventional Neuroradiology
2000 - 2001	Vice President of Mahidol University (Student Affair)
2001 - 2006	Chairman of Department of Radiology, Faculty of Medicine Siriraj Hospital, Mahidol University
2004	President of Organizing Committee of the 6th AAFITN
2005	Vice President the 6th Congress of Asian and Oceanic Pediatric Radiology & the 4th Regional Medical Writing Workshop for Radiologists

Invited Speaker

Assoc. Prof. Thaweesak Aurboonyawat, M.D.

Division of Neurological Surgery, Department of Surgery, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand

Leadership & Professional Appointments

Present	President, The Association of Thai Interventional Neuraradiology (ATIN)
2004 - Present	Attending Staff Division of Neurological Surgery, Department of Surgery, Faculty of medicine, Siriraj hospital, Mahidol university, Bangkok, Thailand

Education/ Academic Profile

2008 - 2009	Interventional Neuroradiology Fellowship Service de Neuroradiologie Interventionnelle, Fondation Ophtalmologique Adolphe de Rothschild Hospital, Paris, France
2007	Interventional Neuroradiology Fellowship Service de Neuroradiologie Diagnostique et Thérapeutique, Hôpital de Bicêtre, Le Kremlin-Bicêtre, Paris, France
2005 - 2006	The International Master Degree in Neurovascular Diseases Paris - Sud university,France and Mahidol University,Thailand
2005 - 2006	Department of Radiology, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand. Fellowship in endovascular therapy
2000 - 2003	Department of Surgery, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand. Residency training in Neurological Surgery
2000 - 2001	Faculty of Graduate Studies, Mahidol University, Bangkok Thailand. Graduate diploma program in clinical science (Surgery)
1992 - 1998	Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand. Bachelor degree of Medicine

Academic and Research Contributions

- Published extensively on pediatric neurovascular interventions, including Vein of Galen malformations
- Conducted device-focused studies on SILK and pipeline stents
- Co-authored key research on dural AVFs and developmental venous anomalies (DVAs)
- Authored a comparative anatomy series on cranial venous systems in vertebrates
- Contributed clinical case studies on aneurysm treatment and carotid-cavernous fistulas

Invited Speaker

Prof. Timo Krings, M.D., Ph.D.

Cerebrovascular Center, Beth Israel Lahey Health,
Boston, United States

Leadership & Professional Appointments

- Chair of Neurointerventional Radiology, Lahey Clinic, Boston
- Director, Cerebrovascular Center, Beth Israel Lahey Health
- Full Professor of Radiology, TH Chan School of Medicine, Univ. of Massachusetts
- Former Division Head, Neuroradiology, Univ. of Toronto (2016 - 2021)
- Former Fellowship Director, Univ. of Toronto (2010 - 2024)
- Former David Braley & Nancy Gordon Chair in Interventional Neuroradiology
- Cross-appointed Interventional Neuroradiologist, Hospital for Sick Children, Toronto

Education/ Academic Profile

- MD, Aachen University, Germany
- Clinical year at Harvard Medical School, Boston
- Residency in Neuroradiology, Aachen (Prof. Armin Thron)
- Neurointerventional Fellowship, Prof. Pierre Lasjaunias, Paris

Academic and Research Contributions

- 500+ peer-reviewed publications
- Authored 4 textbooks on:
    - Interventional Neuroradiology
    - Neurovascular Anatomy
    - Neurovascular Diseases
    - Stroke
- Trained 40+ fellows globally (US, Canada, Europe, Asia)

Awards & Honors

- Scientific Award, European Society of Neuroradiology (ESNR)
- Lucien Appel Prize
- Founders Award, Interventional Neuroradiology (ESNR)
- Anderson Award, Wightman-Berris Academy
- Edward Lansdown Award, Univ. of Toronto
- Gold Medal, British Society of Neuroradiology (Lifetime Achievement)

Invited Speaker

Prof. Tudor G. Jovin, M.D., Ph.D

Cooper University Health Care and Cooper Medical School of Rowan, United States

Leadership & Professional Appointments

- Chair, Department of Neurology, Cooper University Health Care
- Director, Cooper Neurological Institute
- Professor of Neurology and Neurosurgery, Cooper Medical School of Rowan University

Education/ Academic Profile

- Carol Davila University, Medical School, Bucharest, Romania (1985 - 1989)
- Heinrich Heine University, Medical School, Düsseldorf, Germany - M.D., 1994
- Junior House Officer, North Staffordshire Hospital, UK (1994 - 1995)
- Junior House Officer, Hemel Hempstead General Hospital, UK (1995)
- Junior House Officer, Grantham and District Hospital, UK (1995 - 1996)
- Internship, Internal Medicine, Pennsylvania Hospital, Philadelphia, PA (1996 - 1997)
- Neurology Residency, University of Pennsylvania / Pennsylvania Hospital, Philadelphia, PA (1997 - 2000)
- Cerebrovascular Fellowship, Stroke Institute, UPMC Presbyterian University Hospital, Pittsburgh, PA (2000 - 2002)
- Fellowship in Interventional Vascular Neurology, UPMC Presbyterian University Hospital, Pittsburgh, PA (2002 - 2004)

Academic and Research Contributions

- 200+ peer-reviewed publications

Awards & Honors

- Intern of the Year Award 1997
  Department of Medicine, Pennsylvania Hospital, Philadelphia PA
- George J. Harrison Fellowship of the Pennsylvania Hospital 2000
- William H. Oldendorf Award of the American Society of Neuroimaging 2002
- Society of Vascular and Interventional Neurology (SVIN) Pioneering Award 2015
- Society of Vascular and Interventional Neurology (SVIN) Presidential Service Award 2015 - 2016
- Honorary Member Award, Romanian Society of Stroke 2017

Invited Speaker

Prof. Uday S. Limaye, M.D., Ph.D.

Lilavati, Hinduja Hospitals (Mumbai) &
Apollo Hospitals (Chennai), India

Leadership & Professional Appointments

- Consultant Neurointerventionist at Lilavati, Hinduja Hospitals (Mumbai) & Apollo Hospitals (Chennai)
- Former Chief of Interventional Neuroradiology (1995 - 2014), KEMH & Seth GSMC, Mumbai
- Former Fellowship Director (2001 - 2014), KEMH & Seth GSMC, Mumbai
- Vice President & Congress President, Society of Therapeutic NeuroInterventions (STNI) (2018; Joint STNI+MM Meeting 2022)
- Cofounder & Chairman, India Neurointerventional Foundation
- Director, Monsoon Meeting and Course Coordinator of “Circle of Willis and Other Things”
- Member & Leadership positions held: Ex. Chief of INR 1995 - 2014 & Ex. Fellowship Director 2001 - 2014, KEMH & Seth GSMC (Mumbai); Vice President STNI & Congress President STNI 2018 & STNI+MM Joint Meeting 2022

Clinical Experience

- 30yrs in Interventional Neuro Radiology and 32yrs in Interventional Radiology

Clinical Areas of Interest

Paediatric Neurointervention; Maxillofacial intervention; Complex neurovascular diseases of : Brain, Spine, Head, Face and Neck

Academic and Research Contributions

- More than 300 publications and presentations in national & international journals and conferences.

Awards & Honors

- Pioneering work on Dural venous sinus thrombolysis which was awarded as the best paper in the Eastern Neuroradiology meeting at Ottawa, Canada in August 2005 and in AAFITN meeting, Sendai, Japan 2000

Invited Speaker

Prof. Vitor Mendes Pereira, M.D., Ph.D.

Division of Neurosurgery - Department of Surgery,
St Michael's Hospital - Unity Health Toronto, Canada

Leadership & Professional Appointments

April 2021 - Present	Staff Physician, Division of Neurosurgery, Department of Surgery, St Michael's Hospital, Unity Health Network Surgeon/Scientist and Director of Endovascular Research and Innovation
April 2021 - Present	Professor, Division of Neurosurgery, Department of Surgery, University of Toronto, Ontario, Canada
April 2021 - Present	Endowed Chair - Schroeder Chair in Advanced Neurovascular Interventions, Department of Surgery, University of Toronto, Ontario, Canada
August 2014 - Present	Associate Staff Physician, Department of Diagnostic Imaging, The Hospital for Sick Children (SickKids), Toronto, Ontario, Canada
July 2019 - Present	Professor, Department of Medical Imaging, University of Toronto, Ontario, Canada
July 2019 - Present	Associate Member, Institute of Medical Science, University of Toronto, Canada

Education/ Academic Profile

11.2013	Privat-Docent, University of Geneva, Geneva, Switzerland
09.2007 - 10.2008	Master in Sciences (MSc), Faculté de Médecine de l'Université Paris XII, Paris, France
11.2007 - 10.2008	Clinical Fellowship in Interventional Neuroradiology, Department of Interventional Neuroradiology, Rothschild Foundation, Paris, France
11.2006 - 10.2007	Clinical Fellowship in Interventional Neuroradiology, Department of Interventional Neuroradiology, CHU Bicetre, Paris, France
03.2005 - 11.2006	International Master in Neurovascular Diseases (Professional MSc), Faculté de Médecine de l'Université, Paris XI, Paris, France.
02.2002 - 01.2006	Residency Program in Neurosurgery, Clinical University Hospital of State University of São Paulo, Brazil
01.1996 - 02.2001	Bachelor in Medicine, Medical school, Federal University of Maranhão, Sao Luis, Maranhao, Brazil

Academic and Research Contributions

Teaching & Education Awards:

o Jameel Ali Award (2023), Exceptional Teaching (2022), UofT Imaging Division (2019)

• International Recognition:

o Professor Honoris Causa (Brazil, 2020), Manuel Beckman Medal (2020)

o Member, Institutional Chair of Interventional Neuroradiology, Univ. of Santiago (2021)

• Research Honors:

o ESNR René Djindjian Prize (2014), Peter Huber Prize (2012), Founders Award (2009), SVIN Best Abstract (2016)

• Early Career Awards:

o National research prizes (1998) and CNPq scholarship (1997 - 2000), Brazil

• Leadership in Research:

o JDMI Research Leadership Awards (2016–2020), Toronto

Invited Speaker

Assoc. Prof. VU Dang Luu, M.D., Ph.D.

Radiology Department of Bach Mai HospitalHa noi, Vietnam

Leadership & Professional Appointments

- Vice President and General secrectary Vietnamese Society of Radiology and Nuclear Medicine
- President of Vietnamese Sub-Society of Interventional Radiology
- Associated Professor of Radiology 2016
- PhD- Ha noi Medical University 2008 - 2012

Education/ Academic Profile

- 1994 - 2000 Medical School Student of Ha noi Medical University
- 2001 - 2005 Resident of Radiology at Ha noi Medical University
- 2005 AFS Certification
- 2009 AFSA Certification

Training

- 2009 Hand-on workshop of Neurointerventional in Tokyo
- 2010 Live Interventional Neuroradiology & Neurosurgery Course
- 2010 Symposium of Brainstorm in Island, UK
- 2016 LINNC ASIA, Singapore
- 2017 Workshop of thrombectomy using Trevor Provue Stent in Douseldorf, Germany

Invited Speaker

Dr. Wasan Akarathanawat, M.D.

Division of Neurology, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand Affiliated with Chulalongkorn Stroke Center, King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Thailand

Leadership & Professional Appointments

- Lecturer, Division of Neurology, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Education/ Academic Profile

- M.D. (Second Class Honors) - Faculty of Medicine, Mahidol University, Bangkok (2005)
- Residency - Neurology, Chulalongkorn Hospital, Thailand (2011)
- Fellowship - Interventional Neuroradiology, Chulalongkorn University, Thailand (2020); certified by Thai Board of Interventional Neuroradiology
- Board Certification - Thai Board of Neurology (2011)

Fields of Interest:

- Stroke, Interventional neuroradiology, Telemedicine, Robotic technology

Invited Speaker

Prof. Yi-Bin Fang, M.D., Ph.D.

Shanghai Fourth People's Hospital, Tongji University, Shanghai, The People's Republic of China

Leadership & Professional Appointments

- Director, Neuro-Interventional Department & Director, Stroke Center, Shanghai Fourth People's Hospital, Tongji University, Shanghai, China
- Chair and Professor of Stroke Center, Shanghai Fourth People's Hospital, Tongji University (Director since July 2005)

Education/ Academic Profile

- Leading specialist in neurovascular disease, with a major focus on stroke and interventional neuroradiology at Tongji University-affiliated institution

Invited Speaker

Prof. Yong-Sam Shin, M.D., Ph.D.

Seoul St. Mary's Hospital, The Catholic University of Korea, South Korea

Leadership & Professional Appointments

- Professor of Neurosurgery, Vascular and Endovascular Neurosurgery, Seoul St. Mary's Hospital, The Catholic University of Korea
- Congress President, 2026 World Federation of Interventional Neuroradiology (WFITN), Busan, Korea
- Executive Committee Member of WFITN
- Founder and Organizer, Bi-Neurovascular Symposium (BNS)
- Council Member, Asian- Australian Federation of Interventional Neuroradiology (AAFITN)
- Former President, Korean Neuro-Endovascular Society (KoNES)

Speaker's abstract

Predictor in AVM Outcome

Prof. Adnan H. Siddiqui, M.D., Ph.D
The SUNY University at Buffalo, New York, United States

Cerebral arteriovenous malformations (AVMs) are high-flow vascular lesions that can cause devastating neurologic deficits and life-threatening intracranial hemorrhage. Management options generally include observation, microsurgery, radiosurgery (including gamma knife radiosurgery, LINAC, proton beam, and fractionated), and endovascular embolization (both transarterial and transvenous). Given the significant heterogeneity of cerebral AVMs, the current standard of care is a multidisciplinary approach to maximize the potential for cure while simultaneously minimizing the risk of complications. The initial, and often most critical, step is determining if a cerebral AVM needs to be treated. If so, the goal of treatment needs to be clearly defined (e.g. cure, pre-operative treatment to reduce intraoperative blood loss, treatment of intranidal aneurysms, etc.) This decision-making is supported by assessment of known angiographic risk factors for AVM hemorrhage including nidal aneurysms, size of nidus, deep venous drainage, and deep location with perforator or posterior circulation feeders. The Spetzler-Martin AVM grading scale was devised to assess the risk of microsurgical resection with higher grades portending increased surgical risk. With the advent of more sophisticated endovascular options, the Buffalo AVM score was devised to assessthe risks of endovascular treatment. Initially, endovascular embolization was often used as an adjunctive therapy to multimodal treatment for complex cerebral AVMs. Using flow modulation, however, transvenous embolization with cardiac pacing has become a viable option for treatment of complex cerebral AVMs with curative intent in well-selected patients. Most importantly, a multidisciplinary, individualized approach is key to optimizing outcomes for patients with cerebral AVMs.

Speaker's abstract

Spinal CSF-Venous Fistula: Technique of Endovascular Treatment

Prof. Adnan H. Siddiqui, M.D., Ph.D

The SUNY University at Buffalo, New York, United States

After diagnosing a CSF-venous fistula of the spine and identifying the level of CSF leaks, the patient will be recommended to undergo a transvenous route of embolization of the CSF-venous fistula via microcatheterization of the paraspinal veins. The typical set up for this includes a 6F femoral venous sheath, 6F benchmark guide catheter, 5F Berenstein select catheter, 0.035 exchange length glidewire, Headway Duo 167 cm microcatheter, Synchro standard microwire, and Onyx 18. 6F femoral sheath venous access is obtained with ultrasound guidance. Afterwards, the guide catheter over the select catheter over the 0.035 glidewire exchange is advanced to the aortic arch and the azgyos or hemi-azygos vein is selectively catheterized. After advancing the guide catheter into the azygos or hemi-azygos vein, contrast injections were performed to assess the venous architecture. Afterwards, the microcatheter is advanced over the microwire into the azygos venous plexus into the radicular vein at the level of interest where the spinal myelogram demonstrated a CSF-venous fistula. Afterwards, the catheter is purged with DMSO and Onyx 18 embolization is performed under subtracted angiography. After the conclusion of the procedure, the patient is monitored and discharged most commonly on the same day.

Speaker's abstract

Spinal CSF-Venous Fistula: Anatomy, Diagnosis, and Management

Prof. Adnan H. Siddiqui, M.D., Ph.D

The SUNY University at Buffalo, New York, United States

Spontaneous intracranial hypotension (IH) can be caused by structural weaknesses in the spinal meninges of the radicular nerve roots resulting in a CSF leak into the paraspinal vertebral veins, known as a cerebrospinal fluid venous fistula. Symptoms such as orthostatic headaches and cranial nerve neuropathies may occur. Additional clinical signs including tinnitus, vertigo, and hearing loss may also occur due to transmission of abnormal CSF pressures to the perilymph of the cochlea. Diagnosis consists of clinical symptoms and non-invasive imaging, most commonly a brain MRI. In cases of IH, MRI may demonstrate pachymeningeal enhancement, sinus engorgement, brain sagging, and hyperostosis. Additional workup includes CT myelogram cervical, thoracic, and lumbar imaging to identify possible nerve root varices and possible sites of leakage. If there are convincing signs on MRI brain as well as the CT myelogram for a CSF-venous fistula, patient is recommended to undergo a dynamic spinal myelogram in which patient is put in the right and left lateral decubitus position (procedure is separated by 1 or 2 days to allow intrathecal contrast clearing) and a lumbar puncture is performed. Afterwards contrast is injected into the thecal sac while performing digitally subtracted angiography to identify any CSF egress from the thecal sac into the nerve roots in question. A cone beam CT is performed on the table with the patient in the lateral decubitus position to better further identify the site of contrast egress out of the radicular nerve root sheath on axial, coronal, and sagittal imaging slices. Afterwards, the patient is recommended to undergo transvenous route of embolization of the CSF venous fistula which involves catheterization of the azygous vein and subsequent selective embolization with Onyx-18 of the paraspinal vein around the radicular nerve sheaths to shut down the CSF venous fistula.

Speaker's abstract

What Clots Can Tell Us-Results From a Thousand Thrombectomies

Prof. Adnan H. Siddiqui, M.D., Ph.D

The SUNY University at Buffalo, New York, United States

Acute ischemic stroke remains a leading cause of disability and death, with mechanical thrombectomy revolutionizing treatment by enabling direct access to thrombus material. This presentation introduces a next-generation approach to clot analytics that transcends traditional histopathology, integrating multimodal CT radiomics, micro-CT, and transcriptomic profiling to uncover biologically meaningful biomarkers predictive of thrombectomy success and functional outcomes. By leveraging advanced imaging and computational pipelines, researchers have demonstrated that clot architecture and spatial relationships rather than mere composition offer superior prognostic value. These insights are supported by a robust biobanking initiative and collaborations across institutions, enabling high-resolution analysis of clot morphology and its correlation with first pass effect (FPE) and modified Rankin Scale (mRS) outcomes. The second layer of analysis incorporates RNA sequencing of retrieved thrombi, revealing distinct gene expression signatures associated with stroke etiology and treatment response. Integration of histological and transcriptomic data through machine learning models has yielded predictive algorithms with AUCs exceeding 0.90, identifying key molecular pathways such as neutrophil aggregation and NET enrichment as critical determinants of poor outcomes. This multimodal framework not only enhances our understanding of stroke pathophysiology but also lays the groundwork for developing molecular diagnostics and personalized therapeutic strategies. The work presented exemplifies a paradigm shift in stroke analytics, moving from static histology to dynamic, data-driven precision medicine.

Speaker's abstract

Cavernous Sinus Dural Arteriovenous Fistula with Occlusion of the Inferior Petrous Sinus: Angioarchitecture and Transvenous Embolization

Prof. Chao-Bao Luo, M.D., Ph.D

Department of Radiology, Taipei Veterans General Hospital, Republic of China (Taiwan)

Background:
Transvenous embolization (TVE) of cavernous sinus dural arteriovenous fistulae (CSDAVFs) is a standard method with promising results. However, some CSDAVFs associate with occlusive inferior petrous sinus (IPS) leading difficult to access. The purpose of this study is to report angioarchitecture of CSDAVFs with angiographic occlusive IPS (AO-IPS) and our experiences of TVE of the CSDAVF.

Methods:
In the past 10 years, there were 178 patients with 211 CSDAVFs referring for embolization with complete clinical and/or angiographic follow-up. From these data-base, a total of 75 patients (mean age: 65.3 years) with 90 CSDAVFs underwent TVE via AO-IPS. We retrospectively assessed the clinical data, angioarchitecture, and outcomes of 75 patients with 90 CSDAVFs and compared those 103 patients with 125 CSDAVFs of patent IPS.

Results:
A total of 90 (42.7%) out of 221 CSDAVFs had AO-IPS. The most common occlusive level located at the posterior cavernous sinus (CS, 64.4%), followed by IPS, (18.9%) and anterior CS (16.7%). Aggressive CSDAVFs with pial vein reflux occurred in 39 patients (52.0%) and 9 patients (12.0%) presenting with ischemic stroke. Successful navigation of microcatheter to fistula site of the CS was achieved in 82 CSDAVFs (91.1%), while 8 failed after attempts. Follow-up angiography demonstrated complete or near obliteration of CSDAVFs in 100%. Two patients (2.7%) had peri-procedural hemorrhagic complications with minor neurologic deficit.

Conclusion:
AO-IPS of CSDAVF are not uncommon; the most common occlusion level was posterior CS; some associate with pial vein reflux, but only few presented with clinical aggressive behavior. TVE via AO-IPS is a feasible and effective method to manage CSDAVF with high successful rate and low peri-procedural risk. Keywords: Cavernous sinus, dural fistula, embolization, inferior petrous sinus, outcome

Keywords:
Cavernous sinus, dural fistula, embolization, inferior petrous sinus, outcome

Speaker's abstract

Intra-saccular Devices: Risks, Benefits, and Cost-Effectiveness

Prof. Hyun-Seung Kang, M.D., Ph.D

Department of Neurosurgery, Seoul National University Hospital, South Korea

Hyun-Seung Kang, Je Hun Jang, Ju-Sung Jang & PACEN WEB Investigators Woven EndoBridge (WEB) is one of intra-saccular devices which is recently introduced for treatment of intracranial bifurcation aneurysms. This lecture will share the results of a Korean multicenter study on WEB. The study included 405 patients with 412 aneurysms, including 27 ruptured aneurysms, treated with WEB in 22 neurovascular centers. There were 158 anterior communicating artery aneurysms, 157 middle cerebral artery aneurysms, 73 basilar apex aneurysms, and 18 internal carotid artery terminus aneurysms. Procedural complications occurred in 20 patients (4.9%), which included thromboembolic events in 9 (2.2%) and intraoperative aneurysm rupture in 3 (0.7%). The rates of morbidity and mortality were 1.7% (7 patients) and 1.7% (7 patients), respectively. Only one death (0.2%) was related to the treatment. Factors related to long-term complete aneurysmal occlusion included basilar apex location (OR 2.54, 95% CI 1.04–6.18, p=0.041) and maximal aneurysm diameter (OR 0.82, 95% CI 0.70–0.95, p=0.011). Aneurysms ≥6 mm had significantly lower complete occlusion rates (OR 0.43, 95% CI 0.23–0.80, p=0.007).

Another study focused on the treatment cost comparing WEB and stent-assisted coiling (SAC) in patients with intracranial bifurcation aneurysms. Via the propensity score matching, 58 pairs were analyzed. The WEB group showed higher treatment cost than the coil group (52.1 vs. 25.0 units; p <0.001). Procedure time and fluoroscopy time were shorter in the WEB group (84.0 vs. 98.6 minutes [p = 0.044] and 19.7 vs. 36.7 minutes [p <0.001], respectively). Stent usage was lower in the WEB group (17.2% vs. 62.2%; p <0.001).

Speaker's abstract

Endovascular Treatment of Vertebrobasilar Dissection: SAC vs. FDS

Prof. Hyun-Seung Kang, M.D., Ph.D

Department of Neurosurgery, Seoul National University Hospital, South Korea

Vertebral artery dissection can be a life-threatening condition especially when it presents with intracranial hemorrhage or with a mass effect compressing the brain stem. Management strategy depends on 1) the disease: ruptured or unruptured, unilateral or bilateral, disease extent, aneurysmal size, associated thrombus, parent arterial stenosis, condition of the other vertebral artery, PICA variation, anterior spinal artery and perforators; 2) treatment modality: trapping or parent artery occlusion, stent-assisted coiling, sole stenting, flow diverting stent; and 3) treatment endpoints: prevention of bleeding, rebleeding or further ischemia, complete healing of the lesion, reduction of mass effect, clinical improvement or stability.

This lecture will review the history of treatment strategy from the single institutional experiences of 176 cases over the 30 years between 1995 and 2025, present exemplary interesting cases, and share the recent FDS experiences on this serious disease.

Speaker's abstract

Embryonic development of the Ophthalmic artery and its Variations

Emeritus Prof. In Sup Choi, M.D., Ph.D

Tufts University, School of Medicine,Boston, MA, USA

Introduction:

Embryonic development of visual pathway in human, especially the orbit and its content is highly complex and different components have their own embryonic origins. Therefore, the vascular supply of globe and other orbital contents can be variable as consequences of improper annexation or regression.

Embryonic origins of Orbit:

The essential part of the vision is certainly eye itself. The optic nerve and retina are essentially extension of the brain, not a cranial nerve. These and Ciliary and Iris epithelium and Pupillary muscles are originate from the Neuroectoderm. Cornea, Sclera, Choroid, Ciliary muscle and meninges are from the Neural crest and extrinsic, extraocular muscles originates from the mesoderm. The surface Ectoderm is embryonic origins of conjunctiva, lacrimal gland and lens.

Development of Ophthalmic Artery:

As development of the orbit and its contents is complex, the ophthalmic artery undergoes several important steps to become adult type ophthalmic artery, originating from the supraclinoid segment of the internal carotid artery. In early embryonic stage, three arteries participate in arterial supply to eye and orbital contents; the ventral ophthalmic artery of the anterior cerebral artery, the dorsal ophthalmic artery of the cavernous segment of the internal carotid artery and supra-orbital artery of the stapedial artery. These trunks go through steps of annexation, anastomosis and regression, eventually become the adult type ophthalmic artery. Subsequently, many variations may be found in clinical practice. Development and variations of the ophthalmic artery will be discussed.

Speaker's abstract

Dissection of Intracranial arteries - Clinical presentation and treatment

Emeritus Prof. In Sup Choi, M.D., Ph.D

Tufts University, School of Medicine,Boston, MA, USA

Introduction:
The initial event of dissection is disruption of the intima and internal elastic lamina of the arterial wall, either by trauma or hemodynamic stress. Pulsatile arterial flow extends this tear longitudinally further into the media, even to subadventitial layer. It may become a blind pouch filled with thrombus, or communicate with true lumen of the involved artery, becoming a pseudo-aneurysm or creating a second channel, false lumen. The dissected space can expand outwards causing local symptoms and signs by increasing vessel diameter or inwards causing thromboembolic events by narrowing arterial lumen. Pseudoaneurysms in the intradural space often rupture, resulting serious subarachnoid hemorrhage.

Etiology:
Dissections of cervicocephalic arteries are classified by their etiology as traumatic, spontaneous and iatrogenic. Spontaneous dissections are often related to repeated minor traumas or underlying vasculopathy, such as hypertention, hypercholesterolaemia, fibromuscular dysplasia, Ehlers-Danlos syndrome, Cystic medial degeneration, Marfan's disease, etc.

Clinical presentation:
It is primarily depending on its location and depth of dissection. The first symptom is often sudden neck pain or headache in varying degree. When an intramural hematoma or a pseudoaneurysm becomes larger, it progresses causing more serious local mass effect with secondary neurological events or hemorrhage due to rupture through thin wall of an aneurysm. Expansion of arterial wall toward the true lumen leads to partial or total occlusion of involved artery, which results in thromboembolism.

When an intradural artery is involved, especially M1 segment of MCA or vertebrobasilar artery, occlusion of origins of perforators by dissection may induce infarcts in the basal ganglia or brain stem respectively.

A pseudoaneurysm from dissection in an intradural artery is highly vulnerable, since it is covered only by a thin layer of fibrous tissue or clots. Untreated intradural dissecting aneurysm has a high incidence of subsequent rupture even if hemorrhage is not the initial presentation.

Treatment:
Treatment strategy is different by its location of dissection; intradural vs extradural. When dissection is diagnosed without any acute neurological events for extradural ICA or VA, the recommended treatment is heparin for a week and followed by warfarin or anti-planet drugs for 3 -6 months to prevent a thromboembolic complication. Local mass effects such as Horner's syndrome or cranial nerve palsies are often resolved without intervention. Endovascular treatment is indicated when neurological event, stroke or hemorrhage, occurs in acute stage or mass effects persist in spite of proper medical treatment. Permanent occlusion of the involved artery with or without EC-IC bypass surgery was the standard treatment before era of stenting. It is still applicable when dissection is extensive and multiple aneurysms are present. When dissection is localized, stenting across the tear (with coil placement if an aneurysm is present) will succeed to heal dissections.

For intradural dissections, urgent treatment is necessary when a pseudoaneurysm is present, even if SAH did not occur. Endovascular occlusion of the involved artery with balloons or coils is preferable treatment.

In a certain instance that the involved artery cannot be sacrificed, stenting- coiling is an alternative treatment. However, it is important to cover the entrance point of dissection with a stent. Direct surgical clipping is often impossible, therefore, wrapping of the aneurysm or proximal occlusion of parent artery is the only choice when these lesions are approached surgically.

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Speaker's abstract

Vertebrobasilar vascular anatomy and Variants

Emeritus Prof. In Sup Choi, M.D., Ph.D

Tufts University, School of Medicine,Boston, MA, USA

Introduction:

The Vertebrobasilar arterial system, so called the posterior circulation is embryologically conformed by several important processes, from initial cranio-caudal circulation to establishing antegrade circulation. According to Ducas Paget's study, early vascular system to the rapidly developing Rhombencephalon is the paired ventral longitudinal arterial axes. which are supplied via the trigeminal and hypoglossal and otic(?) arteries in cranio-caudal direction. As the aortic arch and vertebral arteries develop, circulation reverses to caudo-cranial.

The second critical process is fusion of the paired longitudinal ventral arterial axes and development of circulation to the cerebellum, the anterior inferior and posterior inferior cerebellar arteries from the paramedian arterial axes.

The third one is fusion of the caudal division of the primitive internal carotid artery to the fused ventral longitudinal arterial axes, the basilar artery and transfer of the telencephalic and portions of choroidal territory of the anterior choroidal artery to the posterior cerebral artery.

One important point to recognize is the pattern of fusion of the caudal division of the primitive internal carotid artery is directly related to the timing of regression of the trigeminal artery.

When the trigeminal artery regresses early, the basilar artery extends more cranially and fusion occurs more cranially, called Cranial fusion.

When regresses late, fusion occurs in more caudal location, called caudal fusion.

In asymmetric fusion status, one trunk from the cranial side P1 segment supplies bilateral mesencephalon, mamillary bodies and thalamii, so called Artery of Percheron. A small branch from caudal side supply ipsilateral mamillary body, 3rd nerve and cerebral peduncle.

Speaker's abstract

Neurointervention and Stroke system in Nepal.

Dr. Kajan Ranabhat, M.D.

Department of radiology, B&B Hospital, Nepal

Background:
A low middle income country in south Asia with a population of 30 million, Nepal is ranked 143 on the human development index. It stretches from east to west as a landlocked country between China on its north and India on the rest of the borders. On this relatively small stretch, it flanks the world's highest mountain ranges (15% of land area) on the north to flat low lands(17%) on the south with a vast range of hills in the middle(68%). This hard terrain exerting difficult construction makes access of basic needs difficult to many places, let alone health care services.

Stroke is the third leading cause of death and contributes to 7.6% of total deaths and 3.5% of total DALYs. As of 2019, the governmental expenditure on health per capita is US$53 per year, and stroke care is primarily paid out-of-pocket. Limited financial resources in the public health sector and paucity of specialized healthcare personnel can be exemplified by one neurologist per one million people.

Low level of knowledge about stroke makes underuse of health services and prehospital delay Thrombolysis treatment is expensive, considering the very low annual per capita GDP of the country ($1208.22).

Proper neurointervention services was started in Nepal from 2019. However, in the short span, many clinicians have taken up this domain from radiology and neurosurgery backgrounds. Currently there are 11 centers in the capital valley, Kathmandu, offering neurointervention services. Likewise neurointervention services are now available in 6 major cities across the country.

Knowledge sharing, spreading awareness among fellow clinicians and educating the community have been of paramount importance. Resource poor set up, lack of medical insurance and technical manpower are the major limitations in initiating and continuing these sort of costly healthcare services. Education to the general population about stroke prevention should be a major undertaking in this scenario.

Speaker's abstract

Embryological consideration of dural AVFs

Prof. Michihiro TANAKA, M.D.,Ph.D.

Department of Neurosurgery and Neuroendovascular Surgery, Kameda Neurocenter, Kameda Medical Center, Japan

Authors; Michihiro Tanaka, Keisuke Kadooka, Takafumi Mitsutake, Kotaro Ueda
Institute; Department of Neurosurgery and Neuroendovascular Surgery, Kameda Neurocenter, Kameda Medical Center, Chiba, Japan

Purpose:
This study retrospectively analyzed the correlation between the distribution of DAVFs and the dural membrane derived from cranial neural crest cells (NCC).

Material and Methods:
A consecutive case series of sixty-six DAVFs (32 men and 34 women, mean 68.4 years) was analyzed. Superselective digital subtraction angiography and high-resolution cone beam CT were performed in order to identify the shunt point. The topographical area derived from NCC was reviewed and identified from the literatures and the relationship between NCC and the shunt point of DAVFs was defined.

Result:
The NCC provides the mesenchyme forming the frontal, sphenoid, squamous temporal bones. Paraxial mesoderm plays a direct role in skeletogenesis of the parietal, petrous temporal and occipital bones. In our series, a total of 15 cases were identified as the olfactory groove, falx cerebri, tentorium cerebelli and lateral spinal DAVFs. These belonged to the area derived from NCC and presented aggressive clinical course with significant cortical venous reflux. The other 51 cases were identified as the carotid cavernous, anterior condylar confluence and transverse- sigmoid sinus. These areas derived from paraxial mesoderm associated with endochondral bone and presented with benign clinical course. Cortical venous reflux was seen only 37% of this group.

Conclusions:
DAVFs associated with NCC are considered as an independent risk factor for an aggressive clinical course and hemorrhage.

Keywords:
Dural AVFs, Neural Crest, Susceptibility, Falco-Tentorial Dura Mater

Speaker's abstract

Microneuroangiography of the middle meningeal artery

Prof. Michihiro TANAKA, M.D.,Ph.D.

Department of Neurosurgery and Neuroendovascular Surgery, Kameda Neurocenter, Kameda Medical Center, Japan

Abstract:

The middle meningeal artery (MMA), a key branch of the maxillary artery, supplies the dura mater, cranial vault, and portions of the skull base. Its clinical significance has expanded in recent years, especially with the advent of microneuroangiography using high-resolution cone beam CT (CBCT) combined with superselective catheter angiography. This imaging technique enables detailed visualization of the MMA's microvascular anatomy and functional roles in neurosurgical and endovascular procedures. High-resolution CBCT allows 3D evaluation of the MMA's anterior and posterior branches, dural arborization, transdiploic vessels, and osseous entry points. It also reveals subtle anastomoses with the internal carotid and ophthalmic arteries crucial in avoiding non-target embolization. The MMA participates in important collateral pathways, including with the inferolateral trunk, recurrent meningeal artery, and ascending pharyngeal artery. Clinically, microneuroangiography has improved the safety and precision of: MMA embolization for chronic subdural hematoma (CSDH): CBCT identifies fragile neovessels supplying the hematoma membrane.Dural arteriovenous fistula (DAVF) treatment: The MMA often supplies the fistulous point, especially at the convexity or falx. Preoperative meningioma embolization: Precise mapping ensures maximal devascularization with minimal risk to adjacent structures.

Embryologically, the MMA derives from the stapedial system and retains connections to multiple cranial domains, explaining its anatomical variability. CBCT-based microneuroangiography also highlights flow dynamics and vessel remodeling in pathological conditions, such as vascular malformations or inflammation.

In conclusion, microneuroangiography of the MMA using CBCT offers unparalleled resolution and anatomical detail, enabling safe, targeted, and effective interventions. It bridges classic anatomy with modern image-guided therapy and enhances our understanding of skull base vascular networks.

Keywords:

middle meningeal artery, microneuroangiography, dural membrane

Speaker's abstract

Functional vascular anatomy of the skull base based on high resolution cone beam

Prof. Michihiro TANAKA, M.D.,Ph.D.

Department of Neurosurgery and Neuroendovascular Surgery, Kameda Neurocenter, Kameda Medical Center, Japan

The skull base harbors a complex network of arterial and venous structures intricately associated with cranial nerves, foramina, and osseous corridors. Detailed understanding of its vascular architecture is essential for the safe and effective performance of skull base surgeries and neuroendovascular interventions. With the advent of high-resolution cone beam computed tomography (CBCT), it has become possible to visualize the functional vascular anatomy of the skull base with unprecedented clarity, surpassing the spatial resolution of conventional cross-sectional imaging and facilitating dynamic assessment when integrated with selective catheter angiography.

This study highlights the characteristic patterns of functional vascular territories in the skull base, emphasizing the embryological and anatomical continuity of dural arterial supply. CBCT with intra-arterial contrast injection enables precise delineation of key arterial contributors, such as the internal carotid artery (ICA), external carotid artery (ECA), and vertebral artery (VA), and their respective branches. These include the middle meningeal artery (MMA), ascending pharyngeal artery (APA), accessory meningeal artery, and inferolateral trunk, among others. The high-resolution imaging allows for identification of perforators and anastomoses that supply distinct compartments, such as the cavernous sinus, clivus, petroclival fissure, and jugular foramen.

Through comparative CBCT imaging in a series of cases, we delineated three principal dural vascular domains: (1) the anteromedial domain supplied by branches of the ICA and ophthalmic artery, (2) the posterolateral domain dominated by ECA feeders including the MMA and APA, and (3) the posterior fossa domain contributed by transosseous branches of the VA. Each domain corresponds to a distinct embryological dural layer, which further explains their clinical behavior in dural arteriovenous fistulas (DAVFs) and skull base tumors. Functional imaging with CBCT also reveals subtle venous drainage pathways and osseous channels, which are critical for understanding the pathophysiology and endovascular access routes. For instance, venous pouches and emissary veins, often occult on standard angiography, are clearly visualized, aiding in treatment planning and complication avoidance.

In conclusion, high-resolution cone beam CT provides a powerful modality for exploring the functional vascular anatomy of the skull base. Its integration into neurointerventional workflow not only enhances anatomical comprehension but also supports tailored, safe, and effective therapeutic strategies for skull base vascular pathologies.

Keywords:
functional vascular anatomy, high resolution cone beam CT, skull base

Speaker's abstract

Situation in Japan: Women in INR

Assoc. Prof. Rie Aoki, M.D.

Tokai University School of Medicine, Tokyo, Japan

The percentage of female physicians in Japan is the lowest among OECD member countries. This is largely attributed to deeply rooted societal gender roles, which perpetuate the view that childcare and parenting are primarily women's responsibilities. Such societal expectations likely contribute to the burden faced by female doctors. In fact, in 2019, the World Economic Forum (WEF) ranked Japan 121st out of 153 countries on the "Global Gender Gap Index," reflecting a very low position.

Additionally, in 2018, it was revealed that ten universities engaged in blatant gender discrimination in medical school admissions, including unfair, uniform score deductions and inappropriate adjustments targeting female applicants. University officials explained this disparity by stating, "As women age, their activity as physicians declines," specifically citing reasons such as "inability to work long hours due to marriage, childbirth, and child-rearing."

Many vascular interventionists in Japan are neurosurgeons; however, particularly in surgical fields, long shifts and extensive surgeries are considered essential. Due to the male-dominated culture and work restrictions, few women aspire to become neurosurgeons. The resignation and leave of absence rates among female neurosurgeons are high, and many women who wish to return to work are unable to do so due to the lack of systemic support and proper environments.

Although the percentage of female neurosurgeons in Japan has been gradually increasing, it remains at only 7.6% as of 2023. According to conference reports, female presenters at the 2023 Neurosurgical Society accounted for 7.9%, but female chairpersons were only 1.1%, The proportion of women as first authors of papers also remains unchanged for over 13 years. In the field of neurovascular intervention, women make up only 4.8% of specialists, with just 2.8% of instructors. Furthermore, there is only one female board member in JSNET, and last year, female chairpersons at JSNET comprised only 2.7%.

Despite these circumstances, the participation and active involvement of women are gradually increasing. Moving forward, developing supportive environments and implementing systemic reforms are essential to creating medical and academic settings where women can more easily pursue their careers.

Speaker's abstract

Woman in INR : Situation in the south Asia

Dr. Saima Ahmad, M.D.

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It is no surprise that Neurointervention is a highly male dominated field within South Asia with women having to face a multitude of cultural barriers. These can include deeply ingrained patriarchal traditions, a lack of decision-making authority, and societal expectations. These challenges often manifest as discrimination based on gender, limited mobility, and pressure to prioritise family responsibilities over professional development.

The South Asian society has the tendency to stereotype women as the caregiver within a family. It is rarely that they are viewed as professionals in demanding disciplines and even respected for it. Gender norms are profoundly embedded in South Asian societies, which are primarily patriarchal and can hence limit a women's access to higher level education, training, and employment prospects, especially within specialized disciplines like neurointervention.

We have conducted a survey in 2025 regarding Neurosciences and difficulties faced in choosing such a specialty within the South Asian culture and society. The survey titled 'The Choice of Struggle and its Unavailability to Women' goes into an in-depth analysis on how women in neurosciences are impacted and treated due to the culture, expectations and limitations upon them. Women in South Asia frequently have family members or in-laws who strongly influence their decisions regarding their personal and professional lives. This lack of autonomy can limit their ability to relocate for work, pursue advanced training, or even accept certain job opportunities that may require travel or unusual working hours.

Women also tend to feel pressured to prioritise domestic work and childrearing because cultural norms may place a higher value on marriage and family obligations than on career goals. Furthermore, compared to their male counterparts, women in neurointervention may face a lack of support networks and mentorship opportunities, as well as workplace discrimination such as being passed over for promotions, receiving less mentorship, or subjected to biassed evaluations especially high backlash regarding and during pregnancy and lack of support from both family and colleagues.

Long-standing gender stereotypes can be broken by promoting gender equality through legislative changes, educational programs, and awareness campaigns. Supportive work settings with flexible scheduling, mentorship programs, and welcoming policies can empower women in neurointervention to take on more challenges and aim for leadership positions.

Speaker's abstract

Distal Approach Techniques Using Flow Diverters for Challenging Giant Aneurysms

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Abstract:

When treating a large internal carotid artery aneurysm with a flow diverter (FD), it may be difficult to advance a microcatheter (MC) to the distal outflow segment, especially in cases where the aneurysm is fusiform or the vascular course is distorted, making the neck indistinct, or when there is a severe angle mismatch between the proximal inflow and distal outflow directions.

In such cases, one approach to reach the distal vessel involves looping the microcatheter within the aneurysm, bringing it into close contact with the aneurysm wall to provide support, and then advancing the guidewire distally. To straighten the MC inside the aneurysm and create a trajectory that connects the proximal and distal ends in the shortest path, the wire needs to be anchored. A useful method at this stage is to use a stent retriever, typically employed for mechanical thrombectomy. Alternatively, a dedicated anchoring stent-wire device (e.g., Stabilizer™, Medilizer AGD, Bolt Medical) can also be used.

Another approach involves using a steerable microcatheter (e.g., Leonis Mova™, Kawasumi), which allows the operator to freely manipulate the catheter tip to create a direct course for the guidewire to access the distal end. After successfully reaching the distal vessel, the steerable MC must be exchanged for an FD delivery-compatible micro-catheter. In some cases, especially when using larger diameter steerable MCs, it may be possible to deliver and deploy the FD directly without exchange. This report outlines the specific techniques and discusses potential pitfalls associated with these approaches.

Key words:

flow diverter, distal access, stabilizer, steerable microcatheter

Speaker's abstract

Condylar AVF: Venous anatomy and treatment approach

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Abstract:

The dural arteriovenous fistula (DAVF) of the Anterior Condylar Confluence (ACC) belongs to the ventral epidural group in the classification of intracranial dural structures by Lasjaunias et al., along with cavernous sinus DAVFs. Categories previously referred to as hypoglossal AVF or marginal sinus AVF are synonymous. In this group of DAVFs, the arteriovenous (AV) shunt is not located on the dura or the wall of the confluence itself, but rather within the skull base bone or surrounding soft tissue in the epidural space. These then converge into the venous sinus or confluence and drain through various venous routes.

In ACC-DAVF, the main feeder is the ascending pharyngeal artery (APA), which forms a vascular network and often involves bilateral contribution. Other feeders include the anterior odontoid artery and clival branches. Venous drainage primarily occurs via connected anterior or lateral condylar veins into the jugular vein or prevertebral venous plexus, with partial drainage into the inferior petrosal sinus (IPS). In cases of significant reflux into the IPS, ocular symptoms similar to those seen in cavernous sinus DAVFs may occur.

Treatment involves accessing the dilated ACC via these drainage pathways and performing coil packing. However, since the ACC is adjacent to the hypoglossal canal, overpacking may cause compression symptoms, such as hypoglossal nerve palsy, and therefore should be avoided. Transarterial embolization via the APA is not recommended due to the high risk of ischemic complications involving cranial nerve supply.

There are also DAVFs near the posterior condylar vein that are similar to ACC-DAVFs. Although the drainage routes differ, the treatment strategy is the same. Since the ACC has a complex vascular anatomy, it is essential to perform superselective angiography of both APAs to accurately identify the approach route.

Keywords:

Anterior condylar confluence, dural arteriovenous fistula, embolization

Speaker's abstract

CAS with double balloon protections - Seatbelt and Airbag technique

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Abstract:

Carotid artery stenting (CAS) has traditionally served as a complementary revascularization procedure to carotid endarterectomy (CEA) for carotid artery stenosis. However, with improvements in safety and clinical outcomes, it is increasingly being considered a first-line, minimally invasive treatment option.

The most significant cause of intraoperative and postoperative ischemic complications is the migration of debris resulting from plaque disruption during forced dilation. To prevent this, distal filters have been commonly used. However, in cases of fragile, high-risk plaques, these filters present pitfalls, such as the "no-flow phenomenon" due to excessive debris and the inability to capture liquid components or microemboli that can pass through the filter mesh.

To address this, distal balloon protection temporarily and completely occluding blood flow and aspirating blood along with the debris has been shown to achieve highly effective debris removal. Nevertheless, in patients with well-developed collateral circulation via the external carotid artery system, there is a risk of emboli migrating into the internal carotid or ophthalmic arteries through these pathways. Moreover, intraoperative balloon migration or unintended deflation may lead to failure in blocking debris migration.

As a solution, the "Seatbelt and Airbag technique," which employs both distal and proximal balloon occlusion to completely block blood flow at the lesion site during angioplasty and stenting, has been developed. A similar concept is utilized in the MOMA Ultra System™ (Medtronic), which occludes both the external and common carotid arteries. However, this system has limitations, including access issues, reduced flexibility depending on lesion variability, and the requirement for continuous aspiration through a venous drainage system.

Although the use of multiple balloons makes the procedure more complicated, this protection system has demonstrated greater efficacy in preventing complications compared to single-balloon protection. It is considered a significant advancement in improving the safety of CAS.

Key words:

Carotid stenosis, carotid stenting, distal protection, proximal protection, Seatbelt and Airbag protection system

Speaker's abstract

AAFITN with educational plan

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Abstract:

In Asia-Australasian countries, the prevalence and accessibility of neuroendovascular therapy still remain considerably lower compared to Western countries. In particular, in low-income countries, there is a shortage of trained physicians, limited availability of expensive treatment devices, and inadequate social security systems to support the cost of such treatments. Furthermore, the lack of formal specialist training systems presents a fundamental barrier to the growth of the field.

Among AAFITN member countries, nations such as China, South Korea, and Japan have established systems for the dissemination of neuroendovascular therapy through official specialist certification, largely led by professional societies. In some countries like Vietnam and India, experienced experts have organized educational seminars and training programs to foster skill development. However, in many countries where there are still few qualified instructors with sufficient expertise and knowledge, such systematic educational frameworks have not yet been established, and opportunities for learning remain scarce.

Within AAFITN, academic congresses have played a key role in education, featuring lectures by renowned international experts alongside presentations and discussions on the latest topics. Educational content has been integrated into these events to dedicate time to the training of younger and novice physicians. While industry-sponsored video seminars and live courses have recently become more common across the region, the high cost of participation often poses a barrier, leaving many who wish to attend or view them unable to do so.

To address these challenges, AAFITN is planning to launch an e-learning course as part of a lifelong learning initiative led by the society. This course will cover consensus-based neuroendovascular treatment methods, including essential knowledge in anatomy and physiology, decision-making regarding indications, treatment strategies, procedural techniques, perioperative management, and troubleshooting. The goal is to create a system in which anyone can access high-quality education anytime, anywhere, with the possibility of receiving certification upon course completion.

Through this initiative, AAFITN aims to build an infrastructure that allows people in all Asian countries to benefit from standardized neuroendovascular treatment.

Key words:

Education system, e-learning, neuroendovascular specialist, certification

Speaker's abstract

Pediatric Non-Galenic Brain ArterioVenous Fistula

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- The cause of Pediatric Intracranial hemorrhage are related to Aneurysm 52% and to B-AVM 26% (compare to causes in adult which are Aneurysm 85% and B-AVM 5%
- Pediatric Brain AVM/F are located within Sub-pial location (versus : Vein of Galen Malformation, Dural-AVM) .The arteriovenous shunts could be malformation versus fistula type (nidus versus no nidus). They can be single versus multiple lesions.
- **Specialty of Pediatric B-AVM / AVF Angioarchitecture are fistulas are** more frequent as compared to adults while multiplicity is more frequent then in adults (up to 32%). Arterial changes (AA) are rare in neonates, infants and young children but venous ectasias are more frequent in children as compared to adults.
- There are Associated conditions for example Wyburn Mason Syndrome or Cerebrofacial Arteriovenous Metameric Syndromes (CAMS), Hereditary Hemorrhagic Telangiectasia (Rendu Osler Weber disease) as well as some other types of vascular malformations
- Age of patient when B-AVM is morphologically first detectable versus age of patient when first symptom related to B-AVM occurs. Toronto group found that between 0- 5 years are 10-20%, 5-10 years are 25-32% and 10-15 years are 42-60% (Lasjaunias found that between 0- 2 years are up to 27%)
- Symptoms : In neonates could present with congestive cardiac failure 46%, convulsions 31%, hemorrhage 15% while in children the hemorrhage presentation could be >50% and seizures approximately 20%.
- Multi-organ failure is rare in neonates who present in Congestive Cardiac Failure (8%) as compared to Vein of Galen neonates in CCF (18%)
- The draining veins from B-AVFs which drain rapidly (short subpial length) into the dural sinuses may produce generalized hydrodynamic disorders (hydrocephalus) while the draining veins from B-AVMs which remain subpial over an extended length before entering the dural sinuses will likely interfere with adjacent brain circulation and function and produce venous CVA and atrophy
- The neurological symptoms are likely to be related to venous aspect of the angioarchitecture (venous thrombosis, hemorrhage) as well as the melting brain syndrome
- Among 303 pediatric B-AVM patients there were 52 patients (17%) with B-AVFs in the Bicetre series
- Among 52 pediatric patients with AVFs 23 (45 %) had multiple AVFs ranging from 1 to 7 per patient and 3 patients had both supra and infratentorial location of the AVFs and 1 patient also had a spinal cord localization (Yoshida 2004, Weon 2004).
- Almost 70 % of the CAVMs in their pediatric HHT population were of the fistulas type (CAVF) compared to 18% in the adult HHT
- **B-AVM : Management** can be acute (emergency, urgent) or elective which multidisciplinary consultation are amndatory. The team strategy proposal, the patient acceptance must be documented and follow-up
- **Elective : embolization** aim could be for cure, for size reduction (pre Rad, pre OR), partial, targeted (AA, dural supply) or palliative (PND)
- **Pediatric B-AVM / AVF Conclusion** Fistulas and multiple lesions are more common in children then in adults with B-AVMs. Arterial aneurysms are rare and venous ectasias are common in children with B-AVMs. Unlike adults, children can present with CHF and hydrocephalus Embolization has a major role in the management of pediatric B-AVMs.

Speaker's abstract

Chinese Women in Neurointervention

Assoc. Prof. Sun Xuan, M.D.

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Chinese Women in Neurointervention:
Growth, Challenges, and the WINGS Alliance

Background and Purpose:
Women remain significantly underrepresented in neurointervention globally, with Chinese women constituting less than one-tenth of neurointerventionalists despite the field's rapid expansion. This study aims to examine the current status, achievements, and challenges of Chinese women in neurointervention, and to present initiatives designed to support their professional development and increase their visibility in the field.

Materials and Methods:
A comprehensive review was conducted of Chinese women neurointerventionalists' contributions across major subspecialties including intracranial/extracranial stenosis, aneurysms, vascular malformations, and acute large vessel occlusion treatments. Data were collected on career achievements, research contributions, and practice volumes from leading female practitioners. In 2024, the Chinese Women in Neurointervention Alliance (WINGS) was established under the Chinese Stroke Association, implementing four specialized sections and organizing academic activities to assess the impact of structured support networks.

Results:
Notable achievements include Professor Cai Yiling's 40-year career with zero medical disputes through strict adherence to surgical indications, Professor He Xuying's leadership in complex vascular malformation treatments, the BASIS study led by Dr. Sun Xuan published in JAMA 2024 as the sole evidence-based study for intracranial stenosis endovascular treatment, and Professor Yi Tingyu's all-female team performing over 500 thrombectomies annually. The WINGS Alliance has successfully recruited nearly 200 women neurointerventionalists from over 20 provinces across China, spanning from Xinjiang to Hainan, and has conducted multiple academic events that received widespread acclaim for their meticulous and innovative approaches to complex cases.

Conclusion:
Chinese women neurointerventionalists have demonstrated exceptional contributions to clinical practice and research despite facing unique challenges including radiation exposure and work- life balance demands. The establishment of WINGS Alliance provides a crucial support network that fosters professional development, facilitates knowledge exchange, and amplifies the collective voice of women in the field. Continued international collaboration through platforms like AFFITN is essential for advancing gender equity and recognizing women's contributions to neurointervention globally.

Oral Presentation

Thursday 21 Aug 2025

Time	Code	Abstract title / Present at Hall 1	Presenter	Code	Abstract title / Present at MR 1-3	Presenter
17.00-17.07	A-054	**Outcome analysis and concept development to identify the most appropriate Woven EndoBridge (WEB) size based on the different shapes of cerebral aneurysms**	Dae Chul Suh (South Korean)	A-105	**Deep Learning-Based Automated DWI Infarct Area Identification for Mechanical Thrombectomy Decision Support in Acute Ischemic Stroke**	Wittawat Takong (Thailand)
17.07-17.14	A-064	**Technical tips and clinical aspects of WEB insertion for wide neck bifurcation aneurysm**	Shingo Matsuda (Japan)	A-045	**A Retrospective Analysis of Mechanical Thrombectomy for Primary Medium Vessel Occlusion at a Single Institution**	Michihisa Narikiyo (Japan)
17.14-17.21	A-096	**Three-Dimensional Mapping of ICA Remodeling After Flow Diverter Deployment: The Role of ICA segments and Pre-treatment Angulation**	I-Chang Su (Republic of China (Taiwan))	A-007	**Influence of Cerebral Microbleeds on Hemorrhagic Transformation after Successful Thrombectomy with Acute Ischemic Stroke from Large Artery Occlusion**	Seung Young Chung (South Korea)
17.21-17.30		**Q&A**			**Q&A**	

Friday 22 Aug 2025

Time	Code	Abstract title / Present at Hall 1	Presenter	Code	Abstract title / Present at MR 1-3	Presenter
11.40-11.47	A-023	**Angioarchitectural Features of Cerebral Arteriovenous Malformations and Their Relationship with Epileptic Seizures: A Cross-Sectional Study in a Tertiary Hospital in Surabaya, Indonesia**	Jovian Philip Swatan (Indonesia)	A-076	**Association between spinal vascular malformation and spinal dysraphism: case series**	Abdullah Alhindi (Saudi Arabia)
11.47-11.54	A-053	**Factors associated with Rupture of Flow-Related Aneurysms in Arteriovenous Malformations**	Jirat Greetawee (Thailand)	A-102	**Filum Terminale Arteriovenous Fistula in Association with Degenerative Lumbosacral Spinal Canal Stenosis: Report of 3 Cases and Review of the Literature**	Prasert Iampreechakul (Thailand)
11.54-12.01	A-111	**Ten-Year Experience in the Management and Outcomes of Ruptured Cerebral Arteriovenous Malformations at Siriraj Hospital**	Siriprapa Monsathaporn (Thailand)	A-080	**Spinal Dural and Epidural AVF Treatment Outcomes: Angiographic Cure and Functional Recovery**	Raweeneut Beangklang (Thailand)
12.01-12.10		**Q&A**			**Q&A**	
14.20-14.27	A-089	**A case of choroidal type Vein of Galen Aneurysmal Malformation presenting with subarachnoid hemorrhage in adulthood during follow-up**	Kotaro Ueda (Japan)			
14.27-14.34	A-058	**Intraarterial Chemotherapy in Retinoblastoma**	Umair Rashid Chaudhry (Pakistan)			
14.34-14.41	A-097	**Impact of Magnified 3D Rotational Angiography on Eye Lens Radiation Dose and Image Quality: A Phantom and Pilot Cohort Study**	Ahmed Albaqshi (Saudi Arabia)			
14.41-14.48	A-071	**Evaluation of carotid plaque characterization using dual energy CT**	Sakyo Hirai (Japan)			
14.48-14.55	A-070	**Anatomical Fixation of the Internal Carotid Artery by the Stylopharyngeus Muscle Leading to Kinking After Carotid Artery Stenting**	Keita Fujii (Japan)			
14.55-15.02	A-030	**A Study of a Previously Unrecognized C1 intraosseous vein: Analysis Using CT-Digital Subtraction Venography**	Takahiro Iinuma (Japan)			
15.02-15.10		**Q&A**				

Saturday 23 Aug 2025

Time	Code	Abstract title / Present at Hall 1	Presenter	Code	Abstract title / Present at MR 1-3	Presenter
11.20-11.27	A-072	**Transvenous Embolization For Dural Arterio-Venous Fistula with Isolated Sinus**	Yasunobu Nakai (Japan)			
11.27-11.34	A-060	**Central Venous Stenosis Mimicking Intracranial Venous Hypertension From Dural Arteriovenous Fistula (DAVF) / CarotidoCavernous Fistula (CCF) : A Diagnostic And Therapeutic Dilemma In A Hemodialysis Patient**	Si Zhao Tang (Singapore)			
11.34-11.41	A-086	**Ruptured of Flow related Aneurysm in Dural Arteriovenous Fistula Supplied by the Artery of Wollschlaeger and Wollschlaeger and Bernasconi-Cassinari Artery : A rare case**	Intan Sudarmadi (Indonesia)			
11.41-11.48	A-074	**Precision Under Pressure: Dual Balloon Protection and Pressure Cooker Embolisation of a High Grade Sphenoid Wing Dural Arteriovenous Fistula**	Yuh Yang Leong (Malaysia)	A-027	**Comparative Evaluation of Imaging Modalities for Eligibility in Endovascular Treatment of Delayed Onset Acute Anterior Circulation Ischemic Stroke in Siriraj Hospital: A Retrospective Analysis**	Pattarawit Withayasuk (Thailand)
11.48-11.55	A-044	**Sinus Preservation or Sacrifice? A Comparative Study of Single-Session Outcomes in Endovascular Treatment of Aggressive Intracranial Dural AVFs**	Chayada Harnroongroj (Thailand)	A-052	**Endovascular treatment for carotid blowout syndrome: single centre experience**	Tze Phei Kee (Singapore)
11.55-12.02	A-026	**Vertebro-Vertebral Arteriovenous Fistulae: A Case Series of Endovascular Management at a Single Center**	Pattarawit Withayasuk (Thailand)	A-120	**Scaling Up Thrombectomy Care in Transitioning Heath Systems: A Qualitative Study of Stroke Centres in Canada**	Tanaporn Jaroenngarmsamer (Thailand)
12.02-12.10		**Q&A**				

Oral Presentation

A-007

Influence of Cerebral Microbleeds on Hemorrhagic Transformation after Successful Thrombectomy with Acute Ischemic Stroke from Large Artery Occlusion

Category: Acute Ischemic Stroke

Primary Author

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Background and Purpose
This prospective cohort study aimed to investigate the relationship between the presence and burden of CMBs and the occurrence of hemorrhagic transformation (HT) following successful thrombectomy with acute ischemic stroke from LVO.

Materials and Methods
132 patients with acute ischemic stroke with successful recanalization by thrombectomy for emergent LVO, were enrolled in this study. CMBs and HT assessed using T2-MRI with a validated scale. The primary outcome measure was the occurrence of HT following thrombectomy. We examined the association between the presence and burden of CMBs and HT. The secondary outcome was defined as a poor functional outcome, with mRS ranging from 3 to 6, assessed at 3 months after stroke onset.

Results
Among 132 patients (mean age 66.9±14.0 years, 68.9% male), 24 (18.2%) exhibited CMBs, and 59 (44.7%) developed HT. A total of 47 (49.2%) experienced a poor functional outcome, and the mortality rate was 11.3%. Statistical analysis revealed a significant association between the presence of CMBs and the occurrence of HT after successful thrombectomy (77.8% vs. 38.9%; P=0.002). Moreover, the presence of CMBs was significantly correlated with a higher likelihood of a poor functional outcome (77.8% vs. 42.9%; P=0.007) after adjustment of initial stroke severity and diffusion lesion volume. However, there was no observed association between the presence of CMBs and mortality (16.7% vs. 8.25%; P=0.426).

Conclusion
The presence of CMBs is significantly associated with the occurrence of HT and a poor functional outcome following successful thrombectomy. However, it does not appear to impact mortality rates in these patients.

Oral Presentation

A-023

Angioarchitectural Features of Cerebral Arteriovenous Malformations and Their Relationship with Epileptic Seizures: A Cross-Sectional Study in a Tertiary Hospital in Surabaya, Indonesia

Category:
Cerebral Arteriovenous Malformation

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Background and Purpose
Epileptic seizures are the second most common clinical manifestation of cerebral arteriovenous malformations (AVMs). These seizures can significantly affect a patient's quality of life and lead to increased healthcare costs for both individuals and the healthcare system. Previous studies have identified associations between certain angioarchitectural characteristics of AVMs and the occurrence of epileptic seizures. However, findings remain inconsistent across studies, and data from the Indonesian population are still limited. This study aims to identify the angioarchitectural features of cerebral AVMs associated with epileptic seizures in the Indonesian population, with the goal of improving diagnostic and management strategies to enhance patient outcomes.

Materials and Methods
This retrospective cross-sectional study included all patients diagnosed with cerebral AVM between January 2016 and December 2023. Eligible patients underwent three-dimensional cerebral angiography and had no other intracranial vascular abnormalities. Bivariate and multivariate analyses were performed to assess the relationship between demographic data, angioarchitectural features of cerebral AVMs, and the occurrence of epileptic seizures.

Results
A total of 92 patients (53 males, 39 females) met the inclusion criteria. Epileptic seizures were the second most common clinical manifestation, occurring in 40 patients (43.48%). Bivariate analysis identified significant associations between epileptic seizures and male gender ($p = 0.037$), AVM size ≥30 mm ($p = 0.036$), AVM components located in the cortical area ($p = 0.011$), absence of AVM hemorrhage ($p < 0.001$), feeding arteries from the cortical-pial region ($p = 0.001$), and exclusive superficial venous drainage ($p = 0.021$). Multivariate analysis further confirmed significant associations between epileptic seizures and age <35 years ($p = 0.029$), absence of AVM hemorrhage ($p = 0.002$), and feeding arteries from the cortical-pial region ($p = 0.011$).

Conclusion
This study highlights the relationship between AVM size, vascular component location, presence of AVM hemorrhage, and venous drainage patterns with the occurrence of epileptic seizures. Understanding these associations may inform more effective management strategies for patients with cerebral AVMs.

Oral Presentation

A-026

Vertebro-Vertebral Arteriovenous Fistulae: A Case Series of Endovascular Management at a Single Center

Category:
Other Neurovascular and Rare Diseases

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Background and Purpose
Vertebro-vertebral arteriovenous fistulae (VVFs) are a rare disorder characterized by a direct shunt between the extracranial vertebral artery and the veins of the vertebral venous plexus. This study aims to comprehensively review the characteristics and outcomes of endovascular treatments for VVFs at our center.

Materials and Methods
A retrospective review was conducted on 14 patients diagnosed with a VVF who underwent endovascular treatment at Siriraj Hospital from January 2000 to January 2023. The study assessed patient demographics, presentation, fistula location, treatment strategies, endovascular techniques employed, and treatment outcomes.

Results
Among the 14 pa- tients, 11 (78.6%) were female, with an age range from 25 to 79 years (median: 50 years). Spontaneous VVFs were observed in 64.3% of the cases, including three associated with neurofibromatosis type 1 (NF-1). Iatrogenic injury accounted for two cases, and three patients had VVFs resulting from traffic accidents. A pulsatile neck mass and tinnitus, with or without neurological deficits, were common presenting symptoms. Active bleeding was observed in three cases with vascular injury, while uni- lateral proptosis, congestive heart failure, and incidental findings each presented in one patient. All the VVFs were successfully obliterated without major treatment complications. Parent vessel sacrifice was performed in 85.7% of the cases, while vertebral artery preservation was achieved in the remaining two patients. Embolic materials included detachable balloons, detachable coils, and n-butyl cyanoacrylate (NBCA) glue. All the presenting symptoms showed improvement, and no morbidity or mortality was observed.

Conclusion
Endovascular embolization is a feasible and effective approach for achieving complete VVF obliteration with safety. Parent artery sacrifice should not be reluctantly performed, particularly when adequate collateral circulation is demonstrated.

Oral Presentation

A-027

Comparative Evaluation of Imaging Modalities for Eligibility in Endovascular Treatment of Delayed Onset Acute Anterior Circulation Ischemic Stroke in Siriraj Hospital: A Retrospective Analysis

Category: Acute Ischemic Stroke

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Background and Purpose
The goal of this study is to evaluate the consistency between computed tomographic perfusion (CTP) according to the endovascular therapy following imaging evaluation for ischemic stroke (DEFUSE-3) criteria and other standard computed tomography (CT) imaging modalities, such as multi-phase CT angiography (MCTA) and unenhanced computed tomography (UECT), in assessing patient eligibility for EVT as determined by neurointerventionists evaluations.

Materials and Methods
This retrospective analysis included 64 patients with anterior circulation stroke and onset between 6 to 12 hours or unknown onset. Two neuro-interventionalists independently reviewed images and assessed eligibility for EVT based on the Alberta stroke program early CT score (ASPECTS) derived from UECT and collateral score obtained from MCTA. The results were then compared to CTP, utilizing the DEFUSE-3 criteria.

Results
Out of the 64 cases analyzed (mean age: 69 years ± 13.9 [SD]), 61 met DEFUSE-3 criteria for EVT by CTP, while 54 were deemed eligible based on an ASPECTS ≥ 6 and collateral score ≥ 3. Agreement between the modalities was moderate (Kappa coefficient score 0.4). When patients with ASPECTS score < 6 were excluded, concordance improved to perfect (Kappa coefficient score 1.0). Hence, concordance was significantly associated with ASPECTS scores ≥ 6 ($P < 0.001$).

Conclusion
In patients experiencing anterior circulation stroke with onset between 6 to 12 hours or unknown onset, excluding an ASPECTS score of 6 or higher, MCTA and UECT proved to be reliable for assessing endovascular treatment eligibility. These modalities may serve as substitutes for CTP and offer support in the clinical decision- making process.

Oral Presentation

A-030

A Study of a Previously Unrecognized C1 intraosseous vein: Analysis Using CT-Digital Subtraction Venography

Category:
Other Head and Neck Pathologies

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Background and Purpose

A comprehensive understanding of the perivertebral venous anatomy is essential for elucidating the pathophysiological mechanisms underlying various clinical conditions, including arteriovenous shunts (AVSs) in the surrounding region. The present study aimed to delineate the complex venous architecture surrounding the vertebrae, with particular focus on characterizing previously unrecognized venous structures associated with the C1 vertebral bone.

Materials and Methods

Head computed tomography digital subtraction venography (CT-DSV) images from 289 patients (162 men and 167 women; aged 1 month to 93 years, average 56.1years), acquired preoperatively at our department, were retrospectively analyzed. The venous structures adjacent to the C1 vertebral bone and their connections were scrutinized by two investigators.

Results

Fifteen intraosseous veins were identified within the lateral mass of the C1 vertebra in 13 cases (4.5%; 3 men and 10 women; average 54.2 years). These venous structures were found on the right side in six cases and on the left side in seven. Most of these intraosseous channels connected the suboccipital cavernous sinus (SOCS) with the intervertebral veins (IVVs). Minor variations included channels connecting the vertebral vein (VV) with the SOCS, the VV with the IVVs, the VV with the anterior internal vertebral vein (AIVV), the VV with the posterior external venous plexus (PEVP), the AIVV with the PEVP, and the AIVV with the IVVs.

Conclusion

CT digital subtraction venography (CT-DSV) revealed venous structures coursing within the C1 vertebral lateral mass. These venous structures have not been described in the previous literature and may potentially be involved in diseases affecting the venous channels, including AVSs in this region. (300 words)

Oral Presentation

A-044

Sinus Preservation or Sacrifice? A Comparative Study of Single-Session Outcomes in Endovascular Treatment of Aggressive Intracranial Dural AVFs

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Intracranial dural arteriovenous fistulas (dAVFs) are complex vascular lesions that challenge treatment strategies. While endovascular therapy is the gold standard, debate persists between sinus preservation and sacrifice approaches, particularly for low to intermediate dAVFs with non-critical sinus involvement. This study compares the effectiveness, success rates, and complications of these two techniques in treating aggressive intracranial dAVFs after a single treatment session.

Materials and Methods

A retrospective analysis was conducted on 92 patients with 125 aggressive dAVFs (Cognard type IIA, IIB, and IIA+B) treated endovascularly between January 2018 and December 2023. Patients were divided into sinus preservation (n=25) and sinus sacrifice (n=100) groups. Cavernous-carotid fistulas, Cognard type II with critical sinus, and Cognard III-IV were excluded. Immediate post-operative and 3-6 month follow-up angiographic outcomes were evaluated, categorizing results as complete obliteration, benign, or aggressive. Complications and retreatment rates were also assessed.

Results

Sinus sacrifice achieved significantly higher complete obliteration rates compared to sinus preservation, both immediately post-operation (62% vs. 28%, p=0.003) and at 3-6 month follow-up (75% vs. 40%, p=0.002). The sinus preservation group had a higher retreatment rate (40% vs. 13%, p=0.003). No significant differences were found in procedural parameters between groups. Complication rates were lower in the sinus sacrifice group (8%) compared to the sinus preservation group (16%), though not statistically significant (p=0.234). Most complications were minor, with one case of major complication (pulmonary embolism) in the sinus sacrifice group.

Conclusion

This study demonstrates the superiority of sinus sacrifice over preservation in treating aggressive intracranial dAVFs. Sinus sacrifice achieved higher obliteration rates and lower retreatment needs, emphasizing the importance of normalizing pressure gradients over preserving specific venous routes. These findings suggest that sinus sacrifice should be considered a primary treatment option for most aggressive dAVFs with non-critical sinus involvement.

Oral Presentation

A-045

A Retrospective Analysis of Mechanical Thrombectomy for Primary Medium Vessel Occlusion at a Single Institution

Category: Acute Ischemic Stroke

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Background and Purpose

Mechanical thrombectomy (MT) for distal medium vessel occlusion (DMVO), including primary medium vessel occlusion (MeVO), has recently been evaluated through multiple studies. However, its clinical efficacy and safety profile remain under debate. This study aimed to retrospectively assess the outcomes of MT for primary MeVO at our institution and to characterize factors associated with favorable prognosis.

Materials and Methods

A total of 132 patients who underwent MT for MeVO between April 2016 and March 2024 were screened. Of these, 58 patients who met the inclusion criteria pre-stroke modified Rankin Scale (mRS) score of 0–2, initial evaluation by a neurosurgeon, and exclusion of in-hospital onset—were analyzed. Patients were stratified into two groups: those with favorable outcomes (discharge mRS 0–3, n=33) and those with poor outcomes (discharge mRS 4–6, n=25). Patient demographics, occlusion characteristics, procedural variables, and clinical outcomes were compared retrospectively. Statistical analyses were conducted using JMP®14.2.0 software.

Results

The favorable outcome group exhibited significantly lower baseline National Institutes of Health Stroke Scale (NIHSS) scores, fewer thrombectomy passes, and a markedly lower incidence of symptomatic intracranial hemorrhage ($p<0.01$). No statistically significant differences were observed between the groups regarding occlusion sites or specific thrombectomy techniques, including aspiration, combined methods, or stent retriever use. Notably, tortuous vascular anatomy was more frequently observed in the poor outcome group, potentially complicating procedural success.

Conclusion

Our findings suggest that lower baseline neurological severity, fewer retrieval attempts, and the absence of vascular tortuosity are positively associated with favorable clinical outcomes following MT for primary MeVO. Given the emerging but inconclusive evidence from recent randomized controlled trials, careful patient selection and individualized procedural strategies remain critical to optimizing outcomes. Future prospective studies are warranted to better define the role of MT in this patient population.

Oral Presentation

A-052

Endovascular treatment for carotid blowout syndrome: single centre experience

Category:
Other Head and Neck Pathologies

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Background and Purpose

Carotid blowout syndrome (CBS) is a challenging complication that arises in patients treated with head and neck cancer as a result of arterial wall necrosis from irradiation or direct tumor invasion. This retrospective review aims to identify factors affecting endovascular treatment decision of CBS between reconstructive and deconstructive techniques.

Materials and Methods

We conducted a retrospective review of all CBS cases with either internal carotid artery (ICA) or common carotid artery (CCA) as culprit vessel, treated endovascularly at our institution from January 2015 to June 2024. A total of 8 cases were identified. CBS was classified as type 1 (impending rupture), type 2 (sentinel bleeding) and type 3 (active massive bleeding).

Results

Out of the 8 cases, 4 underwent parent artery reconstruction with covered stent while the other 4 underwent parent artery sacrifice. Of the 4 patients treated with covered stent, 2 had type 3 CBS and 2 had type 1 CBS. Balloon test occlusion (BTO) was not performed. 3 out of 4 patients in this group had delayed complications: 1 patient had multiple rebleeding episodes with mild in-stent stenosis; 2 developed delayed stent occlusion with ipsilateral MCA infarct. Of the 4 patients treated with parent artery sacrifice, all presented with type 1 CBS. One patient failed BTO and had external carotid artery (ECA)-ICA bypass prior to occlusion of the offending ICA. The other 3 demonstrated good cross flow from contralateral ICA injection. 3 out of 4 patients in this group had complications: 2 developed infarcts of the occluded ICA territory and the other 1 patient had further bleeding episodes from the ipsilateral CCA (post ICA occlusion).

Conclusion

Endovascular treatment for CBS carries high complication rates with the current treatment strategies. For patients who passed BTO, parent artery sacrifice may be a more favorable option, as it is a more definitive treatment and does not require dual antiplatelet therapy. For patients who failed BTO, covered stent placement would be more favorable. Careful consideration of treatment strategy is essential to balance the risks of future ischaemic or haemorrhagic events.

Oral Presentation

A-053

Factors associated with Rupture of Flow-Related Aneurysms in Arteriovenous Malformations

Category:
Cerebral Arteriovenous Malformation

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Background and Purpose
Flow-related aneurysms (FRAs) are common in patients with brain arteriovenous malformations (AVMs) and confer an elevated risk of intracranial hemorrhage. However, predictors of FRA rupture remain poorly defined. This study aimed to identify clinical and angiographic factors associated with rupture of FRAs.

Materials and Methods
We performed a retrospective cross-sectional study of AVM patients with a single flow-related aneurysm confirmed by digital subtraction angiography (DSA) between 2009 and 2023. Patient demographics, AVM characteristics, and aneurysm features were collected. Univariate and multivariate logistic regression analyses were conducted to determine predictors of aneurysm rupture, reported as odds ratios (OR) with 95% confidence intervals (CI).

Results
Eighty-nine patients were included (median age 45 years; 50% male). Twenty-two patients (24.7%) presented with ruptured FRAs. Ruptured aneurysms had significantly larger diameters compared to unruptured ones (5.85 mm vs. 2.4 mm, $p<0.05$). Univariate analysis identified several risk factors for rupture: aneurysm size, posterior circulation location, venous outlet stenosis, and saccular morphology with lobulation ($p<0.05$ for each). An aneurysm diameter ≥4 mm was a strong predictor of rupture (OR 17.31, 95% CI 5.24–56.80). In multivariate analysis, only aneurysm size ≥4 mm remained independently associated with rupture (adjusted OR 34.53, 95% CI 3.61–329.45, $p<0.05$). Endovascular treatment, particularly coil embolization, was the primary modality for ruptured aneurysms, whereas unruptured aneurysms were often managed

Conclusion
Aneurysm size ≥4 mm is the most significant independent predictor of rupture in flow-related aneurysms associated with AVMs. Although posterior circulation, venous stenosis, and lobulated morphology were associated with rupture in univariate analysis, their predictive power was not independent of size. These findings highlight the importance of aneurysm size in clinical decision-making and support early intervention for FRAs measuring 4 mm or larger to mitigate hemorrhagic risk.

Oral Presentation

A-054

Outcome analysis and concept development to identify the most appropriate Woven EndoBridge (WEB) size based on the different shapes of cerebral aneurysms

Category: Cerebral Aneurysm

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Background and Purpose

To analyze outcomes and identify the most effective method for selecting the optimal WEB size by correlating volumetric parameters with specific aneurysm configurations. The goal of this study is to improve the final outcomes of aneurysm treatment and reduce the WEB exchange rate, thereby minimizing the risk of selecting undersized or oversized WEBs.

Materials and Methods

Sixty consecutive aneurysms treated with the WEB device were included in this study. The volume measurements of the aneurysms, based on spherical and columnar configurations, were compared with the WEB volume to assess the accuracy of the device's fit within the aneurysm. After categorizing the aneurysms into symmetric and asymmetric shapes, the asymmetric aneurysms were further classified into five types based on their configurations. We calculated the WEB index (WEB volume/aneurysm volume) to predict whether the aneurysms were undersized or oversized. Different aneurysm shape types were compared by using appropriate statistical analyses.

Results

Symmetric (65%) were more prevalent than asymmetric aneurysms (35%). Among the five types of aneurysm shapes, the column shape was the most common (n=32, 53%), followed by submarine (n=9), spherical (n=7), boots (n=6), and mitten (n=6) shapes. The WEB index was associated with the presence of stent-assisted procedures (oversizing) and the occurrence of sac remnants and/or recurrences (undersizing). There was one non-procedure-related death and two retreatments (3%) among the eight cases of residual and/or recurrent neck or sac during a mean follow-up period of six months (ranging from 3 to 17 months) via MRA, along with a mean clinical follow-up of eleven months (ranging from 3 to 28 months).

Conclusion

One of the essential steps in WEB embolization is the measurement of aneurysm volume, which depends on its size (mean width and height) and shape types. Volume-based WEB selection (WEB index) is the most critical factor in determining the appropriate WEB size based on the aneurysm's shape.

Oral Presentation

A-058

Intra Arterial Chemotherapy in Retinoblastoma

Category: Others

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Background and Purpose

To study the treatment outcomes of ophthalmic artery chemosurgery (OAC) in children with unregressed retinoblastoma after 6 cycles of systemic chemotherapy. STUDY DESIGN Interventional prospective case series. PLACE AND DURATION Lahore General Hospital over one year from October, 2017 to December, 2024. 500 Patients were recruited from the outpatient Department of Ophthalmology and treated at Neuroangio Suite, Lahore General Hospital, Lahore.

Materials and Methods

Children presenting with group D retinoblastoma and haring residual unregressed tumor completion of 6 cycles of chemotherapy were included in the study. The tumor was classified according to the international classification of Retinoblastoma System (ICRB) on EUA treatment outcome of (OC) was evaluated in terms of signs of regression. The ophthalmic artery was cannulised through digital substraction angiography (DSA).

Results

Our study included 500 children, 300 children had unilateral retinoblastoma while 200 children were one eyed due to enucleation of the other eye with group E tumor. Signs of regression appeared after single OAC in 300 children, and after 2 OAC sessions in 100 children. Cannulisation of ophthalmic artery failed in 100 children who had narrow intra-arterial caliber. A total of upto 11 treatment sessions were done, 200 with successful cannulisation of ophthalmic artery infundibulum. Melphalan was used alone in 5 sessions and melphalan + topotecan was given in the 4 sessions. Severe vomiting within 24 hours post treatment was observed after 8 treatment sessions, mild to moderate reversible orbital swelling was observed after 7 treatment sessions. 15 children had severe prolonged orbital swelling which resolved 8 weeks after treatment with vision preservation. Five children had chorio toxicity 12 hours post treatment and permanent loss of vision. All patients were followed for mean 10 + SD 1.2 months.

Conclusion

Ophthalmic artery chemosurgery is a useful tool for addressing residual intraocular retinoblastoma after completion of systemic chemotherapy in eyes with group D retinoblastoma at the time of initial presentation.

Oral Presentation

A-060

CENTRAL VENOUS STENOSIS MIMICKING INTRACRANIAL VENOUS HYPERTENSION FROM DURAL ARTERIOVENOUS FISTULA (DAVF) / CAROTIDOCAVERNOUS FISTULA (CCF) : A DIAGNOSTIC AND THERAPEUTIC DILEMMA IN A HEMODIALYSIS PATIENT

Category:
Dural Arteriovenous Fistulae

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Background and Purpose

Intracranial venous hypertension secondary to central venous stenosis is a rare but important mimicker of carotidocavernous fistula (CCF) and dural arteriovenous fistula (dAVF), particularly in patients on long-term hemodialysis access. We present a case of symptomatic intracranial venous reflux initially suspected to be CCF/dAVF, which was ultimately found to be due to isolated left brachiocephalic vein (BCV) stenosis.

Materials and Methods

A 56-year-old woman with end-stage kidney disease on hemodialysis via tunnelled right internal jugular vein (IJV) pheresible catheter and known left upper limb brachiocephalic (BC) arteriovenous fistula (AVF). She presented with left eye proptosis, chemosis, and raised intraocular pressure. Initial workups including CT brain venogram suggested intracranial venous congestion and raised suspicion for dAVF.

Results

Diagnostic intra- and extra-cranial angiography did not identify any CCF/dAVF. Left upper limb BC AVF fistulography and central venogram were then performed instead, which revealed tight focal stenosis at the left BCV with extensive venous collaterals and venous reflux. Balloon venoplasty (14×40 mm Atlas) was attempted but showed significant recoil. Hence, the decision was made to stent the left BCV instead with a self-expanding nitinol stent (Abre 16×80 mm), which was successful and resulted in immediate resolution of venous hypertension and reflux on angiography. The patient's ocular symptoms resolved post-procedure with normalisation of intraocular pressure (from 25 mmHg to 9 mmHg in the left eye). There were no procedural complications.

Conclusion

This case illustrates the importance of considering central venous stenosis as a reversible cause of intracranial venous congestion in patients on long-term hemodialysis, even when contralateral central venous pathways are patent. Central venous stenosis may occasionally mimic CCF and/or dAVF, both clinically and radiologically. Venous stenting can be an effective therapeutic option, although caution is warranted when extrinsic compression is suspected. Awareness of this entity can prevent unnecessary neurosurgical or neurointerventional procedures and guide appropriate vascular intervention.

Oral Presentation

A-064

Technical tips and clinical aspects of WEB insertion for wide neck bifurcation aneurysm.

Category: Cerebral Aneurysm

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Background and Purpose

Treatment for wide neck bifurcation intracranial aneurysms using endovascular therapy is still challenging in spite of the development of treatment devices. Flow disruption with the Woven EndoBridge (WEB) is an innovative treatment device for wide-neck bifurcation intracranial aneurysms. To achieve successful treatment, it is important to select the appropriate size of WEB and deploy the precise location. We report clinical tips and intraoperative findings based on our experience treated with WEB.

Materials and Methods

Five patients (5 aneurysms: case1-case5) consecutively treated with WEB in our institution for a bifurcation aneurysm since June 2024 were retrospectively evaluated. Intraoperative findings of each case were noted. All aneurysm measurements were performed using Digital Subtraction Angiography (DSA) results, and aneurysm volume calculated with 3D DSA reconstruction imaging using software.

Results

Calculated aneurysm volume was ranged 93.8 - 659.1ml and mean devise-aneurysm volume ratio was 0.84±0.14. The mean aspect ratio and dome-to-neck ratio were 1.41±0.53 and 1.66±0.53. In two of the five cases, WEB size was changed as intraoperative findings. These two cases were higher values of aspect ratio and dome-to-neck ratio than in other three cases. In four of the five cases, diameter of the WEB was chosen 1mm larger than average aneurysm width on orthogonal projections. In one of the five cases, height of the WEB was chosen 1mm less than the aneurysm minimal height. One of the intraoperative findings was it was important to consider that vessel deviation due to insertion of microcatheter into target vessel, and catheter manipulation could be more difficult than preoperative expectation. In case4, an attempt was made to place a WEB in the anterior communicating artery aneurysm, but as part of the WEB protruded into the parent vessel, a stent (Neuroform Atlas) was placed from A2 to A1, jacking up the WEB and securing the parent vessel, resulting in successful embolization.

Conclusion

In irregular aneurysms with high aspect ratio and dome-to-neck ratio, selecting appropriate WEB size is more challenging. The rescue use of intracranial stent with WEB is reasonable, and vessel deviation, approach side, and devise system are well considered.

Oral Presentation

A-070

Anatomical Fixation of the Internal Carotid Artery by the Stylopharyngeus Muscle Leading to Kinking After Carotid Artery Stenting

Category:
Other Head and Neck Pathologies

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Background and Purpose

Carotid artery stenting (CAS) is widely performed for the treatment of carotid artery stenosis. Postoperative kinking of the internal carotid artery (ICA) is occasionally observed; although usually benign, it may in rare cases result in complications such as embolism or vessel occlusion. While previous studies have suggested that the stylopharyngeus muscle can compress the ICA, its role in morphological changes before and after CAS, particularly in the development of kinking, has not been fully elucidated.

Materials and Methods

We retrospectively analyzed digital subtraction angiography (DSA) images from 17 patients who underwent CAS between May 2022 and March 2023. The segment from the carotid bifurcation (where the ICA and external carotid artery divide) to the entrance of the carotid canal was equally divided into nine sections, and eight reference points (Point 1 through 8) were defined in order from the bifurcation side. The amount of shift at each point was measured before and after CAS. Statistical analysis using Tukey's honestly significant difference (HSD) test was performed to evaluate the significance of these positional changes. Additionally, anatomical dissection of two cadavers was performed in August 2023 at Yokohama City University Graduate School of Medicine to investigate the relationship between the stylopharyngeus muscle and the ICA.

Results

The analysis showed that minimal positional shifts were observed from Point 1 through 4, while significant shifts were noted from Point 6 through 8 ($p < 0.001$), suggesting vascular fixation around Point 5. In most cases, Point 5 corresponded to the region slightly proximal to the point where the ICA bends anteriorly. In one cadaveric specimen, the stylopharyngeus muscle was found to compress the ICA. Notably, the site of compression corresponded to Point 5 on imaging, supporting the radiological findings.

Conclusion

Compression by the stylopharyngeus muscle may serve as an anatomical fixation point for the ICA. Depending on the stent deployment site during CAS, kinking may occur as a result of the interaction between mechanical forces from stent-induced vessel deviation and this anatomical fixation. Preoperative recognition of such anatomical characteristics may facilitate the prediction and prevention of kinking, thereby contributing to improving the safety and outcomes of CAS procedures.

Oral Presentation

A-071

Evaluation of carotid plaque characterization using dual energy CT

Category:
Other Head and Neck Pathologies

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Background and Purpose

Dual energy CT (DECT) is useful for qualitative diagnosis of tissues by using the attenuation difference of material-specific CT values obtained by two types of X-ray energy. Although clinical applications are expanding, reports on the carotid plaque characterization are limited.

Materials and Methods

Of 52 cases in which carotid artery stenting (CAS) was performed at our hospital from June 2023 to March 2025, 34 cases and 38 lesions were evaluated using DECT images. Plaque characterization were evaluated by setting manual ROIs on the axial cross section of the most stenotic lesion, and measuring electron density (Rho), effective atomic number (Z), virtual non-contrast CT value (VNC), fat fraction (FF %), and iodine concentration (IC %). Each parameter was compared between two groups based on the presence or absence of symptoms of the lesion, and correlations with the sternocleidomastoid muscle ratio (rSI) of plaques using the MRI BB method were examined.

Results

Median age was 76 years (range 72-81), all patients were male, 13 patients (34.2%) had symptomatic lesions, and median stenosis rate was 76% (range 64-88). When examining each parameter according to the presence or absence of symptoms, Rho (28.6±6.5 vs 36.7±9.4, $p<0.01$) and VNC (21.8±6.7 vs 30.0±10.4, $p<0.05$) were significantly lower in symptomatic lesions, and FF% (22.3±4.6 vs 16.2±5.6, $p<0.01$) was significantly higher. There were no significant differences between symptomatic and asymptomatic patients in Z (8.19±0.38 vs. 8.16±0.52, p=0.50), IC% (13.4±8.4 vs. 12.5±8.8, p=0.63), and rSI (1.44±0.41 vs. 1.40±0.43, p=0.67). Multivariate analysis of each DECT parameter showed that FF% (OR; 0.68 [0.43 – 1.07], p=0.08) was a borderline significant predictor of symptomatic lesions. There were no significant correlations between rSI, angiographic ulceration, or postoperative DWI positivity rate of CAS and each DECT parameter.

Conclusion

Symptomatic lesions had lower CT values and higher fat fractions of plaques, but there was no difference in iodine concentration, which is considered to reflect neovascularization, compared with asymptomatic lesions. Although there was no correlation with rSI, which is an index of instability, it was suggested that DECT parameters, especially the fat fraction within the plaque, may be useful in predicting symptomatic lesions.

Oral Presentation

A-072

Transvenous embolization for dural arterio-venous fistula with isolated sinus

Category:
Dural Arteriovenous Fistulae

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Background and Purpose
Intracranial dural arteriovenous fistulas (DAVFs) with isolated sinus were associated with high hemorrhagic risk. However, packing of the infected sinus was considered to be a curative treatment, transvenous penetration for occluded sinus is difficult with under-reporting of their optimal approaches.

Materials and Methods
Retrospective analysis of adult patients with an isolated sinus DAVFs treated at our institution and affiliated hospital between March 2024 and April 2025. Of 5 patients with an isolated sinus DAVFs underwent treatment. Cases were analyzed for clinical presentation, neuroradiologic findings, treatment techniques, angiographic and clinical outcomes and complications.

Results
The median age was 75.4 and 3 were male. One patient presented with intracranial hemorrhage, 2 patients presented with convulsion, 1 patient present with pulsatile tinnitus, and 1 patient without symptom. Isolated sinus DAVFs were located at transverse ~ sigmoid sinus in 4 patients, and 1 patient is cerebellar tentorium. To evaluate the occluded sinus using T1-weighted black-blood MRI, and transvenous navigation via the occluded sinus using tetraxial catheter system were successful in all cases. Only 1 case suffered subarachnoid hemorrhage due to perforation of dural sinus. All cases were treated by transvenous embolization using Onyx with/without coils, complete occlusion was achieved in all cases.

Conclusion
Careful evaluation of occluded sinus using T1-weighted black-blood MRI, and using a highly supportive tetraxial catheter system, transvenous embolization of isolated sinus DAVFs is possible without direct surgical venous sinus approach.

Oral Presentation

A-074

Precision Under Pressure: Dual Balloon Protection and Pressure Cooker Embolisation of a High Grade Sphenoid Wing Dural Arteriovenous Fistula.

Category:
Dural Arteriovenous Fistulae

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Background and Purpose
Dural arteriovenous fistulas (DAVF) with cortical venous reflux carry a high risk for intracranial haemorrhage. Sphenoid wing DAVF often receives multi-source arterial supply from both the internal and external carotid systems, demanding strategies to avoid catastrophic non-target embolic migration. Reflux protection becomes the key. We report a novel case utilising dual balloon protection and the pressure cooker technique to safely achieve curative embolisation.

Materials and Methods
A 45-year-old man presented with left sided tinnitus and headache. Prominent cortical veins noted on MRI at the left temporal region. Digital subtraction angiography revealed a left sphenoid wing Cognard IV DAVF with arterial supply from the sphenoidal and cavernous branches of the left middle meningeal artery (MMA), the recurrent meningeal artery from the left ophthalmic artery, and branches from the meningohypophyseal trunk (MHT) and inferolateral trunk (ILT) of the left internal carotid artery (ICA). The fistula drained into an ectatic sphenoparietal sinus and superficial middle cerebral vein, confirming cortical venous reflux. To prevent reflux of embolic agent into critical branches, dual Eclipse 2L balloon protection was employed. One balloon was inflated within the cavernous ICA to protect the MHT and ILT, while a second was positioned in the 2nd–3rd segment of the ophthalmic artery to guard the recurrent meningeal artery. This set-up enabled full flow control and protection across both internal carotid and ophthalmic systems. A Sonic detachable microcatheter was navigated into the sphenoidal branch of the left MMA. The pressure cooker technique was applied using Optima coils to create a proximal plug, jailing the Sonic microcatheter, followed by controlled injection of Squid 18/12 copolymer to penetrate the fistula and into the foot of vein.

Results
Complete angiographic obliteration was achieved with no copolymer reflux into the ICA or ophthalmic artery. The patient's symptoms resolved post embolisation and remained neurologically intact.

Conclusion
This case highlights the strategic reflux prevention using dual balloon protection in critical branches in high-risk DAVFs with dangerous anastomoses. When combined with the pressure cooker technique, this approach allows safe and precise embolisation in complex neurovascular lesion.

Oral Presentation

A-076

Association between spinal vascular malformation and spinal dysraphism: case series.

Category:
Spinal vascular diseases

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Background and Purpose

Several case reports document the association between spinal dysraphism, such as spinal lipoma and lipomyelomeningocele, and spinal vascular malformation, such as dural arteriovenous fistulae (DAVFs) and spinal arteriovenous malformation (AVM), suggesting a potential causal relationship. The incidence of spinal dysraphism worldwide is approximately 1 -3 in 1000 live births. To further investigate this connection, we present seven additional cases of spinal dysraphism coexisting with spinal vascular malformation.

Materials and Methods

We identified 304 patients with spinal dAVF and AVM from 2002 to 2024. Most of our patients have spinal dAVFs (240 patients), and the other 64 patients have spinal AVMs. All patients were treated, with most patients undergoing endovascular embolization, and a few patients were treated by open surgical resection of the vascular malformation. We identified seven cases of spinal dAVFs among our cohort of 304 patients with spinal dysraphism. Comprehensive analyses of imaging findings—including MRI and angiographic results—were conducted alongside assessments of clinical presentations, long-term outcomes, and treatment responses.

Results

The mean age of the patients was approximately 68 years, with a distribution of five females and three males. The most frequently observed spinal dysraphism was tethered cord syndrome, present in five patients, four of whom had accompanying intrathecal spinal lipomas, and three patients also showed associated dural ectasia—only one patient presented with lipomyelocele. The predominant symptom was motor weakness. MRI findings revealed vascular flow voids and increased signal intensities predominantly in the sacral and lumbar regions. The lateral sacral artery was the primary arterial feeder, with intradural perimedullary veins as the main drainage pathway. Treatment outcomes varied significantly, with three patients undergoing initial embolization followed by surgery, another three undergoing endovascular embolization only, and one undergoing surgical treatment with a good outcome following treatment in most patients.

Conclusion

In our study of 304 patients with spinal vascular malformations, we found a prevalence of 2.30% for associated spinal dysraphism, significantly higher than the global incidence of 0.1% to 0.3%. This suggests a potential association between the two conditions.

Oral Presentation

A-080

Spinal Dural and Epidural AVF Treatment Outcomes: Angiographic Cure and Functional Recovery

Category:
Spinal vascular diseases

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Background and Purpose
Spinal arteriovenous fistulas (AVFs), encompassing dural (DAVF), epidural (EDAVF), and complex multifocal variants, represent an underrecognized but potentially reversible cause of progressive myelopathy. Despite advances in diagnostic imaging, treatment outcomes remain unpredictable, particularly in anatomically complex lesions. This study reports the outcomes of spinal AVFs treated at Siriraj Hospital, utilizing a lesion-specific, angioarchitecture-guided strategy refined over a 16-year period.

Results
A retrospective review of 61 patients treated between 2007 and 2023 was conducted, comprising 48 DAVFs, 8 EDAVFs, and 5 multiple AVFs (including DAVF with perimedullary AVF × 1, DAVF with EDAVF × 3, and DAVF with filum AVF × 1). Treatment selection endovascular (60%), microsurgical (30%), or combined (11%) was guided by feeder selectability and the presence of ASA/PSA origin. Results: The median age was 58 years, with 66% male predominance. Clinical presentations included motor weakness (85%), numbness (65%), pain (50%), and bladder/bowel dysfunction (56%), without hemorrhagic events. Thoracic location was most common (42%), and 23% exhibited multiple feeders. No aneurysms were detected, while venous pouches were identified in one DAVF and one EDAVF case. The median mALS at presentation was 7. NBCA was used in 95% of endovascular cases. Surgical intervention was required in 41% due to anatomical inaccessibility (n=8) or high-risk feeders (ASA n=8, PSA n=4). Angiographic cure was achieved in 89.8%, reaching 98% among DAVFs. Post-treatment MRI demonstrated significant radiologic improvement, with median T2 hyperintensity reduced from 7 levels to 0 and complete resolution of flow voids (p=0.041). Functional improvement occurred in 80%, with complete recovery in 19%. Motor weakness improved in 92% of cured and 79% of improved cases. Motor weakness at presentation correlated with favorable outcomes (p<0.001), while residual T2 hyperintensity >3 levels predicted poor prognosis (OR 0.00, p=0.059). The complication rate was 6.8%, two feeder extravasations (DAVFs), and two glue migrations into perimedullary veins (DAVFs). Post-treatment medications were required in 45% (heparin 26%, dexamethasone 19%). None of the complications resulted in permanent neurological deficits.

Conclusion
A lesion-specific, angioarchitecture-guided strategy achieved durable angiographic cures and substantial functional recovery in spinal AVFs. Early diagnosis and radiologic reversibility are critical prognostic factors, supporting individualized hybrid treatment as a new standard of care.

Oral Presentation

A-086

Ruptured of Flow related Aneurysm in Dural Arteriovenous Fistula Supplied by the Artery of Wollschlaeger and Wollschlaeger and Bernasconi-Cassinari Artery : A rare case.

Category:
Dural Arteriovenous Fistulae

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Background and Purpose
Subarachnoid hemorrhage (SAH) caused by ruptured intracranial aneurysm is a life-threatening condition. Flow-related aneurysms associated with underlying vascular malformations such as dural arteriovenous fistulas (DAVFs) represent a rare cause of hemorrhage. The artery of Wollschlaeger and Wollschlaeger (AWW), a deep cerebellar branch of the superior cerebellar artery, is an extremely uncommon site for aneurysm formation. When hemodynamic stress from DAVFs involves such distal vessels, it may lead to the rupture of flow-related aneurysms. These cases are particularly challenging due to the deep vascular location, diagnostic difficulty, and limited access for treatment. Prompt identification and targeted endovascular therapy are crucial to prevent rebleeding and ensure favorable outcomes.

Results
We report the case of 34 y.o. male patient with acute subarachnoid hemorrhage. Digital subtraction angiography revealed a DAVF supplied by two rare feeders: the AWW (a cerebellar branch of the superior cerebellar artery)and the Bernasconi-Cassinari artery (a dural branch of the internal carotid artery). Venous drainage was observed into cortical, cerebellar, and deep venous systems. Additionally, a ruptured flow-related aneurysm was identified on the AWW, measuring 3.80 mm at the neck and 7.78 mm in height with a width of 3.89 mm. Endovascular access was established through the left vertebral artery (V3 segment) using a Fargo 6F guiding catheter. A Magic 1.5 microcatheter, navigated with a Hybrid 007D microwire, was advanced into the AWW adjacent to the fistulous site. Embolization was performed using n-butyl cyanoacrylate (NBCA) mixed with Lipiodol at concentrations of 20% and 30%. Post-procedural angiography demonstrated complete occlusion of both the fistulous site and the flow related aneurysm. The patient recovered well with no new neurological deficits. Follow-up imaging at three months confirmed durable occlusion and absence of recurrence.

Conclusion
This case showed a very rare ruptured flow related aneurysm in arterial feeders of DAVFs by the AWW with another feeder from the Bernasconi-Cassinari artery. Complete obliteration is reached by embolize the AWW.

Oral Presentation

A-089

A case of choroidal type Vein of Galen Aneurysmal Malformation presenting with subarachnoid hemorrhage in adulthood during follow-up

Category:
Pediatric Vascular diseases

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Background and Purpose

Vein of Galen aneurysmal malformation (VGAM) accounts for approximately 1% of all intracranial vascular malformations, with only a few cases approximately up to five reported annually in Japan. The choroidal type VGAM is characterized by a primitive vascular architecture, in which the aneurysmal sac is connected to a network of arteries within the cistern. This subtype poses significant challenges to curative treatment, and often managed palliatively with repeated transarterial embolization (TAE) during follow-up. Currently, there is no established evidence regarding the optimal timing for additional interventions in such cases, and treatment decisions are often made at the discretion of the attending physician based on the individual clinical course.

Results

A 20-year-old male with a history of choroidal type VGAM, who had undergone multipleTAEs during infancy at another institution and was followed with MRI, presented with sudden headache and vomiting. CT scan revealed diffuse subarachnoid hemorrhage along with ventriculomegaly. Digital subtraction angiography under general anesthesia demonstrated numerous feeding arteries, and feeder aneurysm was identified on both the right quadrigeminal artery and the left subforniceal artery. Based on the hemorrhage distribution, the aneurysm on the right quadrigeminal artery was considered the likely source of bleeding. Subsequently, TAE using n-butyl cyanoacrylate (NBCA) was performed. A total of six major feeding arteries, including the two with feeder aneurysms, were embolized. The postoperative course was uneventful, and the patient was discharged home on postoperative day 17. Retrospective review of follow-up imaging from the previous institution revealed progressive stenosis of the left transverse sinus over the preceding years, which had progressed to complete occlusion on MRI one month prior to the hemorrhagic event. Additionally, although not previously noted, retrospective analysis revealed the emergence of micro-feeder aneurysms on MR images several years earlier.

Conclusion

Progressive stenosis or occlusion of major venous sinuses and the emergence of feeder aneurysms may reflect worsening of the arteriovenous shunt pathology in VGAM. However, it can be challenging to detect small feeder aneurysms using routine MRI. When progressive findings are observed during regular MRI follow-up, cerebral angiography should be considered to evaluate for the presence of aneurysms. If identified, prophylactic embolization may be warranted to prevent hemorrhagic complications.

Oral Presentation

A-096

Three-Dimensional Mapping of ICA Remodeling After Flow Diverter Deployment: The Role of ICA segments and Pre-treatment Angulation

Category:
Cerebral Aneurysm

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Background and Purpose
Flow diverters (FDs) are increasingly used for internal carotid artery (ICA) aneurysms, yet the extent and direction of FD-induced remodeling along ICA segments remain poorly characterized. This study aimed to assess segment-specific and angulation-dependent remodeling of the ICA and its branches using high-resolution three-dimensional imaging, with implications for treatment planning and device performance.

Materials and Methods
A retrospective analysis was conducted on 69 patients (72 aneurysms) treated with the Pipeline Embolization Device (PED). Pre- and post-treatment subtracted cone-beam CT angiography was used for centerline -based modeling of the ICA and its major branches. Twelve angular measurements were recorded at branch points and bifurcations. Remodeling patterns were evaluated across segments and stratified by tertiles of pre-treatment angulation. Linear mixed-effects models assessed the effects of device coverage and baseline angulation on angular change.

Results
The mean cumulative angular change across the ICA was 33.84° ± 21.77°. Distal segments (i.e. junction between ophthalmic and PcomA segments of ICA [ICA_oph_PcomA] and junction between PcomA and anterior choroidal artery segments of ICA [ICA_PcomA_AChA]) contributed significantly more to total change than the cavernous/ophthalmic segment ($p = 0.002$). Remodeling direction was bidirectional and related to baseline curvature: segments with low pre-treatment angulation straightened (ICA_oph_PcomA: +12.14°, ICA_PcomA_AChA: +12.06°), while those with high angulation became more curved (ICA_oph_PcomA: −9.50°, ICA_PcomA_AChA: −11.22°). Branch vessels, including the PcomA, AChA, and ICA bifurcation, showed similar angulation-dependent remodeling. Changes also occurred beyond the stented segment. Meanwhile, Significant negative correlations were found between ICA segment remodeling and corresponding branch takeoff angles, suggesting coordinated geometric adaptation.

Conclusion
FD-induced ICA remodeling is not uniformly straightening but varies by segment and baseline angulation. Distal ICA segments remodel more, and angulation extremes predict directionality. Recognition of these patterns may refine pre-procedural planning, device selection, and branch outcome prediction. Further research is warranted to determine the clinical implications of these geometric changes.

Oral Presentation

A-097

Impact of Magnified 3D Rotational Angiography on Eye Lens Radiation Dose and Image Quality: A Phantom and Pilot Cohort Study

Category:
Others

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Background and Purpose

Background: Radiation-induced cataract is a documented risk during neurointerventional imaging. Optimizing 3D rotational angiography (3DRA) protocols specifically through magnification may reduce lens exposure without sacrificing diagnostic image quality. However, the clinical impact of varying field-of-view (FOV) settings remains underexplored. Objective: This study aims to evaluate whether 3DRA performed with a 22 cm, 32 cm magnified FOV reduces eye lens radiation dose compared to the conventional 42 cm FOV, while maintaining diagnostic accuracy.

Materials and Methods

A two-phase study is conducted using the Siemens Artis Q biplane angiography system (Siemens Healthineers, Germany). In the initial phantom study, lens doses and Dose-Area Product (DAP) data were compared across 22 cm and 42 cm settings, revealing a consistent reduction with magnification. In the clinical phase, patients undergoing bilateral 3DRA—based on prior MRA or CTA—are prospectively enrolled. After acquiring an informed consent, each patient will undergo two acquisitions, randomly assigning one hemisphere to each FOV. A single experienced operator performs all procedures to ensure consistency. A 3 photoluminescent glass dosimeter (PLD) are attached to each eyelids to measure the actual lens dose, while DAP values will be recorded. Image quality will be assessed using both objective resolution metrics and a blinded 5-point scale evaluating diagnostic confidence will be done by three experienced interventional neuroradiologists.

Results

Phantom results support a dose reduction with 22 cm magnification. Three patients were studied in our pilot, resulting in a 33.9% reduction in radiation dose to the lens ipsilateral to the lesion of the exam interest, and a 62.2% reduction to the contralateral lens, validating the phantom findings and confirming the clinical feasibility of magnified 3DRA protocols. An additional 17 patients are planned to complete the cohort of 20 patients. The image quality assessment showed no significant difference between both acquisitions.

Conclusion

Use of a 22 cm FOV during 3DRA on the Siemens Artis Q system may significantly reduce eye lens radiation exposure without compromising image quality or diagnostic confidence. These findings could inform safer imaging strategies in neurointerventional procedures.

Oral Presentation

A-102

Filum Terminale Arteriovenous Fistula in Association with Degenerative Lumbosacral Spinal Canal Stenosis: Report of 3 Cases and Review of the Literature

Category:
Spinal vascular diseases

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Background and Purpose
Filum terminale arteriovenous fistulas (FTAVFs) are rare spinal vascular lesions, typically located below the conus medullaris and classified as type IVa perimedullary AVFs. While some FTAVFs are considered congenital, growing evidence suggests that they may arise secondary to degenerative spine disease, particularly lumbar spinal canal stenosis. Recognizing this acquired mechanism is essential for appropriate diagnosis and treatment. This study aims to present three cases of FTAVFs associated with severe lumbosacral spinal canal stenosis, highlighting the clinical, radiological, and angiographic features, as well as the outcomes following surgical or endovascular treatment. A focused literature review is also performed to contextualize these findings.

Results
All three patients presented with progressive myelopathy and bowel/bladder dysfunction, following a history of low back pain, sciatica, or intermittent claudication. MRI and spinal angiography revealed FTAVFs located at or just caudal to the levels of maximal spinal stenosis. Two patients underwent successful surgical treatment, including decompressive laminectomy, instrumented fusion, and direct fistula obliteration. These patients achieved good neurological recovery and radiological resolution of spinal cord congestion. One patient underwent unsuccessful embolization and declined further surgery, resulting in poor clinical outcome. Review of 17 additional published cases revealed that most FTAVFs associated with spinal stenosis were located at corresponding levels and were effectively managed by surgical intervention.

Conclusion
Our findings support the hypothesis that FTAVFs can be acquired lesions secondary to chronic mechanical and inflammatory changes from severe lumbar spinal canal stenosis. MRI with contrast and spinal angiography remain essential for diagnosis. Surgical obliteration combined with decompression provides optimal results and should be considered the first-line approach in these cases. Early identification is critical to prevent irreversible neurological decline, especially in patients initially misdiagnosed with degenerative spine disease alone.

Oral Presentation

A-105

Deep Learning-Based Automated DWI Infarct Area Identification for Mechanical Thrombectomy Decision Support in Acute Ischemic Stroke

Category:
Others

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Background and Purpose
Acute ischemic stroke is a major cause of death and disability worldwide. Timely identification of patients eligible for Mechanical Thrombectomy (MT) is critical to improving outcomes, particularly within the extended 4.5–24-hour window. Diffusion-weighted imaging (DWI), an MRI technique sensitive to water molecule movement, allows visualization of infarcted brain tissue. The infarct core volume derived from DWI (DWI volume infarction) is essential in guiding MT decisions, as supported by the DAWN and DEFUSE-3 trials. Manual infarct volume estimation is effective but time-consuming and operator-dependent. Clinicians commonly use adapted prostate volume software for DWI-based assessments, which provide results in 3–5 minutes per patient. However, increasing clinical demand and the emergence of stroke care emphasize the need for faster, automated solutions to improve workflow efficiency, reduce variability, and support rapid decision-making in acute stroke management.

Materials and Methods
The automated approach aims to reduce inter-observer variability, improve diagnostic efficiency, and support timely clinical decision-making for MT. By integrating advanced AI techniques into stroke imaging workflows, this study seeks to enhance patient triage, optimize treatment allocation, and ultimately improve neurological outcomes in acute stroke management. Schematic framework for Automated DWI Infarct Area Identification using Deep Learning is presented in Figure 1. There are three different models have been generated for three different purposes include: (i) infarction classification model to distinguish between Normal and Infarct DWI images, (ii) artifact classification is used for classifying the artifact and non-artifact images, and (iii) infarction segmentation to identify the infarction area.

Results
The results from the experiments showed that the infarction image classification model achieved 94.28% accuracy using VGG16 architecture. The artifact image classification obtained 94.06% accuracy utilizing the VGG16 architecture. Finally, for infarction image segmentation, the model achieved a 77.35% validation Dice coefficient in identifying the location and area of infarction lesions. This combines two architectures by using VGG16 as the encoder and UNET as the decoder, which improves segmentation efficiency.

Conclusion
These results illustrate the capacity to improve diagnostic efficiency, reduce inter-observer variability, and accelerate clinical decision-making for MT in emergent stroke therapy.

Oral Presentation

A-111

Ten-Year Experience in the Management and Outcomes of Ruptured Cerebral Arteriovenous Malformations at Siriraj Hospital

Category:
Cerebral Arteriovenous Malformation

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Background and Purpose
Ruptured cerebral arteriovenous malformations (AVMs) present significant clinical challenges, with outcomes influenced by AVM characteristics, and treatment modalities. This study aims to describe the clinical profiles, angiographic risk factors, and therapeutic outcomes of ruptured cerebral AVMs treated at Siriraj Hospital.

Materials and Methods
A retrospective review was conducted on patients diagnosed with ruptured cerebral AVMs at Siriraj Hospital between January 2014 and March 2024. Data collected included patient demographics, AVM characteristics, angiographic risk factors, treatment modalities, and outcomes.

Results
A total of 129 patients were identified. The majority of patients (84.4%) were older than 15 years at the time of angiographic diagnosis, with a mean age of 32.8 years. AVM location was mainly lobar (63.6%), with 36.4% located in deep brain regions. Deep venous drainage was present in 61.2% of cases. Spetzler-Martin grades 2 and 3 accounted for 59.7%, indicating moderate surgical risk. Angiographic risk factors were common: intranidal aneurysms (24.8%), venous pouches (12.4%), and venous stenosis (15.5%). Multimodality treatment was applied in 37.2% of patients, while embolization alone was performed in 27.1%. Among 81 patients who underwent embolization, targeted or partial embolization was performed in 68 cases (83.95%), while curative embolization was achieved in 13 cases (16.04%), resulting in a low re-rupture rate of 6.17%. Conservative management was used in 7% of cases.

Conclusion
This review demonstrates that ruptured cerebral AVMs predominantly affect young adult patients, with lobar location and deep venous drainage frequently observed. Multimodality treatment was the most common approach, and embolization showed a low re-rupture rate. These findings provide valuable insights into the clinical and angiographic profiles of ruptured cerebral AVMs in a tertiary care setting, which may guide future management.

Poster Presentation

Thursday 21 Aug 2025 / Present at Hall 2

	Present time	Station	Code	Abstract title	Presenter
10:30-11:00	10:40-10:45	A	A-002	Initial usage experience of JOIN smartphone application in NHO Sendai Medical Center	Masayuki Ezura (Japan)
	10:45-10:50		A-003	Imaging Features and Treatment Strategies for Symptomatic Carotid Web: A Case Series Study	Yohei Tanaka (Japan)
	10:50-10:55		A-006	Recanalization is Not Always Equate to Reperfusion: No-Reflow Phenomenon after Successful Thrombectomy as a Predictor for Futile Recanalization and Hemorrhagic Transformation in Major Vessel Occlusion	Nobutaka Horie (Japan)
	10:55-11:00		A-008	Effectiveness and Outcomes of Proximal Balloon Occlusion versus Distal Filter for Embolic Protection during Carotid Artery Stenting	SEUNG YOUNG CHUNG (South Korea)
	10:40-10:45	B	A-009	Retrograde angiography in dissecting vertebral artery aneurysms to avoid intraoperative rupture	Masahiro NISHIHORI (Japan)
	10:45-10:50		A-010	A Case of Ruptured Distal Middle Cerebral Artery Aneurysm with Metastatic Bladder Cancer	Sung-Kyun Hwang (South Korea)
	10:50-10:55		A-011	Unmasking Occult Ruptured Aneurysm in Acute Subarachnoid Hemoorhage with Previously Unknown Etiology: Successful Treatment with Flow Diversion and Coiling	Gamaliel Soetanto (Indonesia)
	10:55-11:00		A-013	Case Report: Endovascular management of a big aneurysm at vertebrobasilar fenestration with Flow diverter	Wei Liang Chen (Taiwan)
	10:40-10:45	C	A-014	Super-selective embolization of vasa vasorum within partially thrombosed vertebral aneurysm	Takashi Izumi (Japan)
	10:45-10:50		A-017	A Case of Spinal Intraosseous Epidural Arteriovenous Fistula	Issei Takeuchi (Japan)
	10:50-10:55		A-019	PEDIATRIC NEUROINTERVENTIONS: A POTPOURRI OF 128 JUVENILE PATIENTS	Saima Ahmad (Pakistan)
	10:55-11:00		A-020	Delayed symptomatic thrombembolism after coil embolization of Unruptured basilar artery top aneurysm: A case report	T Gong (South Kore)a
	10:40-10:45	D	A-021	Microsurgical Disconnection of C1 Nerve Root DAVFs at the Craniocervical Junction: Treatment Principles and Technical Insights from Eight Cases	Sitthisak Phupungtamakoon (Thailand)
	10:45-10:50		A-022	Quantitative index of cerebral aneurysm projection and parent artery curvature in flow diverter placement	Hideki Kanamaru (Japan)
	10:50-10:55		A-024	Intracerebroventricular SRPX2 Administration Attenuates Neurological Deficits and Cerebral Vasospasm in a Mouse Model of Subarachnoid Hemorrhage: A Pilot Study	Yushin Takemoto (Japan)
	10:55-11:00		A-025	Endovascular strategy for intraosseous AVFs near the hypoglossal canal without embolizing the anterior condylar vein	Naoki Toma (Japan)
15:10-15:40	15:20-15:25	A	A-028	Effectiveness of Continuous Intra-arterial Nimodipine Infusion for the Treatment of Refractory Vasospasm after Aneurysmal Subarachnoid Hemorrhage	Yeongu Chung (South Korea)
	15:25:15:30		A-029	Mechanical Thrombectomy for Large Vessel Occlusion Involving an Unrecognized Aneurysm with Hyperdense Sign on CT: A Case Report	Ryosuke Kaneko (Cambodia)
	15:30-15:35		A-031	Single Neuroform Atlas stent: a reliable approach for treating complex wide-neck bifurcated aneurysms	Hong Jun Jeon (South Korea)
	15:35-15:40		A-032	Thrombectomy with Carotid Stent Thrombus Trapping in Acute Tandem Occlusion of Cervical ICA and MCA	Chiu Shih Cheng (Taiwan)
	15:20-15:25	B	A-033	Paraspinal Arteriovenous Shunts: Four Cases from a Single Center	Katsuhiro Mizutani (Japan)
	15:25:15:30		A-034	Treatment results of endvascular treatment for raptured aneurysms at our hospital	Gota Nagayama (Japan)
	15:30-15:35		A-035	Application and Convergence Study of Mechanical Engineering Concepts in Endovascular Treatment	JUNG-JAE KIM (South Korea)
	15:35-15:40		A-114	Bilateral Middle Meningeal Arteries Arising from the Ophthalmic Arteries with Absence of the Anterior Communicating Artery in Ruptured Dissecting Distal Anterior Cerebral Artery Aneurysm: An Extremely Rare Case	SONI AZHAR PRIBADI (Indonesia)
	15:20-15:25	C	A-037	Neurointerventional Procedures Using Sheathless 8Fr Optimo Balloon Guide Catheter via Transradial Access: A Single-Center Experience with 100 Cases	Taichiro Imahori (Japan)
	15:25:15:30		A-038	Development of Multiple Dural Arteriovenous Fistulas After Treatment for Cerebral Venous Thrombosis: A Case Report	Hansan Oh (South Korea)
	15:30-15:35		A-039	Hybrid Treatment for Dural Arteriovenous Fistula of the Posterior Condylar Vein: A Transtubercle Combined Transradial Approach	Jirapong Vongsfak (Thailand)
	15:35-15:40		A-040	A Case of Acute Middle Cerebral Artery Occlusion on the Side of Internal Carotid Artery Agenesis	Tatsuya Yano (Japan)
	15:20-15:25	D	A-041	Temporary coiling technic for cerebral vessel bleeding	Shinya Hagiwara (Germany)
	15:25:15:30		A-042	Endovascular Treatment of ruptured wide-neck cerebral aneurysm	Yuichiro Tsuji (Japan)
	15:30-15:35		A-043	Endovascular Treatment of Intracranial Aneurysms Using the Woven EndoBridge (WEB) Device: A Single-Center Experience	Jinwook Baek (South Korea)
	15:35-15:40		A-046	Stent-assisted coil embolization and flow-diverting stent use for retreating recurrent vertebral artery dissecting aneurysms	Young Dae Cho (South Korea)

Poster Presentation

Friday 22 Aug 2025 / Present at Hall 2

	Present time	Station	Code	Abstract title	Presenter
10:30-11:00	10:40-10:45	A	A-047	Mechanical thrombectomy of the occlusion of the ICA by spontaneous dissection	Myung Ho Rho (South Korea)
	10:45-10:50		A-049	Impact of Age on Short-Term Outcomes Following Endovascular Thrombectomy in Acute Ischemic Stroke Patients Aged 70 and Older: Insights from a Regional Hospital in Taiwan	Pao-Sheng Yen (Taiwan)
	10:50-10:55		A-050	Outcomes of Flow-Diverter Stents in Intracranial Aneurysms: Prognostic Factors of Incomplete Occlusion and In-Stent Stenosis	Kanisorn Sungkaro (Thailand)
	10:55-11:00		A-051	General anaesthesia for acute ischaemic stroke mechanical thrombectomy, a single centre experience in Hong Kong and review of recent literature.	IVAN HOI WEI CHEUNG (Hong Kong)
	10:40-10:45	B	A-055	The useful " C stenting" technique for wide neck basilar apex aneurysms	Yume Suzuki Mie (Japan)
	10:45-10:50		A-057	Outcome of Rescue treatment after failed mechanical thrombectomy in Intracranial Atherosclerosis related Large Vessel Occlusion (ICAS-LVO)	Meitee Vichutavate (Thailand)
	10:50-10:55		A-059	OZONUCLEOLYSIS IN CERVICAL RADICULOPATHY	Umair Rashid Chaudhry (Pakistan)
	10:55-11:00		A-061	OVERCOMING VASCULAR LIMITATIONS: DIRECT PERCUTANEOUS EMBOLISATION FOR SPINAL TUMOUR CONTROL	Si Zhao Tang (Singapore)
	10:40-10:45	C	A-063	Angiographic Predictors of Immediate Obliteration in Lateral Sinus DAVFs Treated with EVOH-Based Endovascular Theragy	Chung Jung Lin (Taiwan)
	10:45-10:50		A-065	Evaluating the Safety and Efficacy of 3-Month Dual Antiplatelet Therapy After Carotid Artery Stenting: A Propensity Score-Matched Retrospective Study	TaisukeAkimoto Yokohama (Japan)
	10:50-10:55		A-066	Strategy of AVM embolization based on the types of vessels and embolic materials	Mitsuhito Mase (Japan)
	10:55-11:00		A-067	Falcotentorial dAVF with Hydrocephalus: Review of a Rare Case with a Strategic Embolization to Prevent Progression of Hydrocephalus	Made Bhuwana Putra (Indonesia)
	10:40-10:45	D	A-068	Exclusive Middle Meningeal artery Embolisation for treatment of large Chronic Subdural Hematoma in Elderly Patients :A case Series	Goutham Selvam (India)
	10:45-10:50		A-069	Phase Selection of Venous Opacity on Multiphase CTA for Outcome Prediction in Acute Ischemic Stroke	Thanit Nanthanasub (Thailand)
	10:50-10:55		A-073	Endovascular Trapping of a Giant Cervical ICA Aneurysm: Coil Anchoring Techniques in High-Flow Vessels.	Yuk YiuNg (Hong Kong)
	10:55-11:00		A-075	Predictive Factors of Favorable Outcomes Following Mechanical Thrombectomy: A Prospective Study	Niimron Nisahoh (Thailand)
15:10-15:40	15:20-15:25	A	A-077	3D to the Rescue: Unmasking a Hidden M2 Occlusion During Mechanical Thrombectomy with 3D Rotational Angiography	Hooi Lam Tan (Malaysia)
	15:25:15:30		A-078	Flow diversion with adjunctive coil embolization for fetal posterior communicating aneurysms	Yukiko Enomoto Gifu (Japan)
	15:30-15:35		A-079	Efficacy and Outcomes of Accero Intracranial Braided Stent in Wide-Neck Bifurcation Aneurysms: A Single-Center Experience	Ahmed Albaqshi (Arabia)
	15:35-15:40		A-081	Carotid artery stenting in elderly patients over 80 years old	Kotaro Ueda (Japan)
	15:20-15:25	B	A-081	When the Spine Deceives: Acute Paraparesis as the Initial Manifestation of a Cranial dAVF	Nutpisit Nawaratthara (Thailand)
	15:25:15:30		A-083	Longitudinal braid stability of Surpass Evolve® Flow diverter in the aspect of Fish-Mouthing deformation	Minu Nahm (South Korea)
	15:30-15:35		A-084	Outcome of Middle Meningeal Artery Embolization for Chronic Subdural Hematoma: A Single-Center Retrospective Study	Pipat Pattanapipitpaisal (Thailand)
	15:35-15:40		A-085	MECHANICAL THROMBECTOMY FOR ACUTE ISCHEMIC STROKE: THE RESPONSE TIME OF CODE STROKE PROTOCOL IN JAKARTA COMPREHENSIVE STROKE CENTER	Affan Priyambodo Permana (Indonesia)
	15:20-15:25	C	A-087	Transvenous Approach in a Dural Arteriovenous Fistula with High-Risk External Carotid-to-Ophthalmic Anastomosis: A Case Report	Vita Kusuma Rahmawati (Indonesia)
	15:25:15:30		A-088	Impact of Oophorectomy in the Hashimoto Model for Rat Cerebral Aneurysm Induction: Comparative Study of Surgical Success and Aneurysm-Related Events Incidence	Sungbin Hwang (South Korea)
	15:30-15:35		A-090	Complete Angiographic Resolution of Intracranial Mycotic Aneurysms Following Conservative Therapy: A Case Report	Muh. Wildan Yahya (Indonesia)
	15:35-15:40		A-091	A case of intracranial mycotic aneurysm recurrence after endovascular treatment followed by spontaneous occlusion	Yasutoshi Akasaki (Japan)
	15:20-15:25	D	A-092	Glue Embolization of a Ruptured Posterior Thalamoperforating Artery Aneurysm within the Artery of Percheron Territory	Nabha Tangchitphredanonth (Thailand)
	15:25:15:30		A-093	From Support to Stress: Aneurysm Formation Through Chronic Hemodynamic Load of Collateral Flow	Putu Yudhi Nusartha (Indonesia)
	15:30-15:35		A-094	Hemodynamic Remodeling of the Circle of Willis in a Rat Unilateral Carotid Ligation Model: Longitudinal MR Angiographic Observation	YEON SOO KIM (Korea)
	15:35-15:40		A-095	Diagnostic Limits of High-Resolution MR Angiography for the Visualization of Intracranial Aneurysms in a Rat Model	YEON SOO KIM (Korea)

Poster Presentation

Saturday 23 Aug 2025 / Present at Hall 2

	Present time	Station	Code	Abstract title	Presenter
10:30-11:00	10:40-10:45	A	A-098	**Predicting Cerebral Aneurysm Recurrence After Coil Embolization: A Novel Deep Learning Approach Using Time-of-Flight MR Angiography**	Shoko Fujii (Japan)
	10:45-10:50		A-099	**Early Clinical Experience with Surpass ELITE flow diverters: Technical and Clinical Considerations**	JUNG-JAE KIM (South Korea)
	10:50-10:55		A-100	**Endovascular Treatment for Stenosis of the Petro-Cavernous Segment of the Internal Carotid Artery**	JUNG-HWAN OH (South Korea)
	10:55-11:00		A-101	**Retrospective Evaluation of Intravenous Cone Beam CT Angiography as a Follow-up Tool Post Flow Diverter Treatment: Assessment of Image Quality, Artifact, and Treatment Outcomes**	Suppaluk Anukulsampan (Thailand)
	10:40-10:45	B	A-103	**Pioneering Advances in Posterior Circulation Acute Ischemic Stroke: Insights from Two Stroke Centers in Indonesia on Mechanical Thrombectomy**	Yoga Arif Syah Hidayat (Indonesia)
	10:45-10:50		A-106	**Efficacy of mechanical thrombectomy supported by Radiologic technologists under telemedicine supervision system**	Mitsuyoshi Watanabe (Japan)
	10:50-10:55		A-108	**Dangerous anastomosis; Mechanisms of ophthalmic manifestation**	Dong Joon Kim (South Korea)
	10:55-11:00		A-109	**Woven endoBridge embolization for intracranial aneurysms: single center experiences in South Korea**	Keun Young PARK (South Korea)
	10:40-10:45	C	A-110	**Safety, efficacy and cost effectiveness of Middle Meningeal Artery (MMA) Embolization for Chronic Subdural Hematoma: A single-centre experience**	Tien Meng Cheong (Singapore)
	10:45-10:50		A-113	**Pixels with a Purpose: Diagnosing Mycotic Aneurysm From Odontogenic Infective Endocarditis. Radiologic Clues in an Acute Stroke Activation.**	Yuh Yang Leong (Malaysia)
	10:50-10:55		A-036	**Carotid artery stenting for heavily calcified lesions after plaque modification using scoring balloon angioplasty**	Taichiro Imahori (Japan)
	10:55-11:00		A-115	**Late-Onset Vascular Occlusion After Direct Puncture of a Carotid Prosthetic Graft for Endovascular Access**	REO Kawaguchi (Japan)
	10:40-10:45	D	A-116	**The usefulness of 3D venography in the treatment of dural arteriovenous fistulae**	Rie Aoki (Japan)
	10:45-10:50		A-119	**Rescue carotid stenting in tandem occlusions: 5 years' experience from a comprehensive stroke center**	Duc Nguyen Minh (Vietnam)
	10:50-10:55		A-120	**Application of the ANSWER Technique in the Endovascular Treatment of Intracranial Aneurysms with Coexisting Parent Artery Stenosis**	Zhiqiang Yao (China)
	10:55-11:00		A-121	**Clinical Application of BADASS PLUS Technique in Endovascular Thrombectomy for Acute Ischemic Stroke with High-Burden Carotid Artery Thrombosis**	Yiqiang Liu (China)

Poster Presentation

A-001

Relationship between in-stent restenosis following carotid artery stenting and platelet reactivity to clopidogrel

Category: Acute Ischemic Stroke

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Background and Purpose

The quantitative association between in-stent restenosis (ISR) and platelet function in patients treated with carotid artery stenting (CAS) remains poorly documented. We aimed to evaluate the degree of ISR following CAS using computed tomographic angiography (CTA), examine its relationship with platelet reactivity to clopidogrel, and determine the optimal thresholds of the P2Y12 reaction unit (PRU) and inhibition rate (IR) for identifying ISR.

Materials and Methods

We retrospectively analyzed 171 patients who underwent CAS with extracranial carotid stenosis from January 2016 to December 2019. Dual antiplatelet therapy with 100 mg aspirin and 75 mg clopidogrel was started ≥5 days before CAS. Clopidogrel resistance was measured with the PRU and IR the day before CAS. The ISR degree was classified into R1 (mild luminal stenosis of <50% ranging <50% of the stented carotid artery total length), R2 (mild luminal stenosis of <50% ranging ≥50% of the stented carotid artery total length), and R3 (moderate to severe luminal stenosis of ≥50% or occlusion) through carotid CTA after 24-30 months. The quantitative association degree between platelet reactivity and ISR R3 was determined by the receiver operating characteristic curve method. The optimal cutoff values of PRU and IR were derived using the maximum Youden index.

Results

There were 33 ISR of R3s (19.3%) and 9 ipsilateral ischemic strokes (5.3%). The PRU and IR were different between R1 + R2 (176.4 ± 50.1, 27.5 ± 18.7%) and R3 (247.5 ± 55.0, 10.3 ± 13.4%) ($p<0.001$). The areas under the curves of PRU and IR were 0.841 and 0.781, and the optimal cutoff values were 220.0 and 14.5%, respectively. Multivariate logistic regression analysis showed that PRU ≥220 and IR ≤14.5% were significant predictive factors for ISR R3 ($p<0.001$, $p=0.017$). ISR R3 was independently associated with ipsilateral ischemic stroke after CAS ($p=0.012$).

Conclusion

High PRU (≥220) and low IR (≤14.5%) are related to ISR R3 following CAS, which may cause ipsilateral ischemic stroke. This is the first observational study to address the relationship between ISR following CAS and platelet reactivity to clopidogrel. Long-term ISR follow-up and modified antiplatelet preparation to improve ISR seems to be needed in patients with high clopidogrel resistance.

Poster Presentation

A-002

Initial usage experience of JOIN smartphone application in NHO Sendai Medical Center

Category: Others

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Background and Purpose

Our hospital provides neuro emergency services on a 24-hour basis. The staff on duty at night are not necessarily specialists in neurosurgery or interventional neuroradiology. The decision to proceed with surgical intervention including mechanical thrombectomy requires the judgment of these specialists. Therefore, we introduced JOIN smartphone application as a smooth means of communication with specialists. The purpose of this study is to show the initial usage experience of JOIN.

Materials and Methods

When the on-call physician determines that surgical intervention may be necessary, they upload the relevant information to JOIN and simultaneously contact the on-duty specialist by phone to assess the need for surgical intervention.

Results

In the 10 months following the introduction of JOIN, there were 146 days when the on-call physician was not a specialist. There were 89 cases where imaging consultations occurred via JOIN. These cases, which involved hemorrhagic conditions, would traditionally require a specialist to come to the hospital to review the images directly or to make judgments based on unclear images taken with a mobile phone camera. Although the images reviewed on JOIN are displayed on a small smartphone screen, they are sufficiently clear for assessing hemorrhagic lesions. For ischemic lesions, the resolution may not be adequate, but when combined with Rapid processing of PerfusIon and Diffusion (RAPID) software, it becomes possible to make a judgment

Conclusion

By introducing JOIN, it has become possible to assess the need for surgical intervention on a smartphone, thereby reducing the time to initiate treatment. For ischemic lesions, if you have RAPID software, it becomes possible to make a judgment. Additionally, the number of times specialists were required to come in outside of regular hours has significantly decreased.

Poster Presentation

A-003

Imaging Features and Treatment Strategies for Symptomatic Carotid Web: A Case Series Study

Category: Acute Ischemic Stroke

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Background and Purpose

Carotid web (CW) has been identified as one of the embolic sources in embolic stroke of undetermined source (ESUS), but its presence is often overlooked. Regarding treatment, it has been reported that medical therapy alone results in frequent recurrences. Surgical revascularization has been reported as a more effective treatment for symptomatic CW, although high-quality evidence is lacking. We present cases of symptomatic CW encountered at our hospital and discuss diagnostic and management strategies.

Materials and Methods

We selected cases of symptomatic CW from patients with cerebral infarction admitted to our department between November 2016 and December 2024 and examined their clinical characteristics.

Results

Five cases of symptomatic CW were identified, with a median age of 47 years. All patients were female, and all presented with ipsilateral middle cerebral artery occlusion. Mechanical thrombectomy was performed in three cases. Regarding diagnosis, neck time-of-flight MR angiography was difficult to interpret in all cases. Carotid duplex was suggestive of CW in two cases, where blood clots were suspected to be adhering to the CW. CT angiography (CTA) or catheter cerebral angiography (CAG) was required for a definitive diagnosis. Multi-planar reconstruction was particularly useful for obtaining detailed images of the CW's structure. Vessel wall MRI was helpful in identifying CW in four cases. In terms of treatment, three patients underwent CAS, and two patients were managed with antiplatelet therapy alone. All patients who underwent CAS were treated with open-cell stents, which have been reported to cause less postoperative restenosis compared to closed-cell stents. The stent was successfully deployed without any troubles in all CAS cases. No post-treatment recurrences were observed in any of the cases.

Conclusion

Accurate diagnosis of CW relies on recognizing its presence, particularly in young female patients. CTA or CAG is essential for diagnosing CW when it is considered a potential embolic source of cerebral infarction. While carotid duplex is less sensitive, it may reveal clots adhering to the CW. In terms of treatment, both medical therapy and CAS demonstrated good outcomes in this study. CAS using an open-cell stent is considered safely feasible. Further studies with larger sample sizes are needed.

Poster Presentation

A-006

Recanalization is Not Always Equate to Reperfusion: No-Reflow Phenomenon after Successful Thrombectomy as a Predictor for Futile Recanalization and Hemorrhagic Transformation in Major Vessel Occlusion

Category: Acute Ischemic Stroke

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Background and Purpose

Thrombectomy for acute major vessel occlusion is a well-established procedure for preventing stroke. However, cases of futile recanalization, where tissue no-reflow persists despite successful reperfusion, have been observed. The aim of this study is to assess cerebral hemodynamics immediately after successful thrombectomy regarding clinical outcome.

Materials and Methods

We prospectively registered cases that achieved successful thrombectomy (mTICI≧2b) for anterior circulation. Pre-operative evaluation included MR imaging. Thirty minutes after recanalization, flat panel CT perfusion imaging was performed, and CBF, CBV, Tmax, mismatch ratio and hypoperfusion index were calculated with Rapid ANGIO. We examined the correlation of these parameters with infarct expansion, hemorrhagic transformation and clinical outcome.

Results

Analysis was conducted on 65 consecutive cases with successful recanalization. Infarct expansion occurred in 23 cases (35.4%), with a significantly lower percentage of susceptibility vessel sign, higher CBF<45% area, and lower favorable clinical outcome. CBF<45% area, not Tmax>6s, significantly correlated with final ASPECTS. Interestingly, mismatch ratio was higher in the group without infarct expansion ($p<0.001$). Hemorrhagic transformation occurred in 26 cases. The groups with hemorrhagic transformation showed a higher CBF<45% and CBV<34% area (both $p=0.01$), and hypoperfusion index was also higher ($p<0.001$). These post-operative parameters significantly contributed to clinical outcome three months after onset.

Conclusion

No-reflow phenomenon could be detected after successful thrombectomy with flat panel CT perfusion, suggesting that major vessel recanalization does not necessarily equate to immediate tissue reperfusion. Our study highlights post-thrombectomy hemodynamic mismatch and collaterals as potential indicators for the quality of thrombectomy.

Poster Presentation

A-008

Effectiveness and Outcomes of Proximal Balloon Occlusion versus Distal Filter for Embolic Protection during Carotid Artery Stenting

Category:
Other Head and Neck Pathologies

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Background and Purpose

CAS is rapidly alternative to CEA and even more effective for high-risk cases. The main concern is preventing procedural embolus dislodgement and so preventative embolic protection devices (EPDs) have significantly improved prognosis

Materials and Methods

This retrospective study included all 106 patients with symptomatic or asymptomatic ICA stenosis ≥70% treated with CAS with either of 2 EPDs: distal filter protection device (DFP) or proximal balloon occlusion device (PBO). All underwent pre- and post DWI to detect new ischemic lesions. We compared clinical outcomes and postprocedural embolization rates in both.

Results

In 111 cases with CAS, DFP success rate was 98.4% and subsequent DWI revealed 249 new ischemic lesions in 81%. In contrast, PBO was 91.4% and 71 new ischemic lesions in 58%. No differences were observed in success rate. PBO resulted in lower new ischemic lesions (p=0.031). PBO also showed fewer total new ischemic lesions (p=0.002) and new ischemic lesions per patient (p=0.027). And in ≥3 new ischemia, significantly lower rate in PBO (p=0.002). In the subtype of stent, there is no significant interaction effect between stent and EPDs and type of stent also did not affect the number of new ischemic lesions. Complications occurred in 1 for DFP and 3 for PBO but all improved

Conclusion

The incidence of postprocedural ischemic lesions was lower in PBO than DFP. And the total number and new ischemic lesions per patient on DWI were also lower in PBO. So, as compared with DFP, PBO might be more effective in reducing cerebral embolism during CAS

Poster Presentation

A-009

Retrograde angiography in dissecting vertebral artery aneurysms to avoid intraoperative rupture

Category: Cerebral Aneurysm

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Background and Purpose

Vertebral artery dissection (VAD) is often treated with endovascular therapy. However, when contrast media is injected, pressure is applied to the vessel wall. In cases where the vessel wall is fragile, intraoperative rupture may occur. We have devised a method to reduce pressure on the vessel wall by performing retrograde angiography. To verify this scientifically, we conducted an experiment in vitro.

Materials and Methods

For retrograde angiography, a balloon guide is first placed in the diseased vessel, and the balloon is inflated to block the antegrade blood flow. By releasing the three-way stopcock at hand, the blood flow is drained retrogradely while taking an angiogram from the opposite side. To verify the results in actual clinical practice and this method, we attached a pressure sensor using a silicone tube and verified it in a pulsatile model that applies similar body blood pressure to that in vivo.

Results

From October 2022, when we started using this method, to the end of 2024, we treated 8 cases of ruptured VAD in 10 sessions. In 4 of these cases, we performed retrograde contrast, and in all cases we were able to obtain sufficient DSA and 3DRA images, and we were able to complete internal trapping. In 1 case, we performed antegrade imaging manually once, and intraoperative rupture occurred. In vitro experiments showed that when anterograde angiography was performed, the pressure on the aneurysm wall was 1.3-2 times higher than the systemic blood pressure, but when retrograde angiography was performed, the pressure increase on the contrast side was 1.3-2.1 times higher, while the pressure increase on the affected side was 1.15-1.87 times higher, a 10-23% reduction in the pressure increase range.

Conclusion

Retrograde angiography was safe and provided sufficient image quality in the acute treatment of dissecting vertebral artery aneurysms. Vitro experiments also demonstrated that it sufficiently reduced pressure on the vessel wall, and it could be a radiographic technique that contributes to further safety improvements.

Poster Presentation

A-010

A Case of Ruptured Distal Middle Cerebral Artery Aneurysm with Metastatic Bladder Cancer

Category:
Cerebral Aneurysm

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Background and Purpose
We report a case of ruptured middle cerebral artery aneurysm with metastatic bladder cancer treated by endovascular embolization.

Materials and Methods
A 54-year-old man presented with seizure and followed by loss of consciousness. Brain computed tomography examination revealed acute intracerebral hemorrhage (ICH) with perilesional edema in the left parietal area, associated with multifocal subarachnoid hemorrhage (SAH). Cerebral angiography also showed that lobulating aneurysm at the left M4 branch in the left parietal area. Brain magnetic resonance image showed that mutifocal diffusion-high signal lesions with partly nodular cortical enhancement and multiple microbleeds and SAH in the both cerebral hemispheres representing multifocal acute to subacute embolic infarctions..

Results
Postoperative angiography showed the obliteration of aneurysm sac preserving branch artery in the neck portion. He had past medical history of metastatic bladder cancer treated by chemotherapy. He made a steady recovery without neurological sequela after operation. Follow-up CT or image study showed the resolving state of ICH without an additional intracranial lesion.

Conclusion
Further investigations are needed to reveal risk factors, physiology and causative mechanisms of this phenomenon of aneurysmal formation and rupture in patient with metastatic cancer.

Poster Presentation

A-011

Unmasking Occult Ruptured Aneurysm in Acute Subarachnoid Hemoorhage with Previously Unknown Etiology: Successful Treatment with Flow Diversion and Coiling

Category: Cerebral Aneurysm

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Background and Purpose

Ruptured brain aneurysm is the most common cause of acute spontaneous subarachnoid hemorrhage (SAH). It is a medical emergency, predominantly affecting individuals of productive years, with prehospital and in hospital mortality rate of 26% and 13%, respectively. Brain angiographic computed tomography (CTA) exhibits sensitivity of 97.2% for detecting ruptured aneurysms, which decreases to 61% for small aneurysms (diameter <5 mm). As gold standard, digital subtraction angiography (DSA) had better sensitivity of 98.1%, which decreases to 90.9% for small aneurysms. This report emphasized the importance re-evaluating the possibility of brain aneurysm in SAH with unknown etiology. Furthermore, combination of flow diverter (FD) and coiling was safe to be employed in the acute phase of SAH.

Materials and Methods

This report presented a case of SAH with an initially undiscovered etiology, which was eventually discovered to be ruptured anterior communicating artery (AComA) aneurysm after reevaluation following rebleeding. Endovascular approach was successfully delivered in the acute phase.

Results

A 35-year-old male presented with a sudden onset of severe headache for three hours, accompanied with vomiting and loss of consciousness. Brain CT revealed diffuse SAH predominantly located in the anterior interhemispheric fissure (Hunt and Hess 3, World Federation of Neurosurgical Societies (WFNS) 2, modified Fisher 3). Initial diagnostic work-up with brain CTA and DSA revealed no significant findings. He was managed with lumbar drain for cerebrospinal fluid diversion and admitted to intensive care unit for close monitoring of potential complications. On the fifth day of admission, he experienced a second thunderclap headache. Follow-up CT revealed worsening of SAH. Repeated DSA revealed a small blister like aneurysm 1.6mmx1.6mm at AComA. Emergent endovascular treatment using 2.25mmx-15mm Silk Vista Baby (Balt, Montmorency, France) and adjunctive Target 1x3mm 360 soft coils (Stryker, Michigan, USA) was successfully carried out, resulting in complete obliteration of the aneurysm (Raymond-Roy Grade 0). He received double antiplatelet thereafter. His condition gradually improved over subsequent days and was discharged without neurological sequelae.

Conclusion

Re-evaluation of SAH etiology is essential, especially in cases of deterioration. Prompt endovascular treatment using FD and coiling is safe and effective during the acute phase.

Poster Presentation

A-012

The Real-World Practice Outcomes of Bridge Mechanical Thrombectomy in the Northern Taiwan

Category:
Acute Ischemic Stroke

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Background and Purpose
Bridge mechanical thrombectomy (BMT) plays an essential role in treatment of large vessel occlusion (LVO) of patients with acute ischemic stroke failed to response to intravenous thrombolysis, either within or extended time windows. The study aimed to present real-world results of BMT with different dosages of tissue plasminogen activator (TPA), either in the standard or extended time windows in an independent referral system in the northern Taiwan.

Materials and Methods
In total, 576 patients with acute anterior circulation ischemic stroke treated with mechanical thrombectomy (MT) between 2017 and 2021 at an independent referral system, composed of two allied stroke centers, were retrospectively reviewed. Of all patients underwent MT, BMT and TPA were performed for 423 patients, which were categorized as full (0.9 mg/kg) or reduced (<0.9 mg/kg) dose. Standard time window (STW) cohort was defined as BMT or MT performed within six hours (6Hs) of acute ischemic stroke onset, while those underwent BMT beyond 6Hs as the extended time window (ETW) cohort. 90 days Modified Rankin Scale (mRS) score, technical treatment success, in-hospital mortality, and post-treatment hemorrhage were analyzed.

Results
Within the STW cohort, the BMT group showed higher rates of good functional outcomes (GFO) at 90 days (mRS 0-3) than the non-bridge group, (25% vs 12%, p = 0.049). In those 423 patients with BMT, 218 of which treated in the STW, while 205 treated in the ETW. Within the STW, the full-dose TPA group demonstrated a higher proportion of GFO at 90 days (mRS0-3) versus reduced (49% vs 21%, p = 0.0358). The overall GFO of STW was higher than that of the ETW (33% vs 20%, p = 0.0480). Within the ETW, GFO was similar between full and reduced dose groups. Successful reperfusion rate was lower in STW versus ETW cohorts (39% vs 58%, p = 0.0199). There were no statistic differences of excellent functional outcome at 90 days (mRS 0-2) within all categories.

Conclusion
In real-world practice, the GFO of BMT is better than MT alone. The TPA dosage is not a determining factor of GFO in ETW BMT.

Poster Presentation

A-013

Case Report: Endovascular management of a big aneurysm at vertebrobasilar fenestration with Flow diverter

Category: Cerebral Aneurysm

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Background and Purpose

We report a case of a big aneurysm at fenestration of vertebrobasilar junction, which was successful treated with a flow diverter and parent artery occlusion of one vertebral artery.

Materials and Methods

A 57 years-old female has the history of hypertension under medication. She suffered headache and dizziness for years, more exacerbation recently weeks. MRI and DSA showed an 11.5x12.5mm big aneurysm at a fenestration of vertebrobasilar junction. A Pipeline Shield Embolization Device (4.5x15mm) was deployed from right VA to BA. And then parent artery occlusion of left distal VA with 8 coils were performed. The postprocedural angiogram showed delayed arterial flow into aneurysm and patency of vertebrobasilar arteries.

Results

She felt headache for 3 days after treatment. Then she was discharged with improved headache and normal neurologic condition. The headache was completely improved after 1 month. The 3 months follow up MRI showed subacute thrombosis of the aneurysm. The 6 months follow up DSA showed total occlusion of the aneurysm with patency of vertebrobasilar artery.

Conclusion

Develpment of aneurysm at anatomic variant of fenestration is rare. Endovascular management with coiling of a big posterior fossa may increase mass effect to brainstem. We report an effective and successful endovascular treatment with flow diverter and parent arterial occlusion for this rare aneurysm.

Poster Presentation

A-014

Super-selective embolization of vasa vasorum within partially thrombosed vertebral aneurysm

Category:
Cerebral Aneurysm

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Background and Purpose

Partially thrombosed vertebral artery aneurysms (PTVAs) are rare, most of which are not easy to treat. Furthermore, endovascular treatment of PTVAs may not have favorable outcomes. The relationship between PTVAs and well-developed vasa vasorum (VV), including the mechanism of aneurysm growth, has been reported, but there are no reports of imaging findings by digital subtraction angiography (DSA). In this case, we successfully performed superselective angiography of well-developed VV and evaluated its imaging characteristics. We present the first DSA report of a well-developed VV of PTVA.

Materials and Methods

A 54-year-old patient presented with a PTVA that exerted a mass effect on the medulla oblongata. The aneurysm had no cavity due to thrombosis. The 3-dimensional DSA images indicated VV. Superselective angiography of the VV indicated staining of the thrombosed aneurysm and draining into the suboccipital cavernous sinus through the venous VV.

Results

VV embolization with n-butyl cyanoacrylate was performed. After 3 months, the contrast effect of the aneurysm on contrast-enhanced magnetic resonance imaging disappeared and aneurysm shrinkage was observed. After 18 months, the reduction in aneurysm size was maintained.

Conclusion

We successfully identified a VV within PTVA. Superselective VV angiography showed staining of the thrombosed component and venous return draining into the suboccipital cavernous sinus. In this case, the embolization of the VV proved to be an effective endovascular treatment of PTVA, but the safety of this method is a challenge. Further case studies are required to validate this method, and we hope it will evolve into a new treatment of PTVA.

Poster Presentation

A-015

Long-Term Outcomes of Ruptured Blood Blister-Like Aneurysms with Multiple (2)Overlapping Stents and Coiling: A Single-Center Experience

Category: Cerebral Aneurysm

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Background and Purpose

To evaluate the long-term feasibility ofmultiple overlapping stents (‡2) with or without coiling fortreating blood blister-like aneurysms (BBAs)

Materials and Methods

BBAs treated with stent-assisted coiling orstent-only therapy wasincluded. BBAs with atypicalanatomical locations, other endovascular or surgicaltechniques performed, and delayed treatment (>48 hours)were excluded. Medical records of patients and proced-ures were retrospectively reviewed

Results

Seventeen patients with BBAs were identi-fied, and 15 were treated with stent-assisted coiling and 2 with stent-only therapy. Triple overlapping stents wereperformed in seven patients, double stents in nine, and asingle stent with coiling in 1. One patient experienced in-stent fibrin formation and received intra-arterial tirofiban.Complementary treatment was required in four patients.Three patients were initially treated with double (3/9) and 1with triple stents (1/7). Three recurred in the acute period(£6 weeks) and 1 recurred 14 months after treatment. Threeof 17 patients with Hunt Hess grade 5 died early. Thirteenpatients were available for long-term angiographic follow-up (13.8 8.9 months). Final angiography showed completeaneurysm occlusion in all patients without in-stent steno-sis or perforating vessel occlusion. Clinical follow-up datawere available for all 14 surviving patients (66.8 40.9 months). Eight patients had favorable out-comes, five had unfavorable outcomes, and 1 died of subarachnoid hemorrhage-unrelated cause. Delayedinfarct or hemorrhage was not documented.

Conclusion

Even in the era of flow diverter stents,the use of multiple overlapping stents with or withoutcoiling can be a feasible alternative for treating rupturedBBAs.

Poster Presentation

A-016

Depression or Anxiety According to ManagementModalities in Patients With UnrupturedIntracranial Aneurysms

Category:
Cerebral Aneurysm

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Background and Purpose

In the treatment of unruptured intracranial aneurysms, the risk was usually estimated by objective neurologicalsequelae. However, their effects on depression and anxiety are rare and remain controversial. We aimed to evaluate therisk of depression and anxiety in patients with unruptured intracranial aneurysm stratified by management strategies in apopulation-based, longitudinal cohort study.

Materials and Methods

Using the Korean National Health Insurance Research Database, 71 750 patients with unruptured intracranialaneurysms between 2008 and 2011 were identified and followed up until the end of 2020. The risk of depression andanxiety was compared among management strategies with respect to age, sex, and medical comorbiditie

Results

The Kaplan-Meier survival curves indicated that the treatment (clipping and endovascular treatment) group developeddepression more frequently than the observation group (P<0.001). The adjusted hazard ratio was 1.11 (95% CI, 1.07–1.15)in the treatment group. According to the management modality, the Kaplan-Meier survival curves indicated that clipping andendovascular treatment groups developed depression more frequently than the observation group (P<0.0001). The adjustedhazard ratio was 1.15 (95% CI, 1.10–1.21) for clipping and 1.07 (95% CI, 1.02–1.12) for endovascular treatment. Thedepression risk was higher with advanced age (hazard ratio for 45–64 years, 1.37 [95% CI, 1.29–1.45] and hazard ratio for≥65 years, 2.04 [95% CI, 1.92–2.17]). The risk for anxiety did not differ among the management modalities.

Conclusion

In this study, the risk of depression was slightly greater after clipping surgery than endovascular treatment.Data on treatment-related, long-term psychological outcomes, such as depression, may aid decision-making for preventivetreatment of asymptomatic unruptured intracranial aneurysm patients

Poster Presentation

A-017

A Case of Spinal Intraosseous Epidural Arteriovenous Fistula

Category: Spinal vascular diseases

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Background and Purpose

Spinal intraosseous epidural arteriovenous fistula is an extremely rare vascular anomaly. Although trauma and surgical intervention have been suggested as possible causes, its precise pathogenesis remains unclear. We report a rare case of spinal intraosseous epidural AVF associated with vertebral compression fracture.

Materials and Methods

A 55-year-old man presented with sudden-onset low back pain without any history of trauma. He was initially diagnosed with an L3 compression fracture and underwent balloon kyphoplasty (BKP) and biopsy. A few months later, he developed gait disturbance. MRI revealed flow voids, and massive bleeding occurred during a second biopsy. CTA suggested a shunt disease, and he was referred to our institution.

Results

Digital subtraction angiography demonstrated multiple feeders arising from bilateral L2–L4 segmental arteries, converging into a cavity within the L3 vertebral body and draining into the internal vertebral venous plexus. Via the azygos arch, transvenous embolization using Onyx was performed, resulting in significant reduction of venous congestion. Postoperative MRI showed improvement in spinal cord

Conclusion

This case provides valuable insight into the diagnostic and therapeutic approach to the exceptionally rare entity of spinal intraosseous epidural AVF. In recent years, transvenous embolization in the spinal region has been reported for cerebrospinal fluid leakage. These advancements suggest that a deeper understanding of spinal venous anatomy may become increasingly essential for managing shunt-related spinal pathologies.

Poster Presentation

A-019

PEDIATRIC NEUROINTERVENTIONS: A POTPOURRI OF 128 JUVENILE PATIENTS

Category:
Pediatric Vascular diseases

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Background and Purpose

The subspeciality of paediatric neurointerventional radiology is developing due to new advances in technology, including smaller devices and lower radiation doses, as well as expanding indications. Our understanding of these conditions, their pathogenesis and natural history has improved in recent years. The necessity of doing these treatments, considering the inherent greater risks of radiation and cerebrovascular impairment in infants, is constantly weighed against the ability to do so. Furthermore, since cardiovascular comorbidities linked to cerebrovascular illness are not typically present at this age, children may have etiologies that are more complex. This study aims to clarify trends in this patient population by reviewing the neurointerventional experience our institution has had with pediatric population.

Materials and Methods

In order to share our insights gained from a decade of experience, we report on the paediatric neurointervention cohort from our centre. Our neuroendovascular database underwent a retrospective assessment. All patients who had neurointerventions between the ages of two months and twenty-one were included. Treatment type, indication, and location as well as patient demographics were extracted from the medical record.

Results

The study included 128 patients, 28 of whom had aneurysms, 50 of whom had arteriovenous malformations, arteriovenous fistulas, and Vein of Galen aneurysmal malformations, 31 of whom displayed tumours such as angiofibroma, haemangioma, and giant cell tumour, and 21 who had stenosis, dissections, and cerebral proliferative angiopathies. The overall mortality rate was 3.1%, with 85.9% of patients reporting no complications following the treatment. Tables 1–4 provide information about disease treatment, location, and outcomes.

Conclusion

The role of endovascular therapy in the management of children with cerebrovascular diseases is rapidly evolving, and experience with new endovascular devices and embolic materials is just gaining momentum. It is anticipated that in the future the role of endovascular therapy will continue to grow as part of the multidisciplinary team approach to the management of children presenting with complex vascular diseases of the central nervous system.

Poster Presentation

A-020

Delayed symptomatic thrombembolism after coil embolization of Unruptured basilar artery top aneurysm: A case report

Category: Cerebral Aneurysm

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Background and Purpose

Endovascular treatment has been increasingly performed for unruptured intra cerebral aneurysms. However, thromboembolic complications, which develop mostly within 48 hours after the procedure, are the most common and major complications of endovascular treatment. We present a rare case of delayed symptomatic thromboembolism in an ischemic stroke patient who had under gone coil embolization for unruptured basilar artery top aneurysm.

Materials and Methods

We report a case of 68 year old man coil embolization for unruputured basilar artery top aneurysm The patient visited our hospital complaining of chronic headache. The patient was diagnosed with unruptured basilar arery top wide neck Aneurysm(3.70x3.75x3.84mm) on conventional angiography..Endovascular coiling was done and final angiography showed complete obliteration of aneurysm, The patient full wake up without any neurological symptoms.

Results

7 days after coil embolization,The patient was found to be unconscious and had left arm and leg weakness. Emergency cerebrovascular angiography showed a occlusion of the basilar artery, and after the emergency mechanical thrombolysis,recanalization of occluded artery was done.The patient is fully recovered and has no neurological sequelae.

Conclusion

Most thromboembolic complications occur within 48 hours of endovascular treatment; therefore, antiplatelet or anticoagulant is used during the procedure. However, delayed thromboembolic event beyond 2 days after coil embolization may occur despite its rarity. Here, we present a case of delayed symptomatic thromboembolism which occurred 7 days after the coil embolization of an unruptured aneurysm despite antiplatelet therapy.

Poster Presentation

A-021

Microsurgical Disconnection of C1 Nerve Root DAVFs at the Craniocervical Junction: Treatment Principles and Technical Insights from Eight Cases

Category:
Spinal vascular diseases

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Background and Purpose

Dural arteriovenous fistulas (DAVFs) at the craniocervical junction (CCJ) involving the C1 spinal nerve root are rare but surgically curable vascular lesions. Their deep location, complex anatomy, and small-caliber feeders present diagnostic and therapeutic challenges. We report treatment principles and technical outcomes from eight cases, including one with holocord myelopathy.

Materials and Methods

Eight patients with CCJ DAVFs at the C1 level were retrospectively reviewed. All underwent 3T MRI, contrast-enhanced MRA, rotational CTA, and digital subtraction angiography. Seven patients were treated with microsurgical disconnection via lateral suboccipital craniotomy and ipsilateral C1 hemilaminectomy; one underwent endovascular embolization.

Results

Among eight patients (5 men, 3 women; median age 54, range 48–72), five (71.4%) presented with subarachnoid hemorrhage (SAH) and three (28.6%) with progressive myelopathy. All fistulas except one were supplied by the radiculomeningeal branch of the vertebral artery at the C1 level. Venous aneurysms were present in all SAH cases and were the presumed source of bleeding. Microsurgical procedures were performed in lateral decubitus position. After dural opening, the denticulate ligament and dorsal root of the C1 nerve were exposed. The arterialized draining vein was identified using intraoperative indocyanine green angiography and confirmed by color change after disconnection. Clipping or coagulation of the intradural draining vein was the key therapeutic step. One patient required reoperation after failed extradural feeder coagulation. All surgically treated patients achieved complete angiographic obliteration within one week. Most had favorable neurological outcomes; two experienced transient trapezius muscle spasm. One patient treated endovascularly had treatment failure and died from sepsis and gastrointestinal bleeding. In the illustrative myelopathy case, the patient regained ambulation and experienced near-complete resolution of bowel and bladder dysfunction by six months.

Conclusion

Microsurgical disconnection of the intradural draining vein offers definitive and durable treatment for C1-level CCJ DAVFs. In anatomically complex cases, surgery provides superior control compared to endovascular approaches. This series reinforces the value of consistent, anatomy-guided microsurgical technique in achieving high cure rates with low morbidity.

Poster Presentation

A-022

Quantitative index of cerebral aneurysm projection and parent artery curvature in flow diverter placement

Category: Cerebral Aneurysm

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Background and Purpose

In cerebral aneurysm treatment using flow diverters (FDs), the curvature of the parent artery and the projection of the aneurysm may influence procedural complexity and occlusion status. However, standardized quantitative measures for these anatomical features are lacking. This study aimed to develop and validate a method for objectively assessing these factors using a cerebral angiography system workstation.

Materials and Methods

We retrospectively analyzed preoperative three-dimensional rotational angiography images from patients treated with FDs for unruptured internal carotid artery aneurysms between 2017 and 2022. Using SmartCT (Philips), a centerline was generated along the parent artery. Point N was defined at the aneurysm neck, with points P and D located 10 mm proximal and distal to N, respectively on the centerline of the parent artery. The aneurysm tip (T) was identified as the furthest point from N on the aneurysm's outline. Two indices were calculated: the curvature ratio (C ratio)—defined as 20 mm divided by the 3D linear distance PD, representing vessel tortuosity; and the projection angle (P angle)—the angle TNP (in the plane where point P and point D coincide), quantifying aneurysm projection. Aneurysm occlusion was evaluated at 6 months post-treatment via angiography, with O'Kelly–Marotta grades C and D considered good occlusion.

Results

Thirty-six cases were included (mean age 65.9 years; mean dome diameter 13.5 mm; mean neck diameter 8.1 mm). The P angle was significantly lower in cases with good occlusion versus poor occlusion (81.8° vs. 145.7°, $p<0.01$). Receiver operating characteristic analysis yielded an area under the curve of 0.90, with an optimal P angle cutoff of 96.1°. Multivariate analysis identified P angle as an independent predictor of good occlusion (odds ratio 0.95; 95% CI 0.91–0.99; $p=0.03$). The C ratio was not significantly associated with occlusion but negatively correlated with neck diameter ($r = –0.46$; $p<0.01$).

Conclusion

This method allows quantitative evaluation of parent artery tortuosity and aneurysm projection. The P angle, in particular, may serve as a valuable predictor of aneurysm occlusion following FD placement.

Poster Presentation

A-024

Intracerebroventricular SRPX2 Administration Attenuates Neurological Deficits and Cerebral Vasospasm in a Mouse Model of Subarachnoid Hemorrhage: A Pilot Study

Category: Cerebral Aneurysm

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Background and Purpose

Hypothalamic dysfunction following subarachnoid hemorrhage (SAH) has been reported to correlate with poor outcomes, yet no therapies directly target the hypothalamus. Sushi repeat–containing protein X-linked 2 (SRPX2), a hypothalamic protein, has recently been implicated in neuroprotection, tissue repair, and autonomic regulation after brain injury. We previously demonstrated an acute decrease in SRPX2 levels in moderate-to-severe SAH model rats. Here, we hypothesized that SRPX2 administration would attenuate neurological deficits and cerebral vasospasm after SAH.

Materials and Methods

Male C57BL/6N mice (28.6–34.7 g) were randomly assigned to three groups (n=5 each): Sham + PBS, SAH + PBS, and SAH + SRPX2. Twenty-four hours before induction of SAH via endovascular perforation (or sham surgery), mice received intracerebroventricular injections of SRPX2 (dose 0.24μg) or PBS. At 24 h post-SAH, we evaluated neurological function (Garcia score, beam balance test), early brain injury (brain water content, BWC), and delayed cerebral ischemia (basilar artery diameter). Immunohistochemistry assessed activation of PI3K/AKT and uPAR-FAK-ERK signaling pathways.

Results

SAH + PBS mice developed significant hypertension, worsened neurological scores, and basilar artery wall thickening compared to Sham + PBS. SRPX2 treatment significantly attenuated the SAH-induced rise in mean arterial pressure ($p = 0.03$), restored Garcia scores to sham levels, and improved beam balance performance ($p = 0.03$). No differences in BWC were observed among the groups. However, SRPX2 markedly reduced basilar artery wall thickness versus SAH + PBS ($p = 0.01$). Immunohistochemical analysis revealed that while pAkt expression did not differ between groups, SRPX2 suppressed the SAH-induced upregulation of pERK ($p = 0.001$), suggesting inhibition of FAK-ERK signaling.

Conclusion

Intracerebroventricular SRPX2 administration prior to SAH ameliorates neurological deficits and cerebral vasospasm in this pilot study. The data indicate a potential influence of SRPX2 on hypothalamic and vascular function via the uPAR-FAK-ERK pathway. Further studies with larger sample sizes and detailed mechanistic exploration are warranted to validate SRPX2 as a novel therapeutic target in SAH.

Disclose all financial interests

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Poster Presentation

A-025

Endovascular strategy for intraosseous AVFs near the hypoglossal canal without embolizing the anterior condylar vein

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Intraosseous arteriovenous fistulas (AVFs) near the hypoglossal canal often drain into the anterior condylar vein (ACV), posing risks of hypoglossal nerve palsy if embolized. This anatomy presents distinct diagnostic and therapeutic challenges.

Materials and Methods

We analyzed 10 patients with intraosseous AVFs adjacent to the hypoglossal canal who underwent endovascular treatment between 2014 and 2025. Angioarchitecture was assessed using MRI, CTA/CTV, and 3D rotational angiography. Shunted pouch locations were classified into four directions superior (S), inferior (I), lateral (L), and posterior (P) based on anatomical landmarks: S corresponded to the jugular tubercle, I to the occipital condyle, L to the condylar fossa, and P to the margin of the foramen magnum.

Results

Mean age was 71.8 years; seven were female. All presented with pulsatile tinnitus; two also exhibited ocular symptoms, one had hypoglossal palsy. Nine cases were Borden type I, one type II. Shunted pouches were located at a single site in six patients, at two sites in three, and at four sites in one. The directional distribution of shunted pouches was S (n=7), P (n=5), L (n=3), and I (n=1). Venous drainage involved the internal jugular vein via the anterior condylar confluence (ACC) in nine cases; additional routes included the inferior petrosal sinus (n=3), lateral condylar vein (n=4), posterior condylar vein (n=3), and marginal sinus (n=2). All patients underwent transvenous coil embolization. In three cases, adjunctive transarterial coil embolization was performed, and in two cases, transvenous injection of n-butyl cyanoacrylate was additionally employed. One case required access via the vertebral venous plexus, with embolization of the shunted pouch and the inferior petrosal sinus to prevent cortical reflux. Seven achieved immediate complete or near-complete occlusion; three required retreatment. Post-treatment CT confirmed that coils were confined to the shunted pouch, avoiding the hypoglossal canal. No new neurological deficits occurred. All patients showed improvement.

Conclusion

Careful evaluation of venous anatomy enables safe and effective endovascular treatment of intraosseous AVFs near the hypoglossal canal. Targeted embolization at the shunted pouch while preserving the ACV and recognizing the ACC as an outflow channel is key to preventing nerve injury.

Poster Presentation

A-028

Effectiveness of Continuous Intra-arterial Nimodipine Infusion for the Treatment of Refractory Vasospasm after Aneurysmal Subarachnoid Hemorrhage

Category: Cerebral Aneurysm

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Background and Purpose

Delayed cerebral ischemia (DCI) is a severe complication following aneurysmal subarachnoid hemorrhage (aSAH), potentially leading to functional impairments. Cerebral vasospasm (CVS) is one of the primary mechanisms of DCI. In cases of medically refractory CVS, intra-arterial (IA) nimodipine is a rescue treatment, but its effectiveness can be insufficient. We hypothesized that continuous IA nimodipine infusion (CIAN) could serve as a salvage treatment, and we evaluated its effectiveness and safety.

Materials and Methods

We evaluated 274 patients with aSAH admitted between October 2017 and February 2024, identifying those who received IA nimodipine and those who also received CIAN. The modified Rankin Scale (mRS) score at discharge was assessed in the CIAN group, and patient and disease characteristics, length of stay, and discharge mRS scores were compared between the conventional IA nimodipine and the CIAN groups.

Results

Of the 274 patients, 15 received IA nimodipine, and five of those underwent CIAN. More females were observed in the medically refractory CVS group compared with the non-refractory group (87% [13/15] vs. 66% [171/259]), but there was no sex difference between the CIAN and conventional IA nimodipine groups. CIAN was initiated at a mean of 9 days after the onset of aSAH and continued for 21–81 hours. Two complications were noted, including severe brain edema and suspected heparin-induced thrombocytopenia. However, radiological assessments showed no new lesions. The CIAN group exhibited a longer duration of abnormal findings on transcranial Doppler compared to the conventional IA group (16.0±10.1 vs. 9.4±7.9 days), as well as longer NCU (17.4±10.1 vs. 14.1±7.0 days) and hospital stays (46.6±28.7 vs. 29.5±14.1 days). Nonetheless, more achieved a favorable outcome (mRS≤2) in the CIAN group (80% [4/5] vs. 70% [7/10]).

Conclusion

CIAN is a viable salvage treatment for refractory CVS, providing a prolonged vasodilatory effect compared to conventional IA nimodipine, with favorable outcomes.

Poster Presentation

A-029

Mechanical Thrombectomy for Large Vessel Occlusion Involving an Unrecognized Aneurysm with Hyperdense Sign on CT: A Case Report

Category: Acute Ischemic Stroke

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Background and Purpose

We report a case of acute ischemic stroke in an elderly male with a known unruptured right internal carotid–posterior communicating artery (IC-PC) aneurysm identified on MRA four years prior. He was found with left hemiparesis 90 minutes after last known well while hospitalized for rehabilitation. MRI showed a DWI-ASPECTS of 4 in the right MCA territory, and MRA revealed right ICA occlusion. Due to low ASPECTS, IV thrombolysis was not administered, and the patient was transferred for mechanical thrombectomy (MT).

Materials and Methods

On admission, NIHSS was 17. Head CT revealed a hyperdense sign from the right ICA C2 to the M1 segment, coinciding with the location of the known IC-PC aneurysm, although this was not recognized at the time of treatment initiation. MT was performed under local anesthesia via a right femoral approach using a Solitaire X stent retriever and React 71 aspiration catheter. During the procedure, the aneurysm was visualized on angiography. To minimize mechanical stress, the aspiration catheter was not advanced beyond the thrombus, and the retriever and microcatheter were carefully withdrawn under aspiration. Complete recanalization was achieved without aneurysmal rupture.

Results

This case illustrates that a hyperdense sign on preoperative CT may reflect not only thrombus but also flow stagnation within an aneurysm adjacent to an occlusion. The aneurysm's visibility on post-deployment angiography despite prior occlusion suggests that proximal thrombus-induced stagnation may have led to hyperdensity on CT. Although not previously reported as a mechanism, this phenomenon may offer a new diagnostic clue to identifying aneurysms hidden by acute occlusions.Furthermore, the use of axial and sagittal CT views was critical in retrospect for detecting the hyperdense aneurysm. This case emphasizes the need for thorough review of preoperative imaging and consideration of past vascular studies when planning MT. When aneurysms are suspected or identified intraoperatively, techniques that minimize stress such as the ADAPT or combined approach should be considered to ensure procedural safety.

Conclusion

To our knowledge, this is the first reported case of MT in an occluded vessel involving a hyperdense aneurysm, with implications for improving preoperative detection and intraoperative strategy.

Poster Presentation

A-031

Single Neuroform Atlas stent: a reliable approach for treating complex wide-neck bifurcated aneurysms

Category:
Cerebral Aneurysm

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Background and Purpose
Treating wide-neck bifurcated cerebral aneurysms (WNBAs) using various techniques and new devices has shown favorable outcomes. However, endovascular coiling can be technically challenging when the aneurysm neck is incorporated into the parent vessel. Furthermore, although recent research has reported favorable outcomes of Neuroform Atlas stent (NAS)-assisted coiling, broad inclusion criteria have hampered precise evaluations of their effectiveness and safety for treating complex WNBAs. Therefore, this study evaluated whether the use of a single NAS is a safe and effective approach for treating complex WNBAs.

Materials and Methods
We treated 76 complex WNBAs (unruptured, n = 49; ruptured, n = 27) using single NAS-assisted coil embolization and retrospectively analyzed the clinical and angiographic outcomes.

Results
In a cohort of 68 patients (mean age, 58.3 ± 11.6 years; males n = 20, 29.4%; females, n = 48, 70.6%), 76 stents were successfully delivered to the target aneurysms, yielding a technical success rate of 98.6%. Complete occlusion was evident in 59 (77.6%) of 76 aneurysms, with neck remnants found in 16 (21.1%) and partial occlusion in 1 (1.3%). Treatment-related morbidities comprised one branch occlusion and one parenchymal hemorrhage. However, no new neurological symptoms of unruptured aneurysms were evident at discharge. The outcomes of 20 of the 27 ruptured aneurysms were favorable (Glasgow Outcome Scale scores of 4 or 5) at the final follow-up assessment (mean 12.2 [6–29] months), except for one initial subarachnoid hemorrhage. Posttreatment angiography revealed complete occlusion in 89.1%, neck remnants in 7.8%, and incomplete occlusion in 3.1% of the aneurysms. Approximately 88.2% of the patients were assessed at least once by follow-up diagnostic or magnetic resonance angiography (mean, 12.5 ± 4.3 [range, 6–29] months), with five (7.8%) minor and two (3.1%) major recurrences.

Conclusion
A single NAS is safe and effective for treating WNBAs incorporated into parent vessels.

Poster Presentation

A-032

Thrombectomy with Carotid Stent Thrombus Trapping in Acute Tandem Occlusion of Cervical ICA and MCA

Category: Acute Ischemic Stroke

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Background and Purpose

Carotid free-floating thrombus (FFT) with distal embolization to the middle cerebral artery (MCA) represents a rare and challenging condition in the context of acute ischemic stroke (AIS). Traditional mechanical thrombectomy techniques such as aspiration and stent retrievers are often less effective in cases where the thrombus is large, elastic, and prone to fragmentation, which increases the risk of distal embolization. Despite advancements in endovascular therapy, optimal management strategies for tandem occlusions involving carotid FFT and MCA embolic occlusion remain unclear. We introduce a technique combining carotid stent placement for thrombus trapping followed by MCA thrombectomy, offering a potential solution for these complex cases. We detail the steps of the procedure and discuss important considerations to prevent thrombus migration.

Materials and Methods

We present the case of a 51-year-old male with history of hypertension who presented with acute right-sided weakness and NIHSS score of 13. CT angiography (CTA) and CT perfusion (CTP), revealed a free-floating thrombus in the left cervical internal carotid artery (ICA) and occlusion of the left M1 segment of the MCA. Carotid stent was deployed to trap the free-floating thrombus against the vessel wall, followed by mechanical thrombectomy of the MCA using contact aspiration. Balloon-guide catheter and embolic protection device (Spider FX) were used to minimize distal thrombus migration.

Results

Post-procedural imaging demonstrated partial recanalization of the left MCA M3 branches with a TICI 2c reperfusion. Complete recanalization of the left cervical ICA was achieved, with the thrombus successfully trapped outside the stent. Clinically, the patient showed significant improvement, with a modified Rankin Scale (mRS) score of 1 at discharge.

Conclusion

Thrombectomy combined with carotid stent thrombus trapping offers a safe, and effective strategy for treating AIS due to carotid FFT with tandem occlusion of the cervical ICA and MCA. This technique ensures thrombus containment and maintains ICA patency. Key procedural considerations include stent selection, and post-procedural antiplatelet therapy.

Poster Presentation

A-033

Paraspinal Arteriovenous Shunts: Four Cases from a Single Center

Category: Spinal vascular diseases

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Background and Purpose

Introduction Paraspinal arteriovenous shunt (PAVS) is a rare variant of spinal arteriovenous shunts (AVS). Traditionally, PAVS has been recognized as an AVS located outside the spinal canal in the parachordal region, highlighting the embryological origin of the vessels from which AVSs arise. However, the literature reveals that PAVS encompasses a variety of etiologies, including congenital, traumatic, and acquired lesions. Its pathology and etiology have not been well-organized, which complicates a thorough understanding of this rare condition. Here, we present four cases of paraspinal AVSs from our institute and review the literature.

Materials and Methods

Case Series Our series included three acquired and one congenital PAVS (age range: 19–59 years, mean age 38.3, three males and one female). One congenital and one acquired PAVS exhibited type I angioarchitecture, while the remaining two acquired PAVSs displayed type IIIa angioarchitecture. Two acquired cases may have developed due to venous congestion or venous hypertension. Three of the cases were symptomatic and underwent transarterial embolization, resulting in complete occlusion in two cases and partial occlusion in one.

Conclusion

Discussion and Conclusion The PAVSs in our case series, as well as those in the literature, can be subdivided into three types: one with a remnant of embryological direct arterial-venous connection, one with arterial wall fragility, and one that developed secondarily due to venous congestion or venous hypertension, similar to intracranial dural AVSs. The etiology of PAVS significantly influences both its angioarchitecture and clinical manifestations, which is critical for better clinical management of this rare disease.

Poster Presentation

A-034

Treatment results of endvascular treatment for raptured aneurysms at our hospital

Category: Cerebral Aneurysm

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Background and Purpose

To report the treatment outcomes of ruptured aneurysms at our hospital.

Materials and Methods

Of 350 cases of ruptured aneurysms treated at our hospital between November 2003 and December 2024, 299 cases were treated with endovascular treatment. We investigated the re-rupture rate, retreatment rate, and intraoperative rupture in these 299 cases

Results

There were no cases of re-rupture during the perioperative period, and all four cases (1.3%) of re-rupture occurred before 2008, and occurred several years after the onset of subarachnoid hemorrhage. Intraoperative rupture was significantly increased in cases using intermediate catheter.

Conclusion

Although endovascular treatment is considered to be effective in preventing re-rupture in the acute phase, some cases require long-term retreatment, and strict long-term follow-up is necessary.

Poster Presentation

A-035

Application and Convergence Study of Mechanical Engineering Concepts in Endovascular Treatment

Category: Others

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Background and Purpose

Endovascular treatment for cerebral aneurysms is undergoing rapid evolution, driven by a better understanding of the disease and development and advancement of new devices. Given the critical role that blood flow and blood vessels play in cerebral aneurysms, it is imperative to develop a comprehensive understanding of their behavior. In this regard, mechanical engineering concepts, such as fluid dynamics and structural analysis, can be employed to elucidate the underlying mechanisms of these conditions.

Materials and Methods

The objective of this study was to apply mechanical engineering concepts to the field of endovascular treatment for cerebral aneurysms. The following specific objectives were set to achieve this aim: 1) The development of new parameters for the development, growth, and rupture of cerebral aneurysms 2) The interpretation of existing phenomena based on mechanical engineering 3) the understanding of endovascular treatment devices based on mechanical engineering.

Results

The hemodynamic parameters have been studied for rupture prediction by relating them to actual findings of cerebral aneurysms.(e.g. thin wall area of the aneurysm and hemodynamic factors) A fluid-structure interaction study has been conducted on the generation of paraclinoid aneurysms. A new concept of morphology, such as Momentum of Inertia, has been presented. We performed the measurement of mechanical properties of microcatheters, flow-diverters, and other related devices to establish a foundation for in silico analysis of these deives. For instance, mechanical engineering concepts can be applied to the prediction of microcatheter shape after steam-shaping and the interaction with aneurysm walls during WEB insertion in individual cerebral aneurysms.

Conclusion

The application of mechanical engineering concepts might improve our understanding of cerebrovascular diseases, aid in the decision-making process, and improve our understanding of current endovascular treatments and devices.

Poster Presentation

A-036

Carotid artery stenting for heavily calcified lesions after plaque modification using scoring balloon angioplasty

Category:
Other Head and Neck Pathologies

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Background and Purpose

Carotid artery stenting (CAS) for heavily calcified lesions (HCLs) presents technical challenges. The NSE PTA balloon (Nipro, Osaka, Japan), a scoring balloon designed for plaque modification, is commonly used in coronary and peripheral interventions. This study evaluated the feasibility and safety of using this balloon in CAS for HCLs.

Materials and Methods

We retrospectively analyzed 10 CAS procedures using the NSE PTA balloon for carotid stenosis with HCLs. Inclusion criteria were concentric calcified lesions occupying ≥270° of the vessel circumference. Efficacy outcomes included procedural success rate, stenosis improvement after NSE PTA (plaque modification prior stenting), final residual stenosis, and 6-month restenosis. Safety outcomes included 30-day major adverse events and secondary outcomes, including severe bradycardia and hypotension.

Results

The median patient age was 77 years (interquartile range: 74–83), with 90% male, and the median arc of calcification was 311° (294–334°). All 10 procedures achieved technical success. The median stenosis rate improved significantly from 86% (80–87%) pre-procedure to 67% (60–69%) post-NSE PTA ($p = 0.018$) and to 29% (25–37%) after stent placement ($p = 0.018$). No major perioperative adverse events occurred within 30 days. Secondary adverse events, such as hypotension, were transient and successfully managed. At 6 months, no significant restenosis was observed.

Conclusion

This preliminary study demonstrated that the NSE PTA balloon for plaque modification in CAS for carotid artery stenosis with HCLs achieved high technical success and favorable safety outcomes. This technique appears to be a promising and easily applicable treatment option for complex calcified lesions.

Poster Presentation

A-037

Neurointerventional Procedures Using Sheathless 8Fr Optimo Balloon Guide Catheter via Transradial Access: A Single-Center Experience with 100 Cases

Category: Cerebral Aneurysm

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Background and Purpose

This study aimed to evaluate the feasibility and safety of neurointerventional procedures performed via transradial access (TRA) using a sheathless 8Fr Optimo balloon guide catheter (BGC).

Materials and Methods

We retrospectively analyzed 100 consecutive neurointerventional procedures performed via TRA using a sheathless 8Fr Optimo BGC at a single center. Technical success was defined as successful delivery of the BGC to the target vessel without conversion to an alternative access site or catheter system, along with completion of the planned procedure.

Results

A total of 100 procedures were performed in 95 patients (median age: 75 years; 63% male). The most common interventions were aneurysm coiling or flow diversion (45%) and carotid artery stenting (36%). Target vessels for BGC placement included the right carotid (59%), left carotid (31%), right vertebral (4%), and left vertebral (6%) arteries. The median BGC navigation time was 12 minutes (interquartile range: 7–20). Technical success was achieved in 95% of procedures. In five cases, conversion to transulnar, transbrachial, or transfemoral access was required; nevertheless, all planned procedures were completed successfully. Balloon inflation was utilized in 37% of procedures for distal embolic protection, rupture management, or device delivery support. No major access-related complications were observed. Symptomatic non-access-related periprocedural complications occurred in 4% of cases. The overall mortality rate was 2%.

Conclusion

Neurointerventional procedures performed via TRA using a sheathless 8Fr Optimo BGC appear to be feasible and safe, offering a high technical success rate and a low incidence of access-related complications.

Poster Presentation

A-038

Development of Multiple Dural Arteriovenous Fistulas After Treatment for Cerebral Venous Thrombosis: A Case Report

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Cerebral venous thrombosis (CVT) is a rare cause of stroke and may lead to neurological deterioration or hemorrhage. Although CVT and dural arteriovenous fistula (DAVF) are distinct entities, sinus thrombosis can cause venous hypertension and angiogenesis, resulting in DAVF formation. Development of DAVFs after CVT is rare, with reported incidences ranging from <1% to 10%. We report a case of a 63-year-old man who developed multiple DAVFs two years after CVT treatment, highlighting the need for long-term surveillance to detect delayed complications.

Materials and Methods

A 63-year-old man presented with left-hand clumsiness. He had a history of CVT diagnosed two years earlier, involving the superior sagittal, right transverse, and right sigmoid sinuses on MR venography, and was treated with warfarin (4 mg daily) for six months. On current admission, CT angiography showed ectatic cortical veins, and transfemoral cerebral angiography (TFCA) revealed multiple DAVFs involving the superior sagittal, right transverse, superior petrosal sinuses, and the torcular Herophili. A hybrid surgical approach was planned to reduce shunt volume.

Results

The patient underwent two sessions of hybrid surgery. In the first session, a posterior auricular incision and craniotomy over the right transverse–sigmoid junction were performed. Under C-arm fluoroscopy, direct punctures of the right transverse and superior petrosal sinuses were achieved, and sinus obliteration was performed using detachable and pushable coils. Craniotomy over the superior sagittal sinus allowed interruption of feeders from the occipital artery (OA) and superficial temporal artery (STA). In the second session, craniotomy over the mid-superior sagittal sinus obliterated dural AVF channels connecting the middle meningeal artery to bridging and cortical veins. A left mini-craniotomy was also performed to ligate feeders from the ethmoidal artery. Final angiography revealed residual Cognard type IV shunt via the occipital artery and type IIA shunt at the torcular Herophili. Despite residual shunts, the patient's neurological symptoms improved, and he was discharged with a modified Rankin Scale (mRS) score of 0.

Conclusion

DAVFs can develop as delayed complications after CVT, underscoring the importance of long-term surveillance. A combined surgical-endovascular approach effectively reduced shunt burden and achieved favorable neurological recovery.

Poster Presentation

A-039

Hybrid Treatment for Dural Arteriovenous Fistula of the Posterior Condylar Vein: A Transtubercle Combined Transradial Approach

Category:
Dural Arteriovenous Fistulae

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Background and Purpose

Dural arteriovenous fistulas (DAVFs) involving the posterior condylar vein at the skull base are exceedingly rare, and their complex anatomy presents significant treatment challenges. Endovascular therapy is typically the preferred treatment approach. We report a hybrid treatment case involving surgical disconnection of the fistula via a transtubercle approach, combined with intraoperative angiography through a transradial approach in this complex region.

Materials and Methods

A 55-year-old male presented with left hemiparesis (motor power grade IV) lasting 20 days, with a medical history of type II diabetes and dyslipidemia. MRI and MRA revealed an enhancing lesion in the anterior aspect of the pons, with MRA suggesting a posterior fossa AV shunt at the right cerebellomedullary cistern. Cerebral angiography confirmed the presence of a DAVF at the posterior condylar vein, with feeding vessels originating from the right posterior meningeal artery. Although a transarterial embolization was planned, access to the venous pouch was hindered by focal luminal narrowing of the vertebral artery.

Results

Consequently, a hybrid approach was considered, involving lateral suboccipital craniotomy in a park bench position. A transjugular tubercle approach was utilized to coagulate the fistula location. An intraoperative transradial approach confirmed the complete obliteration of the fistula.

Conclusion

This case marks the first documented hybrid treatment of a rare DAVF in the posterior condylar vein, showcasing a safe and effective outcome. The integration of surgical and endovascular techniques demonstrates innovative problem-solving in addressing complex anatomical challenges. Key words: DAVFs, hypoglossal canal, posterior condylar vein, hybrid

Poster Presentation

A-040

A Case of Acute Middle Cerebral Artery Occlusion on the Side of Internal Carotid Artery Agenesis

Category: Acute Ischemic Stroke

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Background and Purpose

Congenital absence of the internal carotid artery (ICA) is an exceedingly rare vascular anomaly that poses distinctive challenges in acute cerebrovascular event management. We report a rare case of mechanical thrombectomy for simultaneous occlusions of the middle cerebral artery (MCA) and posterior cerebral artery (PCA) territories secondary to cardioembolic stroke associated with congenital ICA agenesis.

Materials and Methods

An 86-year-old woman with a history of atrial fibrillation presented with sudden-onset impaired consciousness. On admission, she exhibited right hemiparesis, global aphasia, right hemispatial neglect, and right homonymous hemianopia, with a National Institutes of Health Stroke Scale (NIHSS) score of 20. Diffusion-weighted imaging (DWI) revealed extensive hyperintensity in the left occipital lobe and partial hyperintensity in the left MCA territory, with a DWI–Alberta Stroke Program Early CT Score (DWI-ASPECTS) of 8. Magnetic resonance angiography indicated occlusion at the left ICA origin and in the left PCA.

Results

Intravenous thrombolysis with tissue plasminogen activator (tPA) failed to achieve recanalization. Digital subtraction angiography via femoral access demonstrated complete absence of the left ICA from its origin. Retrospective review of MR cisternography suggested congenital absence of the ICA. Subsequent angiography via the left vertebral artery revealed that the left MCA was supplied through a prominent posterior communicating artery, with occlusions in the distal M1 and P2 segments. A 5-French Sofia aspiration catheter was used to achieve complete recanalization of the MCA occlusion. Cone-beam CT confirmed established infarction in the P2 territory; thus, thrombectomy for the PCA occlusion was not attempted. Postoperatively, right hemiparesis improved, but sensory aphasia, hemispatial neglect, and homonymous hemianopia persisted. Bone-window CT confirmed congenital left ICA agenesis. The patient was discharged with a modified Rankin Scale score of 4.

Conclusion

This case highlights the importance of considering congenital vascular anomalies in the differential diagnosis of apparent ICA occlusion during acute stroke evaluation. Awareness of such anomalies can prevent delays in diagnosis and optimize the management strategy.

Poster Presentation

A-041

Temporary coiling technic for cerebral vessel bleeding

Category:
Others

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Background and Purpose

In recent years, with the evolution of various devices, interventions for distal lesions have become widespread. With this trend, hemorrhagic complications caused by microwire arterial perforation or medullary artery injury have increased. We should deal with this problem appropriately.

Materials and Methods

We present two cases in which appropriate hemostasis was achieved using temporary coiling techniques.

Results

Case 1 Patient was a 67 years old female with an unruptured ACom. After the aneurysm embolization, head CT showed subarachnoid hemorrhage in the interhemispheric fissure. 7f ENVOY XB 100cm (CERENOVUS) was guided into the right internal carotid artery and Echelon10 (Medtronic) into the right A2, microangiography showed active bleeding. Echlon10 was advanced to the site of hemorrhage and HyperSoft Helical 1.5mm/4cm (Terumo Neuro) was deployed at the hemorrhage site without detachment. Marathon (Medtronic) was then guided to the right A2, and hemostasis was confirmed by microangiography from the Marathon while the coil was retrieved at the appropriate time. Case 2 Patient was a 86 years old female with an unruptured aneurysm at left A4-5 bifurcation. After Echelon10 was induced in left A5, active hemorrhage was observed at distal A5. Echlon10 was advanced to the site of bleeding and HyperSoft Helical 1.5mm/4cm was deployed at the site of bleeding without detachment. Scepter XC 4mm/11mm (Terumo Neuro) was subsequently guided to A3 and balloon inflated and flow controlled. Microangiography from Scepter XC confirmed hemostasis, and finally Scepter XC balloon was deflated and hemostasis was confirmed again.

Conclusion

Temporary coiling technic suggested the possibility of obtaining adequate hemostasis while avoiding ischemic complications.

Poster Presentation

A-042

Endovascular Treatment of ruptured wide-neck cerebral aneurysm

Category: Cerebral Aneurysm

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Background and Purpose

The treatment of ruptured wide-neck cerebral aneurysm is still a challenge because of coil instability and a high recurrence rate. The aim of this study was evaluate the efficacy and safety of endovascular therapy for ruptured wide-neck cerebral aneurysms.

Materials and Methods

This two-center retrospective study aims to evaluate cases of ruptured wide-neck cerebral aneurysms treated by endovascular therapy from January 2015 to December 2024. Clinical records, aneurysm characteristics, initial occlusion rates and procedure-related complications were reviewed. A wide-neck aneurysm was defined as having a neck ≥ 4 mm or a dome/neck ratio (DNR) < 2.

Results

The analysis included 102 ruptured aneurysms treated by coil embolization. Double-catheter coil embolization (DCC) group (29 cases) showed significantly higher dome, neck, and height of aneurysm than in the balloon-assisted coil embolization (BAC) group (18 cases) and stent-assisted coil embolization (SAC) group (13 cases). Dome-neck ratio and aspect ratio did not differ among the three groups. Sufficient occlusion rates of DCC, BAC, and SAC including complete occlusion and neck remnant were observed 93.1%, 94.4%, 100%, respectively. Procedure related complications of DCC, BAC, and SAC were 3.4%, 5.5%, 30.7%, respectively. The rate of re-treatment for recurrence were 10.3% in the DCC and 22.2% in the BAC. All patients achieved successful endovascular treatment and no cases required alternative clipping surgery.

Conclusion

The DCC group achieved sufficient embolization in the acute phase, with relatively low rates of procedure-related complications and recurrence. DCC was considered to be an effective treatment for ruptured wide-neck cerebral aneurysms.

Poster Presentation

A-043

Endovascular Treatment of I ntracranial Aneurysms Using the Woven EndoBridge (WEB) Device: A Single-Center Experience

Category:
Cerebral Aneurysm

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Background and Purpose

The Woven EndoBridge (WEB) device is an intra-saccular flow disruptor designed for the treatment of wide-neck bifurcation aneurysms (WNBAs). This study aimed to evaluate the technical success, safety, and efficacy of WEB device deployment in a single tertiary center in Korea.

Materials and Methods

Between September 2021 and December 2024, 31 consecutive patients (21 females, 10 males; mean age: 65.0 years) with intracranial aneurysms underwent WEB device embolization. Target aneurysms were located at the MCA bifurcation (n=11), anterior communicating artery (n=10), basilar apex (n=9), and ICA terminus (n=1). Procedural data, immediate angiographic results, complications, and follow-up imaging outcomes were retrospectively analyzed.

Results

Technical success was achieved in all 31 cases (100%). Immediate angiographic outcomes demonstrated contrast stagnation within the device in every case. Follow-up imaging confirmed stable occlusion or progressive thrombosis in most aneurysms. One patient experienced hemoperitoneum unrelated to the neurointervention, recovering fully after gastrointestinal management. One patient died approximately one month after the procedure due to unrelated medical conditions.

Conclusion

The WEB device is a safe and effective option for treating wide-neck bifurcation aneurysms, offering high technical success rates and favorable mid-term angiographic outcomes with minimal complications.

Poster Presentation

A-046

Stent-assisted coil embolization and flow-diverting stent use for retreating recurrent vertebral artery dissecting aneurysms

Category: Cerebral Aneurysm

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Background and Purpose

Vertebral artery dissecting aneurysms (VADAs) sometimes recur after previous endovascular treatments. If there is evidence of changing size over time or if clinical symptoms worsen (due to mass effect), further retreatment is mandatory. The present study was conducted to assess potential differences in efficacy and safety profiles of additional stent-assisted coiling (SAC) and flow-diverting stent (FDS) use in patients with recurrent VADAs

Materials and Methods

A total of 15 recurrent VADAs were subjected to SAC (n=7) or FDS (n=8) retreatment procedures between April 2009 and January 2023. We retrospectively reviewed pertinent medical records and radiologic data to compare efficacy and safety performances of these modalities.

Results

Mean values of maximal dissection length and aneurysm depth were 15.6 mm (range, 10.7-25.0 mm) and 13.9 mm (range, 6.3-29.4 mm) in the SAC group, compared with 15.4 mm (range, 7.2-23.6 mm) and 11.0 mm (range, 3.5-23.6 mm), respectively in the FDS group. In three of seven aneurysms, immediate successful occlusion was evident after SAC. There was immediate contrast stagnation in four of eight aneurysms following FDS placement. No procedure-related hemorrhagic or thromboembolic complications occurred in either group. However, follow-up angiography disclosed major recanalization in four members (57.1%) of the SAC group and in three members (37.5%) of the FDS group.

Conclusion

Reconstructive interventions have proven safe and effective in patients with recurrent VADAs. Unfortunately, follow-up outcomes after retreatment seem worse than initial therapeutic results, even for FDS devices. A larger cohort study is needed to corroborate these findings.

Poster Presentation

A-047

Mechanical thrombectomy of the occlusion of the ICA by spontaneous dissection

Category:
Acute Ischemic Stroke

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Background and Purpose

Spontaneous internal carotid artery (ICA) dissection is a rare vascular disorder, predominantly affecting young adults. It typically presents with stroke-like symptoms due to ischemia in the corresponding vascular territory. Diagnosing ICA dissection can be challenging, as it may resemble pseudo-occlusion, which refers to isolated occlusion of the distal intracranial ICA. Management strategies generally align with those for large vessel occlusion secondary to atherosclerosis or thromboembolism.

Materials and Methods

We retrospectively reviewed data from patients with spontaneous ICA dissection treated at our institution during last 5 years, identifying 15 cases. Among these, three patients presented with complete ICA occlusion and underwent mechanical thrombectomy. All of them involved tandem occlusions of the ipsilateral middle cerebral artery (MCA). In two patients, ICA dissection was suspected prior to intervention based on computed tomography angiography (CTA), while in one case, the dissection was identified near the end of the procedure.

Results

In Case 1, a 32-year-old male presented with global aphasia and right hemiplegia (NIHSS 17, mRS 4). Dissection was confirmed via angiography, and carotid stenting from the proximal to distal cervical ICA was performed. Mechanical thrombectomy achieved complete recanalization (TICI 3), and at 90 days, NIHSS and mRS improved to 3 and 1, respectively. In Case 2, a 50-year-old male exhibited right-sided weakness and aphasia (NIHSS 17, mRS 4). After contact aspiration removed a large thrombus, stent retrieval was used for MCA occlusion. Angiography revealed an intimal flap indicating dissection. The 90-day mRS was 3. Case 3 involved a 38-year-old male with global aphasia and right-sided weakness. CTA suggested poor collateral flow, and angiography revealed distal cervical ICA occlusion with dissection. Mechanical thrombectomy achieved recanalization (TICI 2b), and the 90-day mRS was 4.

Conclusion

Timely diagnosis and precise localization of the dissection and thrombus are crucial for improving outcomes following mechanical thrombectomy.

Poster Presentation

A-049

Impact of Age on Short-Term Outcomes Following Endovascular Thrombectomy in Acute Ischemic Stroke Patients Aged 70 and Older: Insights from a Regional Hospital in Taiwan

Category: Acute Ischemic Stroke

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Background and Purpose

The influence of clinical factors on post-endovascular thrombectomy (EVT) outcomes in patients aged 70 and older remains insufficiently explored. This study evaluates the regional hospital data to determine key predictors of favorable recovery, defined by a modified Rankin Scale (mRS) score of 0 to 2.

Materials and Methods

This institutional ethics committee-approved study analyzed 94 patients aged 70 or older who underwent EVT for acute ischemic stroke. Participants were categorized into two groups: septuagenarians (n = 44) and octo/nonagenarians (n = 50). The study assessed post-EVT outcomes, including the modified Thrombolysis in Cerebral Infarction (mTICI) reperfusion grade, incidence of spontaneous intracerebral hemorrhage (ICH), and the modified Rankin Scale (mRS) score at three months post-EVT. A favorable outcome was defined as an mRS score of 0–2.

Results

Octo/nonagenarians had a significantly higher NIHSS score compared to septuagenarians (19.9 ± 6.1 vs. 16.9 ± 8.0, p = 0.0398), while their mean Alberta Stroke Program Early CT Score (ASPECTS) was notably lower (6.6 ± 2.4 vs. 7.8 ± 2.2, p = 0.0197). Additionally, higher Fazekas grades of leukoaraiosis were more frequently observed among octo/nonagenarians (p = 0.0297). Favorable modified Rankin Scale (mRS) outcomes were achieved in 27.3% of septuagenarians compared to only 8.0% of octo/nonagenarians (p = 0.0274). Multivariate logistic regression analysis revealed that higher NIHSS scores (adjusted odds ratio [aOR] 1.10; 95% confidence interval [CI], 1.01–1.21) were predictive of poorer outcomes, whereas prior intravenous thrombolysis (aOR 0.24; 95% CI, 0.06–0.92) was a significant predictor of better outcomes. However, age was not independently associated with post-treatment outcomes.

Conclusion

This single-hospital study indicates that among patients aged 70 and older, advanced age is not an independent predictor of poorer outcomes following endovascular thrombectomy (EVT) for acute ischemic stroke.

Poster Presentation

A-050

Outcomes of Flow-Diverter Stents in Intracranial Aneurysms: Prognostic Factors of Incomplete Occlusion and In-Stent Stenosis

Category:
Cerebral Aneurysm

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Background and Purpose
Flow-diverter stents (FDS) have transformed the treatment landscape for intracranial aneurysms, offering superior occlusion rates compared to conventional endovascular approaches. Despite their effectiveness, complications such as incomplete occlusion and in-stent stenosis continue challenging long-term success.

Materials and Methods
We retrospectively reviewed 104 intracranial aneurysms treated with FDS at a tertiary referral center (2019–2023). Patient demographics, aneurysm characteristics (size, location, morphology), prior treatments, and procedural details (FDS type, neck coverage, medications) were collected. Angiographic outcomes at approximately 12 months were recorded as occlusion rate. ISS was defined as any luminal narrowing within the stent on follow-up angiography. Logistic regression models were used to identify prognostic factors.

Results
The cohort had a mean age of 56.47 years (±13.06) with 77.8% females. Aneurysms were predominantly unruptured (83.6%) and located in anterior circulation (77%). The mean aneurysm dome width diameter was 7.21 ± 5.34 mm. Fourteen aneurysms (13.5%) had prior treatment (5 clipping, 4 stent assisted coiling). Complete FDS coverage of the aneurysm neck was achieved in 81 cases (77.9%). At a median follow-up of 12 months, complete occlusion was achieved in 60.4% of aneurysms. ISS was observed in 28 cases (30.1%), mostly neointimal lining: 78.5% of ISS cases. Multivariable analysis identified clopidogrel use (OR 4.86, p = 0.02), larger dome width (per mm, OR 1.13, p = 0.02), and incomplete neck coverage (OR 9.20, p = 0.01) as independent prognostic factors of incomplete aneurysm occlusion. For ISS, ticagrelor use was an independent prognostic factor (OR 5.30, p = 0.03). No aneurysm re-ruptures occurred during follow-up. There was no ISS requiring retreatment.

Conclusion
FDS achieved effective aneurysm occlusion in most cases. Incomplete occlusion was more likely in aneurysms with larger dome size or incomplete device coverage of the neck, and among patients on clopidogrel. ISS occurred in about one-third of cases (mostly mild); use of ticagrelor was associated with higher ISS risk. These findings align with emerging evidence that aneurysm size, morphology, and device-apposition factors influence occlusion, while biological factors influence ISS. Optimizing patient selection and device strategy – including ensuring full neck coverage and appropriate FDS sizing – may improve occlusion outcomes and minimize ISS.

Poster Presentation

A-051

General anaesthesia for acute ischaemic stroke mechanical thrombectomy, a single centre experience in Hong Kong and review of recent literature.

Category: Acute Ischemic Stroke

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Background and Purpose

Debate surrounding the anaesthesia of choice for mechanical thrombectomy treatment in acute ischaemic stroke (AIS) is still contentious. It is commonly separated into general anaesthesia (GA), or non-general anaesthesia (non-GA), which include conscious sedation and/or local anaesthesia. Each anaesthesia method has its advantages and drawbacks. Many stroke centre practice is likely dependent on local traditional practice and resource availability. Queen Mary Hospital (QMH) is a regional stroke centre with 24 hours service for intravenous thrombolytics and endovascular therapy (EVT) for acute ischaemic stroke. We have a robust anaesthetic team who can dedicate urgent service for EVT. Given current published literature, our centre is a proponent for GA and nearly all cases of mechanical thrombectomy are performed under GA. We aim to share our stroke centre experience and add to the current literature.

Materials and Methods

Retrospective review from a prospectively maintained database of mechanical thrombectomy cases for AIS from January 2023 to December 2024 was performed. Data including demographics, procedural time metrics and clinical outcomes were extracted for analysis. A review of recent literature and trials around this topic will also be discussed, including their outcomes, relevance of clinical factors and comparison to our local data.

Results

We aim to share our stroke centre experience with figures on logistics, time metrics, practicality and outcomes, whilst comparing with the literature.

Conclusion

There is still ongoing debate on the optimal choice of anaesthesia in mechanical thrombectomy for acute ischaemic stroke. The wide heterogeneity of presenting clinical background renders difficulty in determining an absolute advantage of GA or non-GA as a set standard for all cases. The likely reality remains that GA vs non-GA should be adapted to the clinical scenario and tailoring by weighing up relevant individual parameters. At present in our centre, we have found GA in most cases to be safe and effective in keeping with literature.

Poster Presentation

A-055

The useful “ ↄC stenting” technique for wide neck basilar apex aneurysms

Category:
Cerebral Aneurysm

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Background and Purpose

Large wide-necked basilar artery (BA) apex aneurysms remain difficult to manage despite advances in endovascular strategies. These aneurysms are associated with high recurrence rates and procedure-related complications, including stenosis of the parent artery, occlusion of perforating branches, and in-stent thrombosis. We introduce a novel endovascular technique, which we named “ ↄ C stenting’’, designed to treat complex-shaped BA aneurysms with wide necks involving the proximal segments of the posterior cerebral arteries (PCAs) or the superior cerebellar arteries (SCAs).

Materials and Methods

The “ↄC stenting” technique involves a bidirectional approach. From the anterior circulation, a stent or flow diverter is deployed from the ipsilateral SCA to the PCA via the posterior communicating artery (PCoA). From the posterior circulation, an additional stent or flow diverter is placed from the contralateral PCA to the BA or to the contralateral SCA. This dual-access method is combined with coil embolization to achieve aneurysmal occlusion.

Results

Four patients were treated using this technique. The maximum aneurysmal diameter ranged from 10 to 35 mm, and three aneurysms were partially thrombosed. In three cases, stents were placed between the unilateral SCA and PCA and from the contralateral PCA to the BA. In one case, bilateral SCA-PCA stenting was performed. One case required additional flow diverters. However, all patients achieved favorable outcomes during the further follow-up period.

Conclusion

The ‘‘ↄC stenting” technique is a promising treatment option for complex BA apex aneurysms, particularly in cases with well-developed PCoAs. This approach may provide a new therapeutic strategy for aneurysms that are difficult to treat using conventional methods.

Poster Presentation

A-056

Endovascular Treatment of Complex Brain Aneurysms

Category: Cerebral Aneurysm

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Background and Purpose

Endovascular treatment of complex aneurysms may be challenging. Balloon remodeling, stent-assisted Coiling, FD, contour, WEB and multiple micro-catheter techniques were all developed for endovascular treatment of such aneurysms. However, these techniques may not be needed in case of acute angulation between proximal and distal parent arteries due to the difficultly of reaching the distal edge of the aneurysm. This study is conducted to assess the complex aneurysm coiling with and without Assisted Techniques.

Materials and Methods

This study was conducted from July 2015 to December 2024 at the department of Neuroradiology, Lahore General Hospital, Lahore Pakistan. A total of 500 patients with cerebral aneurysms around the circle of will is and posterior circulation were including in the study of both genders.

Results

Out of 500 patients, there were 200 males and 300 female patients. Their age ranged from 22 - 65 years. The maximum numbers of patients were in their fifth and sixth decade of life. In our study successful endovascular treatment is were done in all patients with minimal recurrence/recanalization of cerebral aneurysms at MCA. Only 08 patients developed dense hemiplegia and 02 died.

Conclusion

In complex aneurysms endovascular treatment is effective safe and methodologically simpler than clipping.

Poster Presentation

A-057

Outcome of Rescue treatment after failed mechanical thrombectomy in Intracranial Atherosclerosis related Large Vessel Occlusion (ICAS-LVO)

Category:
Acute Ischemic Stroke

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Background and Purpose

ICAS-LVO is one of the most common causes of failed mechanical thrombectomy (MT), especially in the Asian population. We evaluated the effectiveness and safety outcomes of rescue treatment (RT) in acute ischemic stroke caused by ICAS-LVO.

Materials and Methods

We conducted a retrospective study of acute ischemic stroke patients with ICAS-LVO enrolled between 2020 and 2024. Study outcomes included the modified Rankin Scale (mRS) at 1, 3, and 12 months, and the rate of symptomatic intracerebral hemorrhage (sICH). Outcomes were compared between patients who received conservative treatment (non-RT) and those who underwent RT.

Results

A total of 92 consecutive patients were included, of whom 56 received RT (balloon angioplasty = 14, rescue stenting = 26, balloon angioplasty with stenting = 10). The favorable outcomes (mRS 0–2) at 1, 3, and 12 months were not significantly different between the non-RT and RT groups (39% vs 43%, P = 0.80 at 1 month; 42% vs 45%, P = 0.80 at 3 months; and 36% vs 43%, P = 0.50 at 12 months). Successful recanalization (mTICI ≥ 2b) was higher in the RT group (61% vs 84%, P = 0.03). The sICH rate was higher in the non-RT group (19% vs 9%, P = 0.20), but the difference was not statistically significant. The recurrent ischemic stroke rate was also higher in the non-RT group (11% vs 7%, P = 0.14). Other bleeding sites were more frequent in the RT group (3% vs 11%, P = 0.20). The stent occlusion rate after RT was 13%.

Conclusion

In acute ischemic stroke patients with ICAS-LVO, RT after failed MT did not demonstrate a significant difference in favorable outcomes after a 12-month follow-up period. However, RT tended to reduce the rates of sICH and recurrent ischemic stroke. Conversely, bleeding at other sites may be a concern following RT.

Poster Presentation

A-059

OZONUCLEOLYSIS IN CERVICAL RADICULOPATHY

Category: Others

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Background and Purpose

Our experience with ozonucleolysis between June 2005 to December 2024 with 8000 patients affected by pain cervical region (Bracehalga) due to disc herniation including of postoperative recurrence disc prolapsed.

Materials and Methods

All these cases treated by intradiscal ozone injections. Patients age between 20 to 70 years underwent percutenous ozoneuclealysis. The procedure done under the angiofioursocopy with full aspectic technique. The ozone generator, essential component placed close to the patients. Simple 23G needle to 22G spinal needle, (quincke type point) were used to inject ozone under fluoroscopy. No premedication or anesthesia were given and the procedures were performed at an outpatient facility with short hospital stay after the treatment.

Results

Among 8000 patients 4200 patients were followed up for 5 months, 50% of the treated patients showed complete recovery with disappearance of symptoms. 25% of cases complaint of occasional episodes of pain neck and arms but no limitations of occupational activities – 15% of the cases showed in sufficient improvement – 5% cases no improvement and went for surgery 10% of the cases never turned up after the first visit. Most of these patient had no FDA surgical indication. The patients who failed to benefit from ozonucleolysis underwent surgery. In all these cases, the previous O2 O3 gas therapy had no negative effects on the surgical procedure.

Conclusion

In our experience, ozonucleolysis of cervical herniated disc has revolutionized the percutenous approach to nerve root disease making it safer cheaper and easier to repeat than treatments currently in use. So ozonucleolysis should be 1st choice of treatment in cervical disc prolapse.

Poster Presentation

A-061

OVERCOMING VASCULAR LIMITATIONS: DIRECT PERCUTANEOUS EMBOLISATION FOR SPINAL TUMOUR CONTROL

Category:
Spinal vascular diseases

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Background and Purpose

Pre-operative embolisation in surgical planning and management of spinal metastases aims to minimise intraoperative blood loss, shorten surgical time, and facilitate post-operative recovery. However, in certain regions such as the cervical spine, transarterial embolisation may carry unacceptable risks. In other cases, complex or stenotic vascular anatomy may preclude selective arterial cannulation and embolisation. This study presents two cases utilising direct percutaneous embolisation as a safe and effective alternative.

Materials and Methods

Two patients with spinal metastatic disease were evaluated. In both cases, standard transarterial embolisation was either unsafe or not technically feasible. Under fluoroscopic and cone beam CT guidance, direct percutaneous embolisation using Glubran mixed with Lipiodol was performed through spinal needles into the tumour parenchyma. Procedural technique, precautions taken, and intra-procedural imaging confirmation were documented.

Results

Case 1: A patient with metastatic renal cell carcinoma presented with an L1 pathological fracture and spinal cord compression. Severe vascular atherosclerosis and ectasia rendered selective embolisation impossible. Direct percutaneous embolisation achieved good tumour devascularisation and retrograde occlusion of feeding vessels without complications. Case 2: A patient with metastatic papillary thyroid carcinoma had a large C6/C7 mass. Transarterial embolisation was incomplete due to the proximity of critical cervical arteries. Subsequent percutaneous embolisation achieved good tumour penetration of embolic material with no immediate complications. Both patients subsequently underwent successful spinal surgery.

Conclusion

Direct percutaneous embolisation is an important alternative when conventional transarterial techniques are limited by anatomical constraints or risk profiles. Careful planning, meticulous image guidance, and understanding of local vascular anatomy are critical to ensure safe and effective tumour devascularisation in spinal metastases.

Poster Presentation

A-062

Endovascular EEG device prospective multicenter single-arm clinical trial to confirm efficacy and safety performance on intractable epilepsy -EPSILON IE trial-

Category: Others

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Background and Purpose

Focal resection for refractory epilepsy is an extremely effective treatment, but diagnosis of its focus often requires invasive intracranial electrode placement. We developed an intravascular EEG electrode (EP01) as a minimally invasive method, and reported that it is possible to diagnose focus lateralization in vivo, and that an FIH study showed that it was possible to obtain EEG recordings with higher sensitivity than scalp EEG, and that multiple electrodes up to 6 could be placed into venous sinuses. In order to verify whether EP01 is capable of diagnosing focus lateralization in the same way as conventional intracranial electrodes, we started a multicenter prospective single-arm study (EPSILON IE) in March 2024 in Japan.

Materials and Methods

Patients with refractory focal epilepsy aged 15 to 70 years who undergo conventional intracranial electrode placement and have appropriate vascular anatomy. EP01 is placed in the bilateral cavernous sinuses, bilateral transverse sinuses, and superior sagittal sinus at the same time as conventional intracranial electrodes, and video-EEG recording is performed for up to 2 weeks. PE was defined as the concordance rate between EP01 with non-invasive testing for focal lateralization diagnosis and that of conventional intracranial electrodes. The planned number of cases is 37.

Results

17 cases had enrolled by March 2025.

Conclusion

The EPSILON IE trial is progressing smoothly and is scheduled to complete enrollment within a year.

Disclose all financial interests

Yuji Matsumaru and Ayataka Fujimoto and Kouta Araki and Hisayuki Hosoo are stock holders of Epsilone Medical

Poster Presentation

A-063

Angiographic Predictors of Immediate Obliteration in Lateral Sinus DAVFs Treated with EVOH-Based Endovascular Theragy

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Advances in liquid embolic agents (e.g., EVOH) and endovascular devices have improved immediate occlusion rates for dural arteriovenous fistulas (DAVFs). However, lateral sinus DAVFs remained challenging, often requiring multiple sessions for complete occlusion. The purpose of this study was to identify angiographic factors predicting immediate obliteration of lateral sinus DAVFs in a single endovascular treatment session.

Materials and Methods

We retrospectively analyzed patients with lateral sinus DAVFs treated by endovascular embolization (transarterial and/or transvenous) using EVOH with intent to cure in one session. Patients with prior DAVF treatments (endovascular, surgical, or radiosurgery), venoplasty, or those not treated with EVOH were excluded. Pre-treatment angiograms were reviewed for arterial feeder characteristics (number and presence of angiogenic/diffuse feeders), Cognard classification, fistula location (proximal vs distal transverse-sigmoid sinus), and a combined conduit score (CCS) quantifying venous outflow patency across sinus segments. The treatment approach (transarterial via occipital artery vs other, or transvenous) and use of adjunctive measures (coils, balloon, or periprocedural anticoagulation) were recorded. Immediate obliteration was defined as complete disappearance of the fistula on angiography at the end of the first session. Statistical analysis identified associations between these factors and immediate obliteration.

Results

Fifty-six patients met the inclusion criteria. Immediate angiographic obliteration in one session was achieved in 37 patients (66%). Cases with angiogenic arterial supply, an occipital artery feeder, higher CCS, or distal sinus location had significantly lower one-session cure rates (each $p < 0.05$). In contrast, adjunct use of coils, balloon assistance, or anticoagulation did not significantly influence immediate obliteration rates ($p > 0.05$). Procedure-related complications were minimal: one patient (1.7%) had a cranial nerve injury and one (1.7%) had transient worsening of venous congestion; no permanent neurological deficits occurred.

Conclusion

Several angiographic features predicted failure of immediate complete obliteration in lateral sinus DAVFs. Notably, lesions with benign presentation (Cognard I, presenting with tinnitus) were the most difficult to cure in one session. Careful angiographic assessment helped predict single-session success and guided patient counseling

Poster Presentation

A-065

Evaluating the Safety and Efficacy of 3-Month Dual Antiplatelet Therapy After Carotid Artery Stenting: A Propensity Score-Matched Retrospective Study

Category: Acute Ischemic Stroke

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Background and Purpose

The optimal duration of dual antiplatelet therapy (DAPT) following carotid artery stenting (CAS) remains uncertain. This study aimed to compare clinical outcomes between two DAPT duration strategies 3-month versus extended therapy across four centers, focusing on the balance between ischemic prevention and hemorrhagic risk.

Materials and Methods

We retrospectively analyzed 347 patients who underwent CAS between 2010 and 2022. Patients were stratified into two groups based on DAPT duration: 3 months or longer than 3 months. Baseline characteristics, postprocedural ischemic events, and DAPT-related hemorrhagic complications were assessed. Propensity score matching was performed, resulting in 80 matched pairs for analysis.

Results

Among the matched cohort, ischemic events including cerebral infarction and transient ischemic attacks occurred in 4 patients in the 3-month group and 10 in the >3-month group. Hemorrhagic complications were observed in 2 and 7 patients in the respective groups. The log-rank test demonstrated a significantly higher incidence of hemorrhagic events in the >3-month DAPT group (hazard ratio [HR] 6.21, 95% confidence interval [CI] 1.23–31.4, p = 0.014). There was no statistically significant difference in ischemic event rates between the groups (HR 2.90, 95% CI 0.89–9.46, p = 0.077).

Conclusion

A 3-month DAPT regimen following CAS appears to be both safe and adequate for most patients. While prolonged therapy may be considered in selected high-risk cases, routine extension of DAPT beyond 3 months does not seem justified based on ischemic outcomes and is associated with increased bleeding risk.

Poster Presentation

A-066

Strategy of AVM embolization based on the types of vessels and embolic materials

Category:
Cerebral Arteriovenous Malformation

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Background and Purpose

In embolization of AVMs, now, two different types of embolic materials (Onyx and NBCA: n-butyl-2-cyanoacrylate) are available However, there were no certain rules of the choice and use of them. The purpose of this retrospective study is to clarify the appropriate choice of the materials by analyzing the types of embolized feeder (perforator or cortical artery) and the clinical results of AVM embolization.

Materials and Methods

The study includes 11 patients with AVMs treated by trans-arterial embolization (TAE) from June 2018 to May 2022 in our institute.

Results

Multi-sessions of TAE were performed in 4 of 11 cases. Surgical removals of niduses were necessary for 9 cases. After these procedures, all AVMs disappeared. Totally, 33 arteries were embolized (13 perforators, 20 cortical arteries). All perforators were embolized using NBCA, resulting in nidus embolization (NE) in 6 of 13 cases (46%). Cortical arteries were embolized using NBCA, Onyx, or coils (11, 8, 1 case, respectively), resulting in NE in 8 of 11 cases (72%) using NBCA and 8 cases (100 %) using Onyx. NE rate of Onyx was significantly higher compared to NBCA. The reasons why we did not use Onyx were as follows; 1) torturous vessels with high risk of hemorrhage in withdrawal of a microcatheter, or difficult accessibility (6 cases), 2) existence of normal arteries proximally near to nidus (2 cases), 3) no use of distal access catheter due to thin vessels in pediatric patients (2 cases). There were two cases of complication (subarachnoid hemorrhage due to catheter removal after Onyx, and infarction due to migration of NBCA), which did not affect mRS on discharge.

Conclusion

In our institute, NBCA tends to be used for perforator, and Onyx for cortical artery. Onyx requires a certain proximal safety margin because of back flow, which is not suitable for perforators. This decision is mainly made depending on proximal existence of normal artery.

Poster Presentation

A-067

Falcotentorial dAVF with Hydrocephalus: Review of a Rare Case with a Strategic Embolization to Prevent Progression of Hydrocephalus

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Dural arteriovenous fistula (dAVF) is an abnormal connection between arteries and veins located around or within the dural venous sinuses, intradural pial, or meningeal veins, accounting for 10–15% of all cerebrovascular malformations. Falcotentorial dAVF with the development of hydrocephalus is an exceptionally rare condition, with only a handful of cases reported. In this paper, we describe the technical details of the management of falcotentorial dAVF with hydrocephalus.

Materials and Methods

A 56-year-old male presented to our hospital clinic with walking difficulty and symptoms of dementia since 3 months prior. Magnetic resonance angiography (MRA) shows hydrocephalus with vascular malformation at the level of the third ventricle. Digital subtraction angiography (DSA) shows dAVF formation at the junction of falx and tentorium cerebelli, with multiple feeders and multiple deep venous drainage, and venous varices compressing the sylvian aqueduct, causing hydrocephalus. Trans-arterial embolization was done with complete occlusion of the fistula and preservation of venous varices. The patient tolerated the procedure well with resolution of the hydrocephalus.

Results

The cause of hydrocephalus in dAVF case is mainly obstruction of the sylvian aqueduct by the venous dilation. Treating hydrocephalus prior to downgrading or curing the dAVF may instigate intracranial hemorrhage by damaging the distended leptomeningeal vessels. During embolization, we are particularly careful to preserve the venous varix, which is located at the most caudal part of the fistula. Embolization of the venous pouch may cause acute thrombosis and varix acute dilation by the thrombosis formation, which may worsen the occlusive hydrocephalus. Following embolization, the hydrocephalus eventually resolves with improved clinical condition.

Conclusion

Falcotentorial dAVF with hydrocephalus is an exceptionally rare case. Preservation of the venous ectasia pouch compressing the Sylvian aqueduct during the embolization procedure may prevent the exacerbation of hydrocephalus and subsequently reduce the volume of the ventricle.

Poster Presentation

A-068

Exclusive Middle Meningeal artery Embolisation for treatment of large Chronic Subdural Hematoma in Elderly Patients :A case Series

Category:
Vascular Trauma

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Background and Purpose
Former studies have demonstrated safety and effectiveness of MMA embolization as both adjuvant and primary therapy for chronic Sub Dural Hematoma. However , data are limited regarding its use as a Exclusive approach in Managing large cSDH Volume > 150 ml in elderly patients

Materials and Methods
we reviewed consecutive MMA embolization referrals and included patients aged >/= 75 with mFI >= 2 who received stand-alone treatment for Chronic sub dural hematoma and had atleast one follow up imaging .

Results
A total of 15 patients met the inclusion and frailty criteria. The average age was 83+/- 5.8 yr. The average initial chronic sub dural hematoma volume was 160 +/- 30 ml , with average midline shift of 7.0 +/- 2 mm . average length of stay was 2 +/- 1 day. There was no intra or post procedural complications.

Conclusion
In Elderly and frail Patients with large Chronic sub dural hematomas exclusive MMA embolisation was effective in decreasing the volume and improving the clinical condition with significant reduction in the morbidity and mortality

Poster Presentation

A-069

Phase Selection of Venous Opacity on Multiphase CTA for Outcome Prediction in Acute Ischemic Stroke

Category: Acute Ischemic Stroke

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Background and Purpose

Selecting appropriate candidates for mechanical thrombectomy in acute ischemic stroke remains challenging. Contrast-enhanced imaging markers have been proposed, including arterial phase parameters, multiphase CTA (mCTA) collateral scores, and venous-phase indicators such as the PRECISE score, which utilizes venous opacity (VO) as a surrogate. While VO data become increasingly available across all three mCTA phases, a recent study by Yue Chu et al. (2024) suggested using the peak VO across phases. However, the peak selection approach may face practical inconvenience in clinical settings, as it requires multiple VO comparisons across all three mCTA phases. This study aims to identify a simplified strategy for VO phase selection by determining whether VO from a single representative phase can reliably predict 90-day functional outcomes, as measured by the modified Rankin Scale (mRS).

Materials and Methods

A retrospective cohort study was conducted at Siriraj Hospital between January 2020 and December 2023, including 505 patients with anterior circulation acute ischemic stroke who underwent mechanical thrombectomy. VO scores were recorded across the three phases of mCTA. Multivariable logistic regression analysis was performed to evaluate the predictive value of VO for 90-day outcomes (mRS), while adjusting for collateral circulation, baseline NIHSS scores, mTICI grades, and the presence of intracranial hemorrhage (ICH) or brain edema. Functional outcomes were dichotomized into good (mRS ≤ 2) and poor (mRS > 2).

Results

A favorable VO score in the first mCTA phase was significantly associated with good functional outcomes (mRS ≤ 2 in 74% vs. 49%; $p < 0.001$). High collateral scores (grades 4–5) were also linked to better recovery (91% vs. 77%; $p = 0.004$). Multivariate analysis confirmed first-phase VO (OR = 0.49; $p = 0.022$), high collateral scores (OR = 2.84; $p = 0.015$), and the absence of ICH or brain edema (OR = 0.20; $p < 0.001$) as independent predictors of favorable outcome.

Conclusion

Among the three mCTA phases, VO from the first phase and collateral circulation scoring emerged as the strongest predictors of 90-day functional outcome. Emphasizing early-phase VO assessment and collateral evaluation may enhance prognostication and clinical decision-making in patients undergoing mechanical thrombectomy.

Poster Presentation

A-073

Endovascular Trapping of a Giant Cervical ICA Aneurysm: Coil Anchoring Techniques in High-Flow Vessels.

Category:
Other Neurovascular and Rare Diseases

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Background and Purpose

Embolisation in high flow artery is challenging as there is increase risk of coil migration. We report a case of endovascular trapping for a giant (11 cm) non-functioning cervical internal carotid artery (ICA) aneurysm causing mass effect (cervical discomfort, shoulder pain) and harboring turbulent flow with an increased risk of thromboembolism or rupture. Given progressive enlargement and symptoms, patient underwent endovascular ICA trapping after passing balloon occlusion testing (BOT).

Materials and Methods

Technical Strategy Distal Outflow Occlusion: A microcatheter was navigated across the aneurysm to reach the distal outflow segment. Coil embolization was performed distal to the aneurysm to prevent retrograde filling. Proximal Inflow Control: A balloon catheter was inflated proximally to reduce antegrade flow during coil deployment. High-density coil packing created a stable proximal “plug.” Coil Anchoring with Glue (NBCA): N-butyl cyanoacrylate (NBCA) was injected to form a rigid cast, securing the coils against migration in the high-flow ICA.

Results

Final angiography confirmed complete aneurysm trapping with preserved cross-flow from the contralateral ICA. The patient showed symptomatic relief and no neurological deficits post-procedure.

Conclusion

This case demonstrates a safe and effective trapping technique for giant cervical ICA aneurysms, emphasizing distal-proximal coil occlusion, flow control, and glue augmentation to ensure coil stability in high-flow vessels.

Poster Presentation

A-075

Predictive Factors of Favorable Outcomes Following Mechanical Thrombectomy: A Prospective Study

Category: Acute Ischemic Stroke

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Background and Purpose

Mechanical thrombectomy (MT) has become the standard treatment of ischemic stroke patients with large vessel occlusion in Siriraj Hospital and has shown comparable favorable outcomes, but still a lack of understanding of factors influencing outcomes. This study aimed to evaluate the effectiveness of mechanical thrombectomy after the Siriraj Stroke Fast Track Activation Protocol and identify predictors of favorable outcomes.

Materials and Methods

A single-center prospective cohort study enrolled 120 consecutive patients with large vessel occlusions who underwent MT between April 2023 and August 2024. The objectives were favorable outcomes at 3 months and factors influencing favorable outcomes.

Results

Among 120 patients (median age 68 years, with 53% male), 57% achieved favorable outcomes at 3 months. Successful recanalization (mTICI ≥2B) was achieved in 85%, with first-pass success in 42%. Safety profiles show a 7.5% mortality rate and 3.3% symptomatic ICH. Independent predictors of favorable outcomes included male gender (aOR 6.97, p= 0.016), non-diabetic status (aOR 10.30, p= 0.011), successful recanalization (aOR 33.92, p=0.003), minimum diastolic blood pressure during procedure ≥55 mmHg (aOR 17.19, p=0.004), extubation within 24 hours (aOR 9.14, p=0.010), post-operative NIHSS at 24 hours less than 16 (aOR 292.11, p=0.001), absence of significant abnormality on 24-hours imaging (aOR 20.28, p=0.022) and red/mixed thrombus composition (aOR 7.97, p=0.023)

Conclusion

The outcomes of mechanical thrombectomy at Siriraj Hospital align with global studies. This study identified several factors influencing favorable outcomes, including unique local predictors such as thrombus composition. These help optimize patient selection and periprocedural and postoperative management to improve the outcomes.

Poster Presentation

A-077

3D to the Rescue: Unmasking a Hidden M2 Occlusion During Mechanical Thrombectomy with 3D Rotational Angiography

Category: Acute Ischemic Stroke

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Background and Purpose

Two-dimensional (2D) biplane Digital Subtraction Angiography (DSA) is the standard imaging modality used during mechanical thrombectomy for acute ischemic stroke. However, in certain cases, particularly those involving distal branch occlusions, DSA may fail to identify the site of vessel blockage, especially in the absence of a visible stump. Three-dimensional Rotational Angiography (3D RA), although not routinely used in this context, can provide enhanced spatial resolution and detailed vessel mapping.

Materials and Methods

A patient with acute ischemic stroke presented with a CT angiography-confirmed left M1 middle cerebral artery (MCA) occlusion. Intravenous tenecteplase was administered, and the patient was brought for mechanical thrombectomy. Initial 2D biplane DSA showed spontaneous recanalization of the M1 segment. However, persistent hypoperfusion was observed in the territory of the superior division of the left M2 segment. 2D biplane DSA projections did not reveal any thrombus or vessel truncation, leaving the cause of hypoperfusion unclear. Given the diagnostic uncertainty, intra-procedural 3D RA was performed.

Results

3D RA revealed a discrete occlusion in the superior division of the M2 segment that was not visible on conventional 2D projections. This enabled precise microcatheter navigation and successful clot retrieval. The patient showed subsequent clinical improvement post-procedure.

Conclusion

This case highlights the diagnostic value of 3D RA in mechanical thrombectomy when conventional DSA is inconclusive. While not part of the standard thrombectomy workflow, selective use of 3D RA can provide essential visualization of distal or anatomically complex occlusions. Its selective use may improve procedural accuracy and patient outcomes in carefully chosen cases.

Poster Presentation

A-078

Flow diversion with adjunctive coil embolization for fetal posterior communicating aneurysms

Category: Cerebral Aneurysm

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Background and Purpose

Flow Diversion (FD) can be challenging to treat fetal posterior communicating aneurysm (FPCoA). Besides FD alone, there are several adjunctive techniques including adjunctive coiling, but their efficacy remains unclear. We retrospectively review our experience with FD combined with adjunctive coiling for FPCoA.

Materials and Methods

We included 9 patients (mean age 74yr, 8 females, 6 ruptured aneurysms) with FPCoA underwent FD with coiling in our institution from October 1, 2017, to March 31, 2025,. Coil embolization was performed to achieve partial or more occlusion while simultaneously to protect the neck where the fetal Pcom bifurcates. Demographic, clinical, treatment details, and imaging data were extracted and reviewed.

Results

All 9 patients had ipsilateral P1, and underwent FD with coiling as a single session (3), as a 2nd stage treatment for ruptured aneurysms (3), or as additional treatment for recurrent aneurysms after coiling (3). The median aneurysm size was 14 (12-14) and neck was 7.5 (7.2-8) mm. The median length of deployed FD was 7 (25-28) mm, including one patient using 2 FDs. The Raymond-Roy occlusion classification just after procedure was II (5), IIIa (3) and IIIb (1), and O'Kelly-Marotta grade B (5) and C (4). On follow-up magnetic resonance or catheter angiography during follow-up periods (median 25 months), Roy-Raymond class I occlusion was not achieved in any patients, whereas class II occlusion, which was considered as satisfactory angiographic result, was achieved in 7 patients (77.8%) and persistent class III occlusion in 2 patients (14.5%). All patients had complete patency of the fetal Pcom. One ruptured FPCoA patient under persistent class III occlusion required additional treatment 9 months after FD. Additional dome and Pcom embolization with coils via retrograde approach from ipsilateral P1 resulted in a minor postoperative stroke, but the occlusion status has remained stable for 1 year after this procedure. Except one patient presented with severe subarachnoid hemorrhage, 8 patients had satisfactory clinical outcomes.

Conclusion

In our case series, FD with coiling showed acceptable clinical and angiographic outcomes. Because the residual neck was stable without regrowth in 8 of 9 cases, Raymond-Roy class II occlusion could be an appropriate procedural goal for FD in FPCoA.

Poster Presentation

A-079

Efficacy and Outcomes of Accero Intracranial Braided Stent in Wide-Neck Bifurcation Aneurysms: A Single-Center Experience

Category: Cerebral Aneurysm

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Background and Purpose

To evaluate the efficacy and safety of the Accero braided stent in the endovascular management of wide-neck bifurcation intracranial aneurysms, based on a single-center experience.

Materials and Methods

We retrospectively reviewed 125 consecutive patients treated with Accero intracranial stents between 2022 and 2024. A total of 87 patients met the inclusion criteria, which required aneurysms to be of initial presentation, originate from major intracranial bifurcation sites—such as the anterior cerebral artery (ACA), anterior communicating artery (ACoA), fetal-type posterior communicating artery (PCoA), internal carotid artery (ICA), middle cerebral artery (MCA), or top of the basilar artery (TOBA)—and to exhibit a wide-neck configuration (neck size ≥4 mm or dome-to-neck ratio <2). Procedures were performed using the Accero braided stent with adjunctive coiling, employing the Pull-and-Push technique for better coverage of the neck. Follow-up imaging was performed immediately post-procedure and at approximately six months, utilizing magnetic resonance angiography (MRA) with time-of-flight (TOF), fluid-attenuated inversion recovery (FLAIR), and diffusion-weighted imaging (DWI) sequences. Additionally, a blinded 3D rotational angiography review will be performed by three independent interventional neuroradiologists to assess preferred treatment strategies (single stent, Y-stent, WEB device, or other).

Results

The mean patient age was 61.7 years, with 72.4% being female. All aneurysms were saccular, with 93.1% located in the anterior circulation, and the mean maximum aneurysm diameter was 4.9 mm. Complete aneurysm occlusion was achieved in 97.7% of cases on follow-up imaging. DWI revealed asymptomatic microembolic lesions in 16.1% of patients. One case demonstrated recurrence at follow-up imaging, and one intraprocedural hemorrhage occurred without resulting neurological deficit. No symptomatic thromboembolic complications were observed.

Conclusion

The Accero braided stent provides a highly effective and safe option for treating wide-neck bifurcation aneurysms using a single stent. Its high occlusion rates, minimal complication profile, and favorable follow-up imaging outcomes support its integration into routine neurointerventional practice.

Poster Presentation

A-081

Carotid artery stenting in elderly patients over 80 years old

Category:
Other Head and Neck Pathologies

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Background and Purpose

The prevalence of carotid artery stenosis increases with age, and opportunities for treatment of carotid artery stenosis in elderly patients are increasing in the current super-aged society in Japan. Based on the results of several RCTs, Japanese stroke society guideline recommend carotid endarterectomy (CEA) rather than carotid artery stenting (CAS) for elderly patients who should undergo revascularization therapy. But CAS, which can be performed under local anesthesia, is often chosen in the daily practice. We investigated the efficacy and safety of CAS for elderly patients over 80 years old.

Materials and Methods

All cases in which CAS was performed on elderly patients aged 80 years or older from April 2015 to March 2023 in Funabashi Municipal Medical Center (my previous workplace) were included in the study, excluding emergency CAS performed following mechanical thrombectomy. To assess safety and efficacy, we retrospectively compared with patients aged 80 years or older who underwent CEA during the same period .

Results

The mean age of the CAS group was 82.9 years, and 30 patients (90.9%) were male. Symptomatic lesions were 24 (68.6%), and the mean stenosis rate (NASCET method) was 69.5%. All patients were treated with an embolic protection device, and closed cell stents were placed in 31 lesions (88.5%) with a 100% procedural success rate. Symptomatic ischemic complications in the acute postoperative period occurred in 3 lesions (8.5%), but all symptoms were transient, and none of them decreased the modified Rankin Scale at discharge. Hyperperfusion on image occurred in 4 lesions (11.4%), 2 of which (5.7%) were symptomatic. During a mean follow-up of 23.9 months, late symptomatic intracranial lesions occurred in 1 lesion (2.9%), but were thought to be caused by an ipsilateral intracranial stenotic lesion. During the same period, CEA was performed in 16 lesions in patients over 80 years of age, and there were no significant differences in the incidence of symptomatic cerebral infarction, hyperperfusion syndrome, or other complications between the CAS and CEA groups.

Conclusion

CAS for elderly patients over 80 years of age was successful in all cases, with no permanent sequelae or complications caused by the treatment.

Poster Presentation

A-082

When the Spine Deceives: Acute Paraparesis as the Initial Manifestation of a Cranial dAVF

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Cranial dural arteriovenous fistulas (dAVFs) commonly manifest with symptoms related to intracranial hypertension or hemorrhage. Myelopathy due to venous congestion is more frequently associated with spinal dAVFs, while the occurrence of spinal cord symptoms originating from cranial dAVFs are remarkably infrequent. We report a case of cranial dAVF that initially presented with acute paraparesis with bowel and bladder dysfunction, clinically mimicking a spinal pathology. This case emphasizes the necessity of considering cranial vascular lesions in the differential diagnosis of acute myelopathy and aims to enhance awareness of this rare yet treatable entity.

Results

A 38-year-old male presented with acute onset paraparesis, constipation, and urinary retention, without back pain. Examination revealed bilateral lower limb weakness, diminished sensation below the T10 level, and reduced anal tone. Magnetic resonance imaging (MRI) of the spine revealed prominent intrathecal flow voids extending from the craniocervical junction to the conus medullaris, along with T2 hyperintensity within the cervical spinal cord, findings consistent with venous congestive myelopathy. Subsequent brain MRI, magnetic resonance angiography (MRA), and magnetic resonance venography (MRV) demonstrated an an aggressive dural arteriovenous fistula (dAVF) at the left transverse-sigmoid sinus junction, characterized by cortical venous reflux and cerebellar venous infarctions. Digital subtraction angiography (DSA) confirmed a high-grade dAVF supplied by multiple branches of the left external carotid artery, with venous drainage into the spinal perimedullary veins. Endovascular intervention included transvenous coil embolization of the left inferior vermian vein followed by Onyx embolization of the left transverse sinus. Post-procedural angiography demonstrated obliteration of spinal venous drainage, with residual slow-flow shunting via the jugular bulb. The patient exhibited rapid clinical improvement, achieving ambulation within several days. At the 3-month follow-up assessment, spinal MRI confirmed the resolution of abnormal intrathecal vessels and spinal cord congestion. Clinically, the patient had achieved full neurological recovery.

Conclusion

Cranial dAVFs with spinal venous drainage may manifest as acute myelopathy, mimicking intrinsic spinal cord pathologies. Timely recognition and prompt endovascular intervention are crucial to mitigate the risk of irreversible neurological sequelae. This case underscores the importance of considering cranial vascular anomalies in the differential diagnosis of patients presenting with unexplained spinal cord dysfunction.

Poster Presentation

A-083

Longitudinal braid stability of Surpass Evolve® Flow diverter in the aspect of Fish-Mouthing deformation

Category: Cerebral Aneurysm

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Background and Purpose

Flow diverters (FDs) are increasingly utilized as promising tools in the management of complex cerebral aneurysms, achieving acceptable rates of morbidity and mortality. Fish-mouthing (FM), a convergence of focal FD end, without in-stent stenosis or intimal hyperplasia, has been observed during follow-up. While its clinical impact remains uncertain, FM may potentially contribute to thromboembolic events and therefore calls for attention. This study aimed to evaluate the incidence, longitudinal progress, and clinical relevance of FM following FD deployment.

Materials and Methods

We retrospectively reviewed 123 patients who underwent FD implantation using a single Surpass Evolve device (Stryker Neurovascular, Kalamazoo, MI, USA) for the treatment of cerebral aneurysms at a single institution. Postoperative and one-month follow-up skull X-rays were systematically compared to assess the presence of FM, defined as a >25% reduction in the distal end diameter of the device based on the recommendations endorsed by the societies. Additional six-month and one-year follow-up skull X-rays and computed tomography (CT) angiography were evaluated to monitor the longitudinal progression or newly developed FM. Patient demographics, aneurysm characteristics and procedure-related factors were assessed to identify potential risk factors for FM. In addition, procedure-related complications were collected to investigate the clinical relevance of FM.

Results

Of the 123 patients, 99 patients (with 118 aneurysms) completed postoperative and one-month imaging follow-up. Most aneurysms (91.5%) were located in the internal carotid artery(ICA), with a mean size of 10.819±5.164 mm and saccular type(79.7%). FM was identified in 17 patients (17.17%), with a mean distal diameter reduction of 30.4% and an absolute decrease of 1.165±0.29 mm. For FM, sixteen cases (94.12%) occurred within the first month, and one developed at one year. No thromboembolic complications were observed. Notably, 81.25% of FM cases resolved spontaneously within one year.

Conclusion

Surpass Evolve showed incidence of FM (17.17%), predominantly occurring within the first month. Despite this, FM appeared to be a self-limiting phenomenon, without associated thromboembolic complication. Therefore, in cases where FM is identified during follow-up, careful imaging follow-up may be considered.

Poster Presentation

A-084

Outcome of Middle Meningeal Artery Embolization for Chronic Subdural Hematoma: A Single-Center Retrospective Study

Category:
Other Neurovascular and Rare Diseases

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Background and Purpose
Chronic subdural hematoma (CSDH) recurs in up to one-third of patients following burr-hole evacuation. Middle meningeal artery embolization (MMAE) is a minimally invasive alternative or adjunctive treatment, though high-quality evidence in Asian populations remains limited. We evaluated the effectiveness, safety, and predictors of treatment failure of MMAE for CSDH at a tertiary center in Thailand.

Materials and Methods
We retrospectively reviewed adult patients who underwent MMAE for CSDH in our hospital between 2022 to 2024. The primary outcome was treatment failure, defined as hematoma progression requiring rescue surgery within 3 months. Secondary outcomes included radiological failure (<50% reduction in hematoma thickness on 3-month CT) and procedure-related complications. Univariable and multivariable logistic regression analyses were performed to identify predictors of failure. Receiver operating characteristic (ROC) analysis determined the optimal pre-operative hematoma thickness cutoff associated with treatment failure.

Results
47 embolizations were performed in 34 patients (mean age 75 ± 9 years; 64% male). Technical success was 100%. Non-disabling complications occurred in 3 cases (6%). Treatment failure occurred in 6 embolizations (12.8%), and radiological failure in 9 of 41 evaluable cases (22%). Median hematoma thickness decreased from 11.0 mm (IQR 9.1–13.2) to 2.9 mm (IQR 0–5.2), representing a median 74% reduction; complete resolution occurred in 44% of embolizations. On multivariable analysis, pre-operative hematoma thickness was the only independent predictor of failure (OR 1.27/mm; p=0.045). ROC analysis identified 13.24 mm as the optimal cutoff (AUC 0.83; sensitivity and specificity both 83%).

Conclusion
Our results align with international studies reporting MMAE failure rates of 5–15%. The higher radiological failure rate observed in our cohort may relate to a greater proportion of elderly patients, larger baseline hematoma volume, or concurrent antiplatelet therapy use. Larger hematomas likely reflect more mature membranes, microvascular proliferation, recurrent microbleeding, and chronic inflammation that may be less responsive to embolization alone. Patients with pre-operative thickness ≥13 mm may benefit from early surgery, hybrid treatment, or intensified postoperative surveillance. MMAE demonstrates strong efficacy, low complication rates, and promising potential for reducing surgical burden in appropriately selected patients. Further multicenter prospective studies are warranted to validate these findings and optimize patient selection criteria in diverse clinical populations.

Poster Presentation

A-085

MECHANICAL THROMBECTOMY FOR ACUTE ISCHEMIC STROKE: THE RESPONSE TIME OF CODE STROKE PROTOCOL IN JAKARTA COMPREHENSIVE STROKE CENTER

Category: Acute Ischemic Stroke

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Background and Purpose

Stroke is the leading cause of death and disability in Indonesia. Time is brain, and golden period of time should be achieved to expect better outcome for stroke patients, and it is now become one of the flagship program of our Ministry of Health. Code stroke protocol include multidisciplinary team management of acute stroke patients to achieve best standardize treatment and fast response according to recent guidelines, with door to CT, needle and groin puncture should be in 20, 60, and 90 minutes respectively. This study aims to showed our response time in management of acute ischemic stroke after implementing code stroke protocol

Materials and Methods

This is a retrospective multicentered study in two comprehensive stroke centers in Jakarta, from 2017 to 2024. All acute ischemic stroke patients that eligible for mechanical thrombectomy were included, and some were excluded due to unavailable data.

Results

Of 244 patients that received mechanical thrombectomy, 145 were included in this study. Most were male (62.1%), with age mean 57±11.1 years old. Patients mostly came with moderate NIHSS score (5-15; 57.1%) and the median time of onset was 168 (range 25-1080) minutes. The median of door-to-CT was 9 minutes. Thrombolysis were given in 41.4% patients and the mean time of onset to needle was 4.34±1.9 hours. The door-to-needle and groin-puncture median time were 68 and 299 minutes respectively.

Conclusion

From our study it showed that our citizen is aware enough of stroke and they received the CT examination and thrombolysis fast enough. However, mechanical thrombectomy still did not even close to the goal time. There were many obstacles we have either from the patient or the hospital system, such as the decision time of the patients' family, the availability of the devices, anesthesia tolerance, intensive care or stroke unit availability, and the coverage of the medical insurance of the procedure. Code stroke is important for creating an established system in the hospital. Our hospital already established the system for more than 5 years, yet there is still several obstacles need to overcome.

Poster Presentation

A-087

Transvenous Approach in a Dural Arteriovenous Fistula with High-Risk External Carotid-to-Ophthalmic Anastomosis: A Case Report

Category: Dural Arteriovenous Fistulae

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Background and Purpose

Dural arteriovenous fistulas (DAVFs) are abnormal shunts between dural arteries and venous sinuses or cortical veins, often presenting with nonspecific symptoms. Selecting an appropriate treatment strategy is critical to prevent neurological complications.

Results

A 54-year-old woman with long-standing type 2 diabetes presented with pulsatile tinnitus, unilateral headache, and blurred vision in her left eye. Brain Magnetic Resonance Imaging (MRI) revealed chronic ischemic lesions and a left-sided DAVF. Cerebral Digital subtraction angiography (DSA) confirmed the fistula: arterial supply arose from the internal maxillary and ascending pharyngeal branches of the external carotid artery (ECA), with venous drainage into the left superior petrosal sinus and pterygoid plexus. DSA also revealed an unusual vascular variant the left ophthalmic artery originated from the internal maxillary artery. This skull base ECA-ophthalmic anastomosis poses a high risk if trans-arterial embolization is attempted. The presence of multiple small feeders made curative transarterial embolization unlikely. Therefore, a transvenous approach was selected. A microcatheter was advanced through the internal jugular vein to the affected sinus, and detachable coils were deployed until complete occlusion of the fistula was achieved. Post-embolization DSA showed blush of the ophthalmic artery on the ECA after venous occlusion, revealed clearer visualization of the ophthalmic artery variation. DAVFs with dangerous ECA–ICA anastomoses and multifocal feeders may be most safely and definitively treated from the venous side.

Conclusion

This case underscores the value of meticulous angiographic analysis and highlights transvenous coil embolization as an effective alternative when trans-arterial cure is unlikely or unsafe.

Poster Presentation

A-088

Impact of Oophorectomy in the Hashimoto Model for Rat Cerebral Aneurysm Induction: Comparative Study of Surgical Success and Aneurysm-Related Events Incidence

Category: Cerebral Aneurysm

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Background and Purpose

The Hashimoto rat cerebral aneurysm model consistently shows high incidence rates of both ruptured and unruptured aneurysms. It is suggested that aneurysm formation rates increase further in oophorectomized rats. This study aimed to compare surgical success and the incidence of aneurysm-related events (ARE) between oophorectomy (OVX) and non-oophorectomy (Non-OVX) rats to determine whether the Hashimoto model remains stable in oophorectomized rats.

Materials and Methods

Female Sprague-Dawley rats were divided into Non-OVX (n=15) and OVX groups (n=10). Both groups underwent left common carotid artery ligation and right renal artery ligation, followed by a high-salt and BAPN mixed diet. OVX rats underwent bilateral oophorectomy at 6 weeks and received identical treatment from 8 weeks. Survival for over one week post-surgery was defined as surgical success. ARE, defined as aneurysm formation with or without subarachnoid hemorrhage (SAH), was monitored using MR imaging at 0, 1, 4, 8, and 12 weeks post-surgery. Vascular corrosion casting and SEM assessed aneurysm formation. In cases of early death, cranial autopsy and histological studies identified ARE. Statistical comparisons between groups were made using Fisher's exact test.

Results

Surgical success rates were similar between the Non-OVX group (86%, 13/15) and the OVX group (90%, 9/10; p=0.99). ARE incidence was 61.5% (8/13) in Non-OVX (2 ruptured aneurysms, 1 SAH without visible aneurysm, 5 unruptured aneurysms) and 77.8% (7/9) in OVX (1 ruptured aneurysm, 2 SAH without visible aneurysm, 4 unruptured aneurysms), with no statistically significant difference (p=0.64).

Conclusion

In this preliminary study, although limited by small sample sizes, no significant differences were observed between OVX and Non-OVX groups regarding surgical success and ARE incidence. However, observed differences in ARE patterns suggest further research with larger sample sizes is necessary to fully evaluate the potential impact of oophorectomy on cerebral aneurysm formation in the Hashimoto rat model.

Poster Presentation

A-090

Complete Angiographic Resolution of Intracranial Mycotic Aneurysms Following Conservative Therapy: A Case Report

Category: Cerebral Aneurysm

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Background and Purpose
Intracranial mycotic aneurysms (IMAs) are rare vascular lesions frequently associated with infective endocarditis (IE). Management strategies vary depending on aneurysm size, location, and rupture status. Although surgical or endovascular interventions are often preferred, conservative medical management with antibiotics has shown success in selected cases. However, complete angiographic resolution remains a rare outcome.

Results
We present a case of a 57-year-old male with a history of diabetes and valvular heart disease who developed multiple IMAs. The patient presented with sudden left-sided weakness, facial asymmetry, and slurred speech, with preserved consciousness. MRI revealed a hyperacute right parietal intracerebral hemorrhage (approximately 63 mL) due to a ruptured aneurysm at the M2–M3 segment of the right middle cerebral artery. Cerebral angiography confirmed two closely adjacent mycotic aneurysms in the superior trunk of the right MCA. Transthoracic and transesophageal echocardiography identified mobile vegetations on the anterior and posterior mitral leaflets, fulfilling criteria for IE. The patient underwent urgent craniotomy for hematoma evacuation but was managed conservatively for the aneurysms. Following the diagnosis of IE, intravenous ampicillin (2 g three times daily) was administered for 42 days, followed by oral erythromycin (250 mg twice daily) for six months. Additional medical therapies included antiepileptics for seizure control and agents for glycemic control and cardiovascular management. A follow-up cerebral angiography performed six months after antibiotic therapy demonstrated complete angiographic resolution of the aneurysms, with no residual vascular abnormalities. Clinically, the patient exhibited marked neurological improvement, with intact consciousness (GCS 15), resolution of headaches, slight residual facial palsy, and improved left-sided motor strength (5/4+). Sensory and autonomic functions remained normal.

Conclusion
This report demonstrates that, under carefully selected conditions, intracranial mycotic aneurysms (IMAs) can achieve complete clinical and angiographic resolution with conservative antibiotic therapy. Successful outcomes depend on appropriate patient selection, considering aneurysm morphology, location, clinical stability, and radiological follow-up. These findings contribute to growing evidence that conservative management may represent an effective therapeutic strategy, with serial imaging essential to guide individualized treatment decisions.

Poster Presentation

A-091

A case of intracranial mycotic aneurysm recurrence after endovascular treatment followed by spontaneous occlusion

Category: Cerebral Aneurysm

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Background and Purpose

Spontaneous occlusion of cerebral aneurysms has been reported in cases such as ruptured, giant, or dissecting aneurysms. However, reports regarding intracranial mycotic aneurysms (IMAs) are limited. In particular, cases in which the aneurysm recurred after endovascular treatment before spontaneously occluding within a few days are extremely rare. We treated a patient with an IMA located in the proximal posterior cerebral artery (PCA), which recurred soon after endovascular treatment followed by spontaneous occlusion.

Results

The patient was a 38-year-old man who presented with subarachnoid hemorrhage (WFNS Grade II). He had a history of Streptococcus salivarius bacteremia and dental caries three months earlier. Initial workup on admission revealed Staphylococcus haemolyticus bacteremia, and bacterial meningitis. A dissecting aneurysm was detected in the P1 segment of the right PCA, and coil embolization was performed the following day. On day 7, a small recurrence in the neck of the aneurysm was observed. On day 45, an enlargement of the recurrence was observed along with coil compaction and looping at the aneurysm neck, and an additional elective endovascular surgery was planned. However, preoperative imaging revealed spontaneous occlusion of the aneurysm, and the additional treatment was abandoned. No recurrence of the aneurysm was observed thereafter, and the patient was transferred to a subacute rehabilitation unit with a modified Rankin Scale score of 1 on day 70.

Conclusion

IMAs are considered to progress through four phases: (phase I) lodging of infective emboli in the parent artery, (II) aneurysm formation, (III) rupture in some cases, and (IV) thrombosis and spontaneous healing of the vessel. Furthermore, spontaneous thrombosis of aneurysms may be promoted by several factors such as reduction of intra-aneurysmal flow, vasospasm, high aneurysm sac volume to orifice ratio, endothelial injury due to inflammation, and/or use of contrast material. In this case, inflammation due to infection, together with coil compaction, likely induced endothelial injury and reduced intra-aneurysmal flow. These changes, combined with the natural healing of the parent artery, may have led to spontaneous thrombosis of the aneurysm. Further study of similar cases is essential for a better understanding of the underlying pathogenesis.

Poster Presentation

A-092

Glue Embolization of a Ruptured Posterior Thalamoperforating Artery Aneurysm within the Artery of Percheron Territory

Category: Cerebral Aneurysm

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Background and Purpose

Thalamoperforator aneurysms are extremely rare, particularly within the territory of the artery of Percheron (AOP)—a solitary perforator that supplies bilateral paramedian thalami and rostral midbrain. Due to its terminal nature and lack of collateral support, treatment of AOP aneurysms carries substantial risk of ischemic complications. However, conservative management poses greater danger, given the high risk of rebleeding and poor neurologic outcomes. We report a rare and technically demanding case of ruptured posterior thalamoperforating artery aneurysm successfully treated with endovascular glue embolization in an elderly patient.

Results

An 81-year-old woman with hypertension and valvular heart disease presented with sudden-onset severe headache and nausea. Non-contrast CT revealed diffuse subarachnoid and intraventricular hemorrhage. CT angiography demonstrated multiple aneurysms with contrast extravasation at the interpeduncular cistern. Digital subtraction angiography confirmed a ruptured 2.4 × 4.5 mm perforator aneurysm arising from the left P1 segment of the PCA an AOP variant in the setting of cranial fusion of the basilar apex. Another right posterior communicating artery (PComA) aneurysm was also identified. A microcatheter was navigated into the perforator, and 0.6 mL of 30% glue was injected, achieving complete aneurysm obliteration with proximal arterial occlusion. Balloon-assisted coiling of the right PComA aneurysm followed. After extensive multidisciplinary consultation and detailed explanation of procedural risks, ischemic consequences, and long-term disability, the patient's relatives provided informed consent for intervention. Post-procedurally, the patient developed right medial thalamic infarction. She was discharged with a modified Rankin Scale (mRS) score of 4, improving to mRS 3 at 2-month follow-up with structured neurorehabilitation.

Conclusion

Asymmetrical cranial fusion of the basilar apex often results in unilateral P1 dominance, predisposing the AOP to arise from a single trunk and increasing vulnerability to hemodynamic stress, aneurysm formation, and rupture. Although small, perforator aneurysms have a reported rebleeding rate of up to 40% and mortality approaching 70% without treatment. Endovascular embolization is generally favored when feasible. The unilateral infarction may reflect anatomical variation, dominant perfusion laterality, or localized embolic spread. Delayed recovery likely reflects the functional complexity of thalamic structures, combined with reduced neuroplastic potential in elderly individuals. Early diagnosis, patient-family engagement, and individualized planning are essential for optimizing outcomes.

Poster Presentation

A-093

From Support to Stress: Aneurysm Formation Through Chronic Hemodynamic Load of Collateral Flow

Category: Cerebral Aneurysm

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Background and Purpose

Vascular remodelling following craniofacial tumour resection involving vascular manipulation can lead to long-standing hemodynamic alterations. While most intracranial aneurysms arise from congenital wall defects or bifurcation-related stress, acquired arterial rerouting may also play a significant role in aneurysm pathophysiology. We report a rare case of mid-basilar artery aneurysm formation likely resulting from chronic collateral flow burden following nasopharyngeal angiofibroma surgery performed in adolescence.

Results

A 47-year-old male presented with progressive right hemifacial spasm, numbness, slurred speech, and spasticity. Digital subtraction angiography (DSA) demonstrated a large, wide-necked sidewall aneurysm at the mid-basilar artery (15.5 mm × 9.9 mm; neck 8.3 mm). The patient had undergone craniofacial tumour resection in adolescence, likely involving ligation of external carotid artery feeders. Over subsequent years, collateral pathways formed, rerouting significant arterial inflow through the left vertebral artery to maintain external carotid territory perfusion. This chronic hemodynamic redirection resulted in dominant left vertebral flow, confirmed by substantial caliber asymmetry between the left and right vertebral arteries, contributing to continuous shear stress on the basilar artery wall and aneurysm formation. A dual femoral access strategy was used: partial coiling was performed directly within the mid-basilar aneurysm via left femoral artery access using a 45-degree microcatheter and 9 mm × 31 cm coil. Subsequently, a flow diverter (4 mm × 23 mm) was deployed across the aneurysm neck in the basilar artery via right femoral artery access, using a straight-tip microcatheter and distal access catheter positioned in the vertebral artery. This hybrid approach was selected to reduce mass effect while promoting gradual aneurysm exclusion through flow remodelling.

Conclusion

This case demonstrates that collateral circulation, though initially compensatory, may chronically impose pathological flow patterns leading to delayed aneurysm development. Understanding the vascular consequences of prior craniofacial tumour surgery is critical when evaluating atypical aneurysm locations. Recognition of post-surgical hemodynamic consequences is crucial for diagnosing atypical aneurysm etiologies and planning individualised neurointerventional treatment.

Poster Presentation

A-094

Hemodynamic Remodeling of the Circle of Willis in a Rat Unilateral Carotid Ligation Model: Longitudinal MR Angiographic Observation

Category: Cerebral Aneurysm

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Background and Purpose
Vascular remodeling of the circle of Willis (COW) due to altered hemodynamics plays a central role in aneurysm vulnerability. Such remodeling is segment dependent and often asymmetrical, yet its spatiotemporal patterns remain poorly characterized in vivo. This study aimed to longitudinally quantify morphologic changes in the COW using high-resolution MR angiography in a hypertensive rat model and to compare remodeling patterns between surgery and control groups.

Materials and Methods
An 81-year-old woman with hypertension and valvular heart disease presented with sudden-onset severe Thirteen rats underwent left CCA and right RA ligation with a high-salt diet and BAPN (surgery group), while six rats received sham surgery (control group). Serial 7T MR angiography was performed at baseline and at 1, 4, and 12 weeks. Arterial diameter and tortuosity index (TI) were assessed in major COW segments. Linear mixed models evaluated time-group interactions and side-specific effects. Control animals were scanned at baseline, week 4, and week 12 to match the surgical timeline.

Results
The surgery group exhibited dynamic and asymmetric vascular remodeling not observed in controls. Significant group × time interaction was found in Right A1 ($p=0.030$), Right A2 ($p=0.037$), BA ($p=0.034$), Right PCOM ($p=0.034$), and Left PCOM ($p=0.001$). Right ICA showed the most pronounced remodeling (group effect $p=1.1e-5$, interaction $p<0.001$). Left PCA showed early dilation followed by regression, while right ICA and A1 progressively dilated. TI increased significantly in the surgery group (Right: $p=0.019$, Left: $p=0.011$), with greater between-group differences over time ($p<0.001$ and $p=0.035$). Segment-specific post-hoc analyses confirmed significant diameter or tortuosity increases compared to D0 as early as W1, including the left PCA ($p = 0.0067$), basilar artery ($p < 0.0001$), and right TI ($p = 0.0156$). These findings suggest that major remodeling was already underway by week 1 and largely stabilized by week 4.

Conclusion
Longitudinal MR angiography enables detailed evaluation of COW remodeling. Significant differences between surgical and control groups highlight the role of altered flow in shaping vascular structure. Most remodeling occurred by week 4, demonstrating the utility of MR imaging in capturing early hemodynamic adaptation.

Poster Presentation

A-095

Diagnostic Limits of High-Resolution MR Angiography for the Visualization of Intracranial Aneurysms in a Rat Model Background and Purpose

Category: Cerebral Aneurysm

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Background and Purpose

MR angiography (MRA) offers a non-invasive modality for detecting vascular pathology, yet its sensitivity to early or small aneurysm-related events remains uncertain. This study aimed to delineate the detection boundary of high-resolution MRA by comparing imaging findings with pathology-confirmed outcomes in a hypertensive rat model.

Materials and Methods

Thirteen rats underwent unilateral carotid and renal artery ligation with BAPN to induce aneurysm-prone hemodynamics. Serial 7T MRA was performed at 0, 1, 4, and 12 weeks, and findings were compared to scanning electron microscopy (SEM) after corrosion casting. Each rat was classified into true positive (TP), false positive (FP), false negative (FN), and true negative (TN) groups based on SEM and MR. Lesions detected and undetected by MRA were further evaluated by segmental location and morphology.

Results

Among 13 rats, SEM confirmed aneurysm-related events in 8. MR imaging identified 9 rats as positive, yielding 6 TP, 3 FP, 2 FN, and 2 TN. MRA sensitivity and specificity were 75.0% and 40.0%. The average diameter of MR-detected aneurysms (n=5) was 0.57 mm, with lesions most frequently located at the left P1 (n=3), right MCA (n=1), and A1-OF junction (n=1). Of these, 3 lesions confirmed on both MR and SEM had a larger average size of 0.74 mm. In contrast, the average diameter of SEM-confirmed aneurysms was 0.26 mm. False negatives tended to be smaller and morphologically subtle. They were located at the left A1-OF origin (n=2), right MCA (n=2), and right A2 (n=1), suggesting that even lesions in typical sites may escape detection if their contrast or shape is insufficient. False positives appeared at the left P1 and right A1–A2 junction, possibly reflecting signal irregularities or borderline variants unconfirmed by SEM.

Conclusion

This study demonstrates the diagnostic boundaries of high-resolution MRA for aneurysm-related events in vivo. Understanding what MRA can and cannot detect especially relative to lesion size and location is key to interpreting preclinical imaging. Integration with pathology remains critical. As an early experience, this work sets the stage for future expansion to broader animal models, including ovariectomized rats to study hormonal effects.

Poster Presentation

A-098

Predicting Cerebral Aneurysm Recurrence After Coil Embolization: A Novel Deep Learning Approach Using Time-of-Flight MR Angiography

Category: Cerebral Aneurysm

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Background and Purpose

Recurrence following coil embolization remains a major clinical challenge in the management of cerebral aneurysms, often requiring prolonged follow-up and potential retreatment. While several risk factors have been proposed, these existing factors lack sufficient generalizability. This study aimed to develop a deep learning–based model using Time-of-Flight MR Angiography (TOF-MRA) as noninvasive imaging to improve the prediction of aneurysm recurrence.

Materials and Methods

This retrospective multicenter study analyzed 154 patients with coil-embolized unruptured cerebral aneurysms across five stroke centers. Three prediction models were developed: a logistic regression model, a neural network model using clinical data, and a combined deep learning model incorporating clinical and imaging data from three-dimensional reconstructed TOF-MRA. The combined model was created in two versions: one exclusively with pre-operative images and the other using pre- and post-operative images. Image preprocessing involved standardized reconstruction of seven 3D views per case from TOF-MRA, followed by conversion to 2D inputs. The models were evaluated using leave-one-out cross-validation to assess the area under the receiver operating characteristic curve (AUC), accuracy, sensitivity, and specificity. Gradient-weighted Class Activation Mapping (Grad-CAM) was applied for interpretability.

Results

Among the 154 cases, 46 (29.9%) showed recurrence. The combined model using pre-and post-operative TOF-MRA images showed the highest discriminative performance (AUC, 0.75) and sensitivity (0.74), demonstrating a superior ability to distinguish recurrence. The version using only pre-operative images showed high accuracy (0.76) and specificity (0.88) but a lower AUC. When the sensitivity was fixed at 0.80, the combined model using both imaging time points maintained balanced performance (accuracy 0.66, specificity 0.60). Grad-CAM highlighted relevant anatomical features in both pre- and post-treatment images, providing visual interpretability.

Conclusion

This study demonstrated the potential of integrating TOF-MRA images into AI-driven models to enhance aneurysm recurrence prediction after coil embolization. The superior performance of the combined model, particularly when using pre- and post-operative images, suggests the potential for more precise, personalized predictions of recurrence risk.

Poster Presentation

A-099

Early Clinical Experience with Surpass ELITE flow diverters: Technical and Clinical Considerations

Category: Cerebral Aneurysm

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Background and Purpose

The Surpass ELITE (SE) flow diverters are designed to promote better wall apposition based on the broader braid angle than previous Surpass EVOLVE flow diverters. Furthermore, a novel surface modification is applied to a 64-wire conduit of single-layered cobalt-chromium alloy. This study aims to provide a comprehensive description of the technical feasibility and intra- and peri-operative safety of SE flow diverters.

Materials and Methods

A retrospective analysis was conducted on twenty-seven consecutive cases of intracranial aneurysm treatment with SE flow diverters. A comprehensive review and analysis was conducted on the properties of SE flow diverters, intraprocedural thromboembolic complications, early (<30 days) neurological complications, and imaging/clinical follow-up data.

Results

A total of 28 SE flow diverters were utilized in the treatment of 37 intracranial aneurysms (average maximal diameter 10.12 ± 0.96 mm), affecting 27 patients (22 female, average age 57 years). All patients were treated with one SE flow diverter, with the exception of one patient in whom telescopic stenting with two SE flow diverters was utilized to bail out the dislodgement of the initial stent into the aneurysm. During the procedure, successful deployment of SE flow diverters was achieved without any suboptimal opening of the distal end. Coil was used as an adjunct in 3 patients (11.1%) and balloon-angioplasty was performed in 14 patients (51.9%) to promote wall-apposition. One patient treated for vertebral artery dissecting aneurysm exhibited symptoms of motor weakness immediately following the procedure. However, the patient had recovered as a modified Rankin scale score 1 on discharge. Another patient with a symptomatic ICA aneurysm over 20 mm developed diplopia one week after the procedure. On short-term follow-up (< 6 months), eight of nine aneurysms assessable on the imaging were completely obliterated.

Conclusion

Preliminary findings might indicate the credible performance of SE flow diverters for intracranial aneurysms, enhancing wall apposition and precise delivery, attributable to their evolved design and properties.

Poster Presentation

A-100

Endovascular Treatment for Stenosis of the Petro-Cavernous Segment of the Internal Carotid Artery

Category: Acute Ischemic Stroke

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Background and Purpose
Stent placement is an effective treatment option for patients with stenosis of the petro-cavernous segment of the internal carotid artery (ICA). However, the periprocedural risks and anatomical considerations remain unclear. This study aims to evaluate periprocedural complications and hazardous anatomical features associated with symptomatic petro-cavernous ICA stenosis, with a focus on characteristics specific to each occlusion mechanism.

Materials and Methods
This study retrospectively analyzed periprocedural complications in 14 patients who underwent balloon angioplasty and stent placement for symptomatic severe stenosis (>70%) of the petro-cavernous segment of the ICA. Patients were enrolled consecutively at a tertiary care hospital between March 1, 2018, and August 30, 2022. All patients had ischemic stroke confirmed by magnetic resonance angiography in association with petro-cavernous ICA stenosis and received endovascular treatment.

Results
The follow-up period ranged from 8 to 36 months. Restenosis was observed in 6 patients (42.8%). The overall morbidity rate was 14.2%, and the mortality rate was 7.1%. One patient died during follow-up due to a recurrent stroke and intractable in-stent thrombosis.

Conclusion
Balloon angioplasty and stent placement are acceptable treatment options in patients with symptomatic petro-cavernous ICA stenosis. However, since the petro-cavernous segment ICA is a tortuous site and there may be a risk of plaque protrusion or rupture associated with surrounding structures such as bone or ligament, a careful approach is required when performing the endovascular treatment.

Poster Presentation

A-101

Retrospective Evaluation of Intravenous Cone Beam CT Angiography as a Follow-up Tool Post Flow Diverter Treatment: Assessment of Image Quality, Artifact, and Treatment Outcomes

Category: Cerebral Aneurysm

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Background and Purpose

Flow diverter therapy treats intracranial aneurysms by altering blood flow and promoting vessel wall remodeling. While DSA is the gold standard for post-treatment follow-up, it is invasive. This study evaluates IV CBCTA as a noninvasive alternative, focusing on image quality, artifacts, and treatment outcomes like device apposition, stenosis, and aneurysm morphology.

Materials and Methods

This retrospective study included 23 patients with intracranial aneurysms who were treated with various types of FDS and scheduled for follow-up with IV CBCTA. Image quality was assessed with quantitative analysis (SNR, CNR), and treatment outcomes (wall apposition, stenosis, aneurysm changes) were evaluated using descriptive statistics.

Results

Image quality, with SNR ranging from 2.77 to 26.48 (mean±SD: 7.83±5.06) and CNR ranging from 1.88 to 24.77 (mean±SD: 6.25±4.82), was assessed. Motion artifacts were present in 17.4% of patients. Regarding treatment outcomes, aneurysm occlusion was achieved in 43.48% of patients, with 34.78% showing a decrease in residual aneurysm size. Stable residuals were noted in 17.39%, and regrowth was observed in 4.35%. Wall apposition was deemed good in 86.95% of patients, with minor issues such as malapposition (4.35%) and a floating stent (4.35%) observed in a few cases. Mild intimal hyperplasia was present in 26.09% of cases, with no hyperplasia found in the remaining 73.91%. No patients experienced vascular occlusion or stenosis, and 100% of vascular branches were patent.

Conclusion

Intravenous cone-beam CT angiography shows promising potential for the effective evaluation of vascular status following the placement of intracranial flow diverters. The flow diverter devices used to treat intracranial aneurysms appear to be effective for long-term placement, demonstrating favorable morphological outcomes and an absence of delayed complications.

Poster Presentation

A-103

Pioneering Advances in Posterior Circulation Acute Ischemic Stroke: Insights from Two Stroke Centers in Indonesia on Mechanical Thrombectomy

Category: Acute Ischemic Stroke

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Background and Purpose
Stroke is the leading cause of mortality and disability in Indonesia. Comprising 20–25% of ischemic strokes, posterior circulation acute ischemic stroke (PCAIS) is one of its most severe forms, with subtle clinical manifestations complicating early diagnosis. PCAIS affects critical regions which govern vital functions such as consciousness and motor coordination. These factors, exacerbated by Indonesia's sociogeographic challenges, highlight the urgent need for optimized thrombectomy interventions to improve patient prognosis.

Materials and Methods
This retrospective multicenter study, conducted at two stroke centers in Jakarta from 2017 to 2024, included all eligible PCAIS patients for mechanical thrombectomy.

Results
Eleven patients participated in this study, with a predominance of males (90.9%) and a mean age of 54.8 ± 9.5 years. The patients presented with a median symptom onset of 255 (122-1080) minutes and NIHSS score of 15 (10-25). The location of infarct was mostly in basillar artery (54.5%) and vertebral artery (36.4%). Stent retriever was used in 54.5% of patients, with good recanalization (mTICI 2B-3) in 63.6% of the total. The majority of patients (72.7%) died during hospitalization. Of the survivors, only one achieved a favorable 90-day modified Rankin score.

Conclusion
The majority of patients with PCAIS experienced poor outcomes, consistent with some prior studies, though remains debated. Notably, two exceptional cases demonstrated favorable functional outcomes, potentially due to robust collateral circulation, highlighting an area for further exploration. These findings emphasize the critical need for precise patient selection and a careful evaluation of the risk-benefit balance in implementing thrombectomy, setting the stage for future studies to refine treatment strategies.

Poster Presentation

A-104

The clinical outcomes for the endovascular treatment of ruptured internal carotid artery blood blister-like aneurysm in 7 cases

Category: Cerebral Aneurysm

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Background and Purpose

Ruptured Blood blister-like aneurysms (BBAs) usually arise from the anterior walls of the internal carotid artery. Several surgical and endovascular techniques have been described for the treatment of these aneurysms, however, there is still no consensus on the best technique or method. We studied the endovascular management of ruptured BBAs patients. 7 patients with ruptured BBAs located of the internal carotid artery were studied. Endovascular therapy was adopted as the first-line therapy. Patients' aneurysmal characteristics, progression status, aneurysm occlusion on follow-up angiography, and modified Rankin Scale (mRS) score were recorded.

Results

A total of 7 patients (2 women and 4 men) with the mean age of 50 years were included in this study. The WFNS grade were 1-2 and 4-5 in 5 and 2 patients. As initial treatment, 5 patients were treated with stent-assisted coiling (SAC). 2 patients were treated with Enterprise2 stent and FRED, each. Perioperative ischemic complication in one patient was observed. No patients suffered from rebleeding. Retreatments were performed in 4 patients. Additional coiling was performed in one patient and FRED were deployed in 4 patients. Perioperative ischemic complication in additional treatments were not observed. Follow up results were 4 patients in complete occlusion and 2 patients in partial occlusion. Clinical data revealed at discharge mRS scores of 0-2, 3, and 4 in 5,1,and 1 patient, respectively. The mRS score at the final follow-up was 0-2 for all patients.

Conclusion

The multi-selection of endovascular treatment of ruptured internal carotid artery blood blister-like aneurysms is more important for the prognosis of the patient's condition and prevention of rebleeding.

Poster Presentation

A-106

Efficacy of mechanical thrombectomy supported by Radiologic technologists under telemedicine supervision system

Category: Acute Ischemic Stroke

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Background and Purpose

Mechanical thrombectomy (MT) is standard therapy for acute ischemic stroke. However, MT requires skilled endovascular surgeons 24/7/365, which is not achieved by many hospitals especially in rural areas and developing countries. We have radiologic technologists to assist MT and utilize telemedicine system for the mentor to supervise MT procedure, and investigated its safety and efficacy to solve this problem.

Materials and Methods

One or two neurosurgical residents with trained radiologic technologists performed MT (RTMT group) under supervision of board-certified endovascular surgeon through telemedicine system. Radiologic technologists received hands-on training of MT beforehand, and performed preparation and cleanup of devices and control of angiography table during MT procedure. The mentor was on live-streaming telemedicine system through smartphone/tablet/PC application (JOIN; Allm Inc, Tokyo, Japan) to supervise their procedure. The angiographical and clinical outcomes were compared with conventional MT cases (CMT group).

Results

All cases completed MT without on-site support of senior surgeons. There was no difference in Puncture-to-reperfusion time (RMT 64min vs CMT 70min, p=0.576), TICI>=2b (76.9% vs 85.7%, p=0.749) and number of passes (2.1 vs 2.0, p=0.925). Median mRS was 5 and 4, respectively. Telemedicine supervision also showed no difference in PTR (TMT 82min vs 64min, p=0.182), TICI>=2b (76.9% vs 85.7%, p=0.749) and number of passes (2.1 vs 2.0, p=0.925), and median mRS was 5 and 4, respectively.

Conclusion

Assistance by Radiologic technologists and telemedicine supervision are safe, and let young endovascular surgeons concentrate on MT procedure. This can be one of the practical solutions for the insufficiency of trained endovascular surgeons.

Poster Presentation

A-107

Image diagnosis for intracranial atherosclerotic disease (ICAD) -related LVO, Usefulness of “insula cortex sign”

Category: Acute Ischemic Stroke

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Background and Purpose

Preoperative imaging in acute cerebral main artery occlusive disease is important for treatment indication and device selection. Preoperative imaging can easily identify the extent of ischemia and the site of the occluded vessel, but may be difficult to diagnose the disease type. Susceptibility vessel sign (SVS) on MRI (T2*) is considered to be specific for cardiogenic disease, but is also seen in some cases of acute occlusion in Intracranial atherosclerotic disease (ICAD).

Results

In this study, we report a retrospective analysis of insula cortex negative sign in patients with middle cerebral artery occlusion (M1) and its possible role in the diagnosis of ICAD acute occlusion. Early ischemic changes in the insular cortex were significantly different in 417 (84.2%) cardiogenic and 3 (4.2%) ICAD cases. There was also a high rate of specificity and sensitivity with negative insular cortex at ICAD related M1 occlusion.

Conclusion

In the acute phase of M1 occlusion, the presence or absence of ischemic changes in the insular cortex is useful in the diagnosis of the disease type.

Poster Presentation

A-108

Dangerous anastomosis; Mechanisms of ophthalmic manifestation

Category: Others

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Background and Purpose

Dangerous anastomoses are potential connections between the extracranial and intracranial circulation. Understanding this anatomy is fundamental for safe and effective treatment in neurointerventional procedures. The purpose of this study is to describe the mechanism of ophthalmic manifestations of the dangerous anastomoses during neurointerventional procedures.

Results

Monoocular partial/complete blindness occurred in 5 patients in association with coil embolization of an aneurysm (n=1), liquid embolization of DAVFs (n=2), post trans-sphenoidal surgery bleeding embolization (n=1), and tumor embolization (n=1). The mechanisms of the dangerous anastomosis manifestation included pressured opening & migration of the liquid embolic material into the potential channel (n=2), vasospasm related glue reflux (n=1), reflux of PVA embolic material (n=1), and thrombus formation due to flow competition within the anastomotic channels after coil embolization of an ophthalmic aneurysm (n=1). The monocular blindness symptoms were permanent (n=3) and transient (n=2).

Conclusion

Various different mechanisms may partake in the clinical manifestation of the dangerous anastomosis in the orbital area. Understanding these mechanisms with a comprehensive knowledge of the anatomy may prevent unwarranted complications associated with the neurointerventional procedures.

Poster Presentation

A-109

Woven endoBridge embolization for intracranial aneurysms: single center experiences in South Korea

Category: Cerebral Aneurysm

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Background and Purpose

Endovascular treatment for intracranial bifurcation aneurysm with wide-neck remains challenging and is prone to complications. Currently, the Woven Endobridge (WEB) is widely utilized for intracranial aneurysm treatment. However, the safety and efficacy of this approach requires conclusive establishment. This presentation aims to evaluate clinical and radiological outcomes of intracranial aneurysm embolization using the WEB device.

Materials and Methods

From August 2021 to April 2025, 281 consecutive patients (male:female = 108:173, mean age 63.9) with 286 aneurysms underwent treatment with the WEB device in single center. Demographic characteristics, procedural details and complications, clinical outcomes, and one-year radiological findings were retrospectively reviewed. Aneurysm occlusion was assessed using the modified WEB Occlusion Scale (WOS). Moreover, propensity score matching was conducted to compare WEB embolization with stent-assisted coiling (SAC).

Results

The cohort comprised 23 ruptured and 263 unruptured aneurysms, including 5 cases of recurrent aneurysms (4 post-coiling and one post-clipping). Mean aneurysm diameter was 5.66 mm (range: 2.75–13.67). The most common locations were anterior communicating artery (Acom, 41.3%), followed by middle cerebral artery bifurcation (35.3%), basilar apex (18.9%), and internal carotid artery (ICA) bifurcation (4.5%). Except for one intraprocedural rupture, all aneurysms were successfully treated with the WEB device (technical success rate: 99.6%). WEB size adjustments were needed in 69 cases (24.1%), and assisting techniques were required in 39 cases (13.6%). Procedure-related complications occurred in 19 cases (6.7%), including 4 transient ischemic attacks (TIA), 4 strokes, 4 intraprocedural ruptures, 3 puncture site complications, and 4 iatrogenic parent artery injuries. Permanent morbidity and mortality rates were 0.7% (two in mRS 1) and 0.3%, respectively. One-year angiographic follow-up was available for 144 cases (50.3%), with a complete occlusion rate (WOS A and B) of 78.5%. There were 3 recurrent aneurysms, which were successfully treated by additional coiling (0.2%). Comparing the SAC, the 6-month clinical and radiological outcomes of unruptured intracranial aneurysms treated with WEB were comparable. WEB has advantages over SAC, including reduced fluoroscopy time ($p < .001$) and avoidance of dual antiplatelet therapy.

Conclusion

WEB is a safe and effective alternative to SAC for the treatment of wide-neck bifurcation aneurysms with high occlusion rates and low complication risks.

Poster Presentation

A-110

Safety, efficacy and cost effectiveness of Middle Meningeal Artery (MMA) Embolization for Chronic Subdural Hematoma: A single-centre experience

Category: Others

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Background and Purpose

Middle meningeal artery (MMA) embolization has emerged as a promising treatment for chronic subdural hematomas (cSDH), with randomized trials (mostly using liquid embolic) supporting its efficacy as both a standalone and adjunctive therapy. However, surgical drainage remains a lower-cost alternative, raising questions about the cost-effectiveness of MMA embolization—particularly with liquid embolic agents. We present our single-center experience of MMA embolization using both particles and liquid embolic, evaluating its safety, efficacy, and cost-effectiveness.

Results

Thirty patients were included (mean age 76.4 years; 96.7% male). The most common presenting symptom was neurological deficits (43.3%), followed by gait instability/falls (30%). At presentation, 20% were on anticoagulation and 36.6% on antiplatelet therapy. Particulate embolics (Embosphere) were used in 90% of cases, with transfemoral access employed in 66%. Mean cSDH thickness reduction was 1 cm (SD 0.6 cm), and midline shift improved by 0.5 cm. Treatment failure occurred in one patient (3.3%), requiring salvage burr-hole drainage. We had 1 case of retained catheter while using liquid embolic agent with no long lasting consequences. No other procedural complications, post procedural neurological deficits or mortalities were observed. In our institute, the average cost of consumables was S$ 1,800 for particulate embolic versus S$ 4,477 for liquid embolic. The cost savings associated with particles arise from their lower price compared to liquid embolics (S$ 380 vs. S$ 1600), as well as reduced micro-catheter usage - unlike liquid embolic, which require a micro-catheter change following injection of each branch.

Conclusion

In our cohort, MMA embolization using particles was safe, effective, and significantly more cost-effective than liquid embolics. These findings support the adoption of particle-based embolization as a financially sustainable alternative in cSDH management.

Poster Presentation

A-112

The clinical strategy and outcomes for brain arteriovenous malformation using multimodal therapy.

Category:
Cerebral Arteriovenous Malformation

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Background and Purpose
The management of brain AVM(bAVM) relies on multidisciplinary discussions that lead to patient-specific strategies based on patient preferences, local expertise, and experience in referral centers.

Materials and Methods
We examined the indications, efficacy, and outcomes of patients receiving multimodal therapy for bAVM management, considering endovascular treatment as the first choice. This retrospective analysis included 48 patients who were treated between 2015 and 2025.

Results
13 patients with frontal AVM, 4 patients with temporal AVM, 7 patients with parietal AVM, 8 patients with occipital AVM, and 16 patients with others. 40 (83.3%) patients presented with hemorrhage. 5 (10.4%) patients presented with intractable epilepsy. 1 patient presented with enlargement of varix. 2 patients were astmptomatic. Spetzler Martin (SM) grading 1,2,3,and 4 were 8, 15, 19, and 7cases, respectively. Endovascular treatment was mainly performed in 32/48, 6/48, and 8/48 patients using NBCA, Onyx, and NBCA/Onyx, respectively. Target embolization for aneurysm-related hemorrhage was performed in two cases. One of the two patients who underwent embolization required direct carotid puncture. Complications related to embolization occurred in 3patients.(2cases of SAH. 1 case of IVH). No permanent neurological deficits associated with embolization were observed. Hemorrhage after the initial treatment occurred in two cases of pial AVF (one after endovascular treatment and one after craniotomy) and one case of parietal lobe AVM with intraventricular hemorrhage (after endovascular treatment and gamma knife therapy).

Conclusion
Further research is necessary to evaluate the treatments for bAVM, including safe devascularized embolization. Multimodal therapy for bAVM with open surgery, appropriate embolization, and stereotactic radiosurgery has shown good outcomes according to patient-specific strategies in our series.

Poster Presentation

A-113

Pixels with a Purpose: Diagnosing Mycotic Aneurysm From Odontogenic Infective Endocarditis. Radiologic Clues in an Acute Stroke Activation.

Category: Cerebral Aneurysm

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Background and Purpose

Stroke activations often reveal more than just ischemia. Rarely, a ruptured mycotic aneurysm secondary to infective endocarditis (IE) presents as a haemorrhagic stroke mimic. This case highlights the power of holistic imaging interpretation in unveiling a covert source of sepsis, culminating in a life-saving diagnosis

Results

A 49-year-old man with no prior medical history presented with acute left upper limb weakness, triggering an acute stroke activation. Initial non-contrast CT brain revealed diffuse bilateral subarachnoid haemorrhage (SAH), prompting the search of the source. CT angiography (CTA) identified a subtle enhancing dot in the right high frontal parasagittal region. Digital subtraction angiography confirmed a tiny distal anterior cerebral artery aneurysm with features highly suggestive of a ruptured mycotic aneurysm. A broader review of systemic imaging yielded vital diagnostic clues. Chest radiograph incidentally showed marked cardiomegaly with left atrial enlargement, raising suspicion for underlying cardiac pathology WITH mitral valve involvement. Further scrutiny of CTA bone window revealed subtle dental periapical lucencies consistent with dental abscesses — an unusual but critical finding. The constellation of findings suggested a path of progression from periapical dental infection to bacteremia, leading to infective endocarditis and septic embolism, culminating in a ruptured mycotic aneurysm. The patient underwent targeted glue embolisation of the aneurysm using NBCA via a Magic microcatheter, with no new neurologic sequelae. Subsequent echocardiography confirmed mitral valve vegetations with severe regurgitation, prompting urgent mitral valve replacement (MVR) after completion of intravenous antibiotics for 6 weeks. Dental evaluation confirmed ongoing periapical abscesses, and dental clearance was completed thereafter.

Conclusion

This case exemplifies the diagnostic value of meticulous, multimodal imaging review in stroke mimic presentations. A small periapical abscess, an enlarged cardiac silhouette, and a punctate vascular anomaly — when connected — led to the rare diagnosis of ruptured mycotic aneurysm secondary to infective endocarditis from dental sepsis. Early recognition enabled timely neurointervention, cardiac surgery, and infection source control. We advocate for a systematic, whole-body approach in acute neurovascular imaging, especially when atypical findings arise.

Poster Presentation

A-114

Bilateral Middle Meningeal Arteries Arising from the Ophthalmic Arteries with Absence of the Anterior Communicating Artery in Ruptured Dissecting Distal Anterior Cerebral Artery Aneurysm: An Extremely Rare Case

Category:
Other Neurovascular and Rare Diseases

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Background and Purpose

The middle meningeal artery (MMA) typically branches from the maxillary artery, entering the cranial through the foramen spinosum. The MMA that origin from the ophthalmic artery is exceptionally rare and is usually unilateral. The anterior communicating artery (AComA) completes the anterior segment of the Circle of Willis; its absence is an uncommon variant that may influence hemodynamic and aneurysm formation. Aneurysms of the Distal Anterior Cerebral Artery (DACA) are also rare, constituting about 6% (range, 2%–9%) of all intracranial aneurysms. This report aims to present an exceptionally rare neurovascular anomaly.

Results

A 53-year-old male presented with subarachnoid hemorrhage (SAH) due to a dissecting DACA aneurysm. Cerebral angiography revealed bilateral MMAs originating anomalously from the ophthalmic arteries instead of the typical maxillary arteries. Computed Tomography also demonstrated hypoplastic foramina spinosum bilaterally. Embryologically, the MMA derives from the stapedial artery, which originates from the second aortic arch. During development, the stapedial artery regresses as its branches are taken over by the external carotid artery system. The maxillary branch of the stapedial artery anastomoses with the maxillary artery to form the definitive MMA, which typically enters the skull through the foramen spinosum. Embryologically, agenesis of the AComA represents failure of the anterior cerebral artery plexus to fuse during the fifth gestational week. Aneurysms of the DACA are rare. Variations of the A2–A4 circulation are common. These developmental variants of the DACA may be associated with an increased propensity for DACA aneurysm formation, particularly at the bifurcation of the pericallosal and callosomarginal arteries. As the result, this case present an exceptionally rare neurovascular anomaly.

Conclusion

This case highlights a combination of three neurovascular variant: bilateral middle meningeal arteries arising from the ophthalmic arteries, absence of the anterior communicating artery and distal anterior cerebral artery. Combination of these three neurovascular anatomy in one patient is extremely rare case. Understanding such rare variants is crucial for accurate cerebral angiographic interpretation and further neurointervention management.

Poster Presentation

A-115

Late-Onset Vascular Occlusion After Direct Puncture of a Carotid Prosthetic Graft for Endovascular Access

Category: Others

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Background and Purpose

In neuroendovascular treatment, choosing an appropriate vascular access route is critical for procedural success and safety. In patients with a history of aortic arch replacement, conventional access via the femoral, radial, or brachial arteries is often technically unfeasible due to graft-related vascular friction. In such cases, direct carotid puncture may serve as a viable alternative. In this case, we report a case of delayed vascular occlusion caused by direct puncture of a carotid artery prosthetic graft.

Results

A 78-year-old woman presented with dizziness and memory impairment. MRI showed a large aneurysm (14.7 × 12.0 mm) at the C4 segment of the right internal carotid artery (ICA). She had previously undergone total arch replacement for Stanford type A aortic dissection. Due to severe arch deformation, traditional access routes were deemed unsuitable. Direct puncture of the cervical prosthetic graft was performed under ultrasound guidance, followed by successful deployment of a flow diverter. No immediate complications occurred. At 3-month follow-up, MRI showed shrinkage of the aneurysm. At 6-month follow-up, cervical ultrasound and intracranial CTA revealed occlusion of the graft at the puncture site. However, the patient remained asymptomatic without new neurological deficits.

Conclusion

Direct puncture of prosthetic grafts carries an estimated complication rate of 10–20%, including pseudoaneurysm formation, anastomotic disruption, thromboembolism, and infection. To our knowledge, there are no previous reports specifically describing direct carotid access via a prosthetic graft. Although vascular occlusion following such puncture is rare, this case highlights the need for caution and long-term follow-up. Direct carotid puncture through a prosthetic graft can be a technically feasible solution when conventional access is unavailable. However, it carries distinct risks, including delayed vascular occlusion. Careful procedural planning and ongoing follow-up are essential for ensuring patient safety in such cases.

Poster Presentation

A-116

The usefulness of 3D venography in the treatment of dural arteriovenous fistulae

Category: Others

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Background and Purpose

In the treatment of dural arteriovenous fistulae (dAVF), the venous structure can be complex in some cases, making it difficult to determine the location of the shunt, the areas that should and should not be embolized, and the approach route. we experienced some cases of dAVF in which the structure was clarified by performing three-dimensional(3D) venography, allowing for safer and more accurate treatment.

Results

This study included 12 dAVF cases treated using 3D venography between April 2014 and April 2025. All of 8 cavernous sinus (CS) dAVF cases are symptomatic with occluded inferior petrosal sinus (IPS). 2 HC-dAVF cases are borden type 2. one case had two shunt points, CS and HC. One case had two shunt points, HC and transeverse sinus. The catheter was successfully guided through the occluded IPS in all cases. And the average time of catheterization to the shunt point from the IPS is 13 minutes 13 seconds. There is no complication related to venography and procedures. In 11 cases , the shunt disappeared completely. In one case, shunt point slightly remained after the procedure. But symptoms disappeared.

Conclusion

It is necessary to analyze the angioarchitecture of the lesion using 3D images to understand accurately the reflux point and approach route to the reflux point. 3D venography (under compression of the jugular vein) is useful to identify the connection of occluded IPS and can show the precise anatomy of the connection between the shunt and veins that should not be embolized.

Poster Presentation

A-117

Carotid total occlusion: hints and approaches to achieve better recanalized rate

Category: Acute Ischemic Stroke

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Background and Purpose

Carotid total occlusion causes acute ischemic stroke, which is hardly located the lesion in the tortuous intracranial segments or the ostium of the internal carotid artery (ICA). Here we proposed some criteria for more accurate recognition of ostium ICA as the culprit lesion and techniques to achieve a better recanalized rate.

Materials and Methods

This case series included patients admitted to SIS Hospital because of total occlusion of ICA leading to acute ischemic stroke from Jan 2023 to Jun 2024. All patients were performed diagnostic digital subtraction angiography (DSA) in the first week of hospitalization and endovascular carotid stenting after 2 weeks from the onset. Primary outcomes were the technical success rate, periprocedural ischemic and hemorrhagic rates. Secondary outcomes included rates of recurrence ischemic episodes and mortality.

Results

This case series included patients admitted to SIS Hospital because of total occlusion of ICA leading to acute ischemic stroke from Jan 2023 to Jun 2024. All patients were performed diagnostic digital subtraction angiography (DSA) in the first week of hospitalization and endovascular carotid stenting after 2 weeks from the onset. Primary outcomes were the technical success rate, periprocedural ischemic and hemorrhagic rates. Secondary outcomes included rates of recurrence ischemic episodes and mortality.

Conclusion

Recognition of ostium ICA occlusion and proposed coaxial intervention system can be indications of high-rate successful carotid stenting for acute ischemic stroke caused by ICA total occlusion

Poster Presentation

A-118

TOP OF BASILAR ARTERY OCCLUSION SYNDROME

Category: Acute Ischemic Stroke

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Background and Purpose

Acute top-of-the-basilar artery occlusion is rare and clinically quite severe. Accurate diagnosis of this lesion necessitates careful clinical evaluation and imaging, particularly brain MRI, which is extremely important. Mechanical thrombectomy seems appropriate for treating these cases. However, clinical data is few. We investigated whether mechanical thrombectomy in top-of-the-basilar artery occlusion improved clinical outcome by modified Rankin Scale (mRS) score within 3 months after the procedure.

Materials and Methods

This was a retrospective analysis of patients with acute top-of-the-basilar artery occlusion who were treated with mechanical thrombectomy between June 2021 and January 2024 at our hospital. Clinical, neuroimaging, procedural, outcome, and complications data were collected. Primary outcomes included the rate of good outcomes (mRS ≤ 2) at 3-month follow-up.

Results

Twenty-two patients who underwent mechanical thrombectomy in top-of-the- basilar artery occlusion were enrolled in the study. All patients were achieved the successful recanalization (mTICI ≥ 2b). Seventeen patients (77.3%) were recanalized using the ADAPT technique, and five patients (22.8%) needed a combination of the ADAPT technique and stent retrievers. Eighteen patients (81.8%) had a good outcome (mRS ≤ 2) at 3 months, and no patient underwent decompressive craniectomy.

Conclusion

Our study suggests that despite the small series with top-of-the-basilar artery occlusion, mechanical thrombectomy might be safe, has a high success rate, and is related to a good outcome. However, the diagnosis may be missed if not considered carefully. In particular, MRI is necessary and important for the accurate diagnosis of top -of-the-basilar artery occlusion.

Poster Presentation

A-119

Rescue carotid stenting in tandem occlusions: 5 years' experience from a comprehensive stroke center

Category: Acute Ischemic Stroke

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-

Background and Purpose
Rescue carotid stenting has recently been provided as an additional treatment followed by mechanical thrombectomy in patients with tandem occlusions of the anterior circulation. Nevertheless, few available data support the benefits of this treatment in Asia. We hypothesized that this treatment would be associated with improved postprocedural clinical outcomes.

Materials and Methods
We retrospectively analyzed patients who underwent rescue carotid stenting for tandem occlusions of the anterior circulation between December 2020 and May 2024 at Can Tho S.I.S. General Hospital. Clinical, neuroimaging, procedural, and complication data were collected. Primary outcomes included the rate of good outcomes with the modified Rankin Scale (mRS) ≤ 2 at 3-month follow-up.

Results
Ninety patients with tandem occlusions of the anterior circulation who underwent rescue carotid stenting were included, all of whom achieved successful recanalization. Among the 80 cases with the distal-to-proximal approach, diagnostic- Dotter was used in 85 %. Fifty-three patients (58.9 %) had good outcomes, and six patients (6.7 %) experienced parenchymal hemorrhage type II, which was associated with death (mRS 6) after the procedure.

Conclusion
Placement of rescue carotid stenting in tandem occlusions was associated with improved clinical outcomes, without increasing symptomatic intracranial hemorrhage.

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