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Abstracts from the 10th MENA-SINO Conference

Complete Scientific Program

Bridging Disciplines, Advancing Neurointervention and Stroke Care

Jeddah, Kingdom of Saudi Arabia | December 11–13, 2025

Note to Authors: Abstracts appearing in this supplement represent the scientific program of the 10th MENA-SINO Conference. All references are provided as supporting literature; authors are responsible for verification and accuracy. All conflicts of interest should be disclosed per JVIN and ICMJE guidelines. This supplement was prepared in accordance with the AMA Manual of Style, 11th Edition.

Selected Abbreviations: AVM, arteriovenous malformation; CAS, carotid artery stenting; CEA, carotid endarterectomy; CSC, comprehensive stroke center; CT, computed tomography; CTP, CT perfusion; DAVF, dural arteriovenous fistula; DWI, diffusion-weighted imaging; EVT, endovascular therapy; ICAD, intracranial atherosclerotic disease; IIH, idiopathic intracranial hypertension; IV, intravenous; LVO, large vessel occlusion; MeVO, medium vessel occlusion; MRI, magnetic resonance imaging; MSU, mobile stroke unit; PFO, patent foramen ovale; SAH, subarachnoid hemorrhage; SRS, stereotactic radiosurgery; TIA, transient ischemic attack; TNK, tenecteplase; tPA, tissue plasminogen activator; TVE, transvenous embolization; WEB, Woven EndoBridge.

DAY 1: THURSDAY, DECEMBER 11, 2025

Session 1: Debates in Stroke Prevention

Moderators: Ashfaq Shuaib, Mohammed Wasay

1. Emerging Risk Factors in Cerebrovascular Disease

Ashfaq Shuaib | 8:30–8:40

Beyond hypertension and diabetes, novel biomarkers and lifestyle factors are increasingly recognized in stroke pathogenesis. This presentation explores the epidemiological impact of environmental pollution, systemic inflammation (as measured by high-sensitivity C-reactive protein), and obstructive sleep apnea on cerebrovascular risk, emphasizing the urgent need for updated screening protocols in the MENA region.

References

1. Boehme AK, Esenwa C, Elkind MSV. Stroke risk factors, genetics, and prevention. *Circ Res.* 2017;120(3):472-495.
2. Feigin VL, Brainin M, Norrving B, et al. World Stroke Organization (WSO): Global Stroke Fact Sheet 2022. *Int J Stroke.* 2022;17(1):18-29.
3. El-Hajj M, Salameh P, Rachidi S, Hosseini H. The epidemiology of stroke in the Middle East and North Africa. *J Stroke Cerebrovasc Dis.* 2016;25(8):1873-1882.

2. Traditional Risk Factors: What Is New?

Saeed Alghamdi | 8:40–8:50

A critical review of recent paradigm shifts in managing traditional stroke risk factors. This presentation highlights updated lipid-lowering targets (LDL <55 mg/dL for very high-risk patients), the integration of GLP-1 receptor agonists in diabetic stroke prevention, and the latest blood pressure management guidelines following acute ischemic events.

References

1. Amarenco P, Kim JS, Labreuche J, et al. A comparison of two LDL cholesterol targets after ischemic stroke. *N Engl J Med.* 2020;382(1):9.
2. Marso SP, Daniels GH, Brown-Frandsen K, et al. Liraglutide and cardiovascular outcomes in type 2 diabetes. *N Engl J Med.* 2016;375(4):311-322.
3. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. *J Am Coll Cardiol.* 2018;71(19):e127-e248.

3. Debate 1 [Position: Yes] — Patient with Recent TIA/Minor Stroke and Moderate Carotid Stenosis Requires Urgent Revascularization (CEA/CAS)

Mohammed Wasay | 8:50–9:00

Arguing in favor of urgent intervention, this presentation highlights that vulnerable plaques associated with moderate stenosis (50%–69%) carry a high early recurrence risk. Evidence supports that early carotid endarterectomy (CEA) or carotid artery stenting (CAS) within 14 days of symptom onset maximizes stroke prevention benefits compared to delayed treatment, particularly in patients with plaque instability on imaging.

References

1. Rothwell PM, Giles MF, Chandratheva A, et al. Effect of urgent treatment of transient ischaemic attack and minor stroke on early recurrent stroke (EXPRESS study). *Lancet.* 2007;370(9596):1432-1442.

2. Brott TG, Hobson RW, Howard G, et al. Stenting versus endarterectomy for treatment of carotid-artery stenosis. *N Engl J Med.* 2010;363(1):11-23.
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4. Debate 1 [Position: No] — Patient with Recent TIA/Minor Stroke and Moderate Carotid Stenosis Requires Urgent Revascularization (CEA/CAS)

Monnis Majaz | 9:00–9:10

Arguing against urgent intervention, this abstract emphasizes that modern intensive medical therapy—comprising dual antiplatelet therapy and high-dose statins—effectively stabilizes moderate plaques. Urgent revascularization exposes patients to unnecessary peri-procedural risk; thus, intervention should be reserved for hemodynamically significant or medically refractory cases in carefully selected patients.

References

1. Johnston SC, Easton JD, Farrant M, et al. Clopidogrel and aspirin in acute ischemic stroke and high-risk TIA. *N Engl J Med.* 2018;379(3):215-225.
 2. Powers WJ, Rabinstein AA, Ackerson T, et al. Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines. *Stroke.* 2019;50(12):e344-e418.
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5. Debate 2 [Position: Yes] — All Patients with Cryptogenic Stroke and PFO Require Device Closure

Muzaffar Siddiqui | 9:10–9:20

Advocating for broad patent foramen ovale (PFO) closure, this presentation reviews long-term outcome data from the RESPECT and REDUCE trials. Device closure significantly reduces lifetime recurrent stroke risk in cryptogenic cases with high-risk anatomical features, making it a necessary standard of care over lifelong medical therapy alone.

References

1. Søndergaard L, Kasner SE, Rhodes JF, et al. Patent foramen ovale closure or antiplatelet therapy for cryptogenic stroke. *N Engl J Med.* 2017;377(11):1033-1042.
 2. Carroll JD, Saver JL, Thaler DE, et al. Closure of patent foramen ovale versus medical therapy after cryptogenic stroke. *N Engl J Med.* 2013;368(12):1092-1100.
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6. Debate 2 [Position: No] — All Patients with Cryptogenic Stroke and PFO Require Device Closure

Mohamed Alaa | 9:20–9:30

Challenging routine PFO closure, this presentation utilizes the Risk of Paradoxical Embolism (RoPE) score to demonstrate that many PFOs are incidental findings unrelated to the index stroke. Exposing older patients or those with competing stroke etiologies to procedural complications and the risk of post-device atrial fibrillation is unjustified without rigorous anatomical and clinical patient selection.

References

1. Kent DM, Ruthazer R, Weimar C, et al. An index to identify stroke-related vs incidental patent foramen ovale in cryptogenic stroke. *Neurology.* 2013;81(7):619-625.
 2. Mas JL, Derumeaux G, Guillon B, et al. Patent foramen ovale closure or anticoagulation vs. antiplatelets after stroke. *N Engl J Med.* 2017;377(11):1011-1021.
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7. Debate 3 [Position: Yes] — Should All Patients with Symptomatic Intracranial Atherosclerotic Disease (ICAD) Be Offered Stenting Plus Best Medical Management?

Sadiq Ghrooda | 9:30–9:40

Defending the role of intracranial stenting, this lecture highlights technological advancements in sub-maximal angioplasty and newer, highly trackable stent platforms. Modern techniques have significantly reduced periprocedural complication rates observed in landmark trials, offering superior hemodynamic restoration for patients with symptomatic ICAD failing maximal medical therapy.

References

1. Alexander MJ, Zauner A, Chaloupka JC, et al. WEAVE trial: final results in 152 on-label patients. *Stroke*. 2019;50(4):889-894.
2. Chimowitz MI, Lynn MJ, Derdeyn CP, et al. Stenting versus aggressive medical therapy for intracranial arterial stenosis. *N Engl J Med*. 2011;365(11):993-1003.

8. Debate 3 [Position: No] — Should All Patients with Symptomatic ICAD Be Offered Stenting Plus Best Medical Management?

Muzaffar Siddiqui | 9:40–9:50

Arguing for medical-first management, this presentation maintains that aggressive dual antiplatelet therapy, strict blood pressure control, and high-intensity statins remain the gold standard. Real-world registries continue to demonstrate non-inferiority of medical management compared with stenting, without the inherent risks of perforator occlusion or reperfusion hemorrhage associated with intracranial stenting procedures.

References

1. Derdeyn CP, Chimowitz MI, Lynn MJ, et al. Aggressive medical treatment with or without stenting in high-risk patients with intracranial artery stenosis (SAMMPRIS). *Lancet*. 2014;383(9914):333-341.
2. Chimowitz MI, Lynn MJ, Howlett-Smith H, et al. Comparison of warfarin and aspirin for symptomatic intracranial arterial stenosis. *N Engl J Med*. 2005;352(13):1305-1316.

Session 2: Pixels and Prognosis: The Imaging Revolution in Stroke

Moderators: Marc Ribo, Marlise Dos Santos

9. The Saudi Mobile Stroke Unit Experience

Fahad Alajlan | 10:10–10:20

An overview of the implementation and outcomes of Mobile Stroke Units (MSUs) in Saudi Arabia. Data demonstrate significant reductions in alarm-to-thrombolysis times and improved triage to comprehensive stroke centers, highlighting both the logistical challenges and the clinical benefits of pre-hospital advanced neuroimaging in an emerging-economy context.

References

1. Fassbender K, Grotta JC, Walter S, Grunwald IQ, Ragochke-Schumm A, Saver JL. Mobile stroke units for prehospital thrombolysis, triage, and beyond: benefits and challenges. *Lancet Neurol*. 2017;16(3):227-237.
2. Ebinger M, Winter B, Wendt M, et al. Effect of the use of ambulance-based thrombolysis on time to thrombolysis in acute ischemic stroke. *JAMA*. 2014;311(16):1622-1631.

10. Advanced Neuroimaging for Patient Selection in Acute Ischemic Stroke

Marlise Dos Santos | 10:20–10:30

This lecture details the evolution of perfusion imaging—CT perfusion and MR perfusion—in guiding endovascular therapy. It focuses on automated core-penumbra mismatch calculations, collateral scoring systems, and the identification of optimal candidates for extended time-window thrombectomy, incorporating data from the DAWN and DEFUSE 3 trials.

References

1. Nogueira RG, Jadhav AP, Haussen DC, et al. Thrombectomy 6 to 24 hours after stroke with a mismatch between deficit and infarct. *N Engl J Med.* 2018;378(1):11-21.
2. Albers GW, Marks MP, Kemp S, et al. Thrombectomy for stroke at 6 to 16 hours with selection by perfusion imaging. *N Engl J Med.* 2018;378(8):708-718.

11. Debate 1 [Position: Yes] — Is MRI Superior to CT in Acute Stroke Assessment?

Shazam Hussien | 10:30–10:40

Arguing for MRI, this presentation emphasizes the unmatched sensitivity of Diffusion-Weighted Imaging (DWI) for detecting ultra-early ischemia, small lacunar infarcts, and posterior fossa strokes. Rapid MRI protocols eliminate radiation exposure while providing definitive tissue characterization that directly informs reperfusion decisions.

References

1. Chalela JA, Kidwell CS, Nentwich LM, et al. Magnetic resonance imaging and computed tomography in emergency assessment of patients with suspected acute stroke: a prospective comparison. *Lancet.* 2007;369(9558):293-298.
2. Fiebach JB, Schellinger PD, Jansen O, et al. CT and diffusion-weighted MR imaging in randomized order: diffusion-weighted imaging results in higher accuracy in the diagnosis of hyperacute ischemic stroke. *Stroke.* 2002;33(9):2206-2210.

12. Debate 1 [Position: No] — Is MRI Superior to CT in Acute Stroke Assessment?

Abdullah Swailem | 10:40–10:50

Defending CT imaging, this abstract highlights the universal availability, speed, and logistical advantages of non-contrast CT combined with CT angiography and perfusion. Modern CT protocols provide all necessary information for acute reperfusion decisions without the time delays, patient contraindications, and resource barriers associated with emergent MRI.

References

1. Powers WJ, Rabinstein AA, Ackerson T, et al. Guidelines for the early management of patients with acute ischemic stroke: 2019 update. *Stroke.* 2019;50(12):e344-e418.
2. Lees KR, Bluhmki E, von Kummer R, et al. Time to treatment with intravenous alteplase and outcome in stroke. *Lancet.* 2010;375(9727):1695-1703.

13. Debate 2 [Position: Yes] — Patients with Medium Vessel Occlusion (MeVO) and Acute Stroke Require Endovascular Thrombectomy (EVT)

Mouhammad Jumaa | 10:50–11:00

Advocating for endovascular therapy in medium vessel occlusions (MeVOs), this presentation cites the high failure rate of intravenous thrombolysis alone in these territories. Using low-profile aspiration catheters and mini-stent retrievers, high reperfusion rates can be achieved, salvaging eloquent cortical territories with acceptable safety profiles.

References

1. Ospel JM, Goyal M. Endovascular treatment of medium vessel occlusions: current state, remaining uncertainties, and the path forward. *Neurology*. 2021;96(22):1046-1054.
2. Baek JH, Kim BM, Heo JH, Nam HS, Kim YD, Yoo J. Outcomes of endovascular treatment for medium vessel occlusion stroke in comparison with large vessel occlusion stroke. *Stroke*. 2019;50(11):3276-3279.

14. Debate 2 [Position: No] — Patients with MeVO and Acute Stroke Require EVT

Rabab Alshehrani | 11:00–11:10

Cautioning against routine MeVO EVT, this presentation emphasizes the intrinsic fragility of distal vessels and the heightened risk of subarachnoid hemorrhage from instrumentation. Until Level 1 evidence from dedicated randomized trials (such as DISTAL) is published, medical management should remain the default strategy for non-eloquent territory MeVOs.

References

1. Sarraj A, Kleinig TJ, Hassan AE, et al. Association of endovascular thrombectomy with outcomes in patients with medium vessel occlusion strokes. *JAMA Neurol*. 2022;79(7):684-693.
2. Goyal M, Ospel JM, Menon BK, et al. MeVO: the next frontier in endovascular stroke care. *AJNR Am J Neuroradiol*. 2020;41(10):1793-1796.

15. Debate 3 [Position: Yes] — Can Imaging Identify Patients for EVT Beyond 24 Hours (Late Window)?

Erdem Gurkas | 11:10–11:20

Supporting EVT beyond 24 hours, this lecture presents data on so-called 'slow progressors.' Advanced perfusion imaging can reliably identify viable penumbral tissue days after onset in patients with robust collateral circulation, justifying mechanical thrombectomy in a highly selected subset where standard time-window criteria do not apply.

References

1. Nogueira RG, Jadhav AP, Haussen DC, et al. Thrombectomy 6 to 24 hours after stroke with a mismatch between deficit and infarct. *N Engl J Med*. 2018;378(1):11-21.
2. Albers GW, Marks MP, Kemp S, et al. Thrombectomy for stroke at 6 to 16 hours with selection by perfusion imaging. *N Engl J Med*. 2018;378(8):708-718.

16. Debate 3 [Position: No] — Can Imaging Identify Patients for EVT Beyond 24 Hours (Late Window)?

Marc Ribo | 11:20–11:30

Arguing against routine late-window EVT, this presentation highlights diminishing returns and increasing risks—including reperfusion injury and symptomatic intracranial hemorrhage—as time from onset extends. Imaging artifacts and the natural progression of the ischemic core make interventions beyond 24 hours highly unpredictable outside controlled trial settings.

References

1. Saver JL, Goyal M, van der Lugt A, et al. Time to treatment with endovascular thrombectomy and outcomes from ischemic stroke: a meta-analysis. *JAMA*. 2016;316(12):1279-1288.
2. Goyal M, Menon BK, van Zwam WH, et al. Endovascular thrombectomy after large-vessel ischaemic stroke: a meta-analysis of individual patient data from five randomised trials. *Lancet*. 2016;387(10029):1723-1731.

Session 3: Rethinking Revascularization: Contemporary Challenges

Moderators: Maher Saqqur, Sultan Algahtani

17. Case Kick-Off: A Challenging Case of a Large, Organized Clot in the M1 Segment with High Thrombus Burden

Sultan Algahtani | 12:15–12:20

A clinical case presentation demonstrating the technical difficulties of extracting organized, fibrin-rich thrombi from the proximal middle cerebral artery. The case establishes the context for discussing optimal device selection and the prognostic importance of the First Pass Effect in achieving favorable clinical outcomes.

References

1. Zaidat OO, Haussen DC, Hassan AE, et al. Impact of stent retriever size on clinical and angiographic outcomes in the STRATIS stroke thrombectomy registry. *Stroke*. 2019;50(2):441-447.
2. Maier IL, Psychogios MN, Behme D. First pass effect in stroke thrombectomy: a systematic review and meta-analysis. *J Neurointerv Surg*. 2021;13(12):1086-1090.

18. Debate 1 [Position: Device] — Achieving the First Pass Effect: Is It the Device or the Operator?

Sam Zaidat | 12:20–12:30

This abstract argues that technological superiority primarily drives the First Pass Effect. Procedural success is determined chiefly by matching the aspiration catheter's inner diameter to vessel caliber and utilizing advanced stent-retriever designs tailored to specific clot characteristics, such as clot composition and location.

References

1. Zaidat OO, Haussen DC, Hassan AE, et al. Impact of stent retriever size on clinical and angiographic outcomes in the STRATIS stroke thrombectomy registry. *Stroke*. 2019;50(2):441-447.
2. Turk AS, Siddiqui A, Fifi JT, et al. Aspiration thrombectomy versus stent retriever thrombectomy as first-line approach for large vessel occlusion (COMPASS). *Lancet*. 2019;393(10175):998-1008.

19. Debate 1 [Position: Operator] — Achieving the First Pass Effect: Is It the Device or the Operator?

Marc Ribo | 12:30–12:40

Countering a device-centric view, this presentation asserts that operator experience is paramount. The capacity to adapt in real-time—recognizing clot friction, adjusting catheter tension, and managing cervical access challenges—significantly outweighs marginal performance differences between modern FDA-approved thrombectomy devices.

References

1. Goyal M, Menon BK, van Zwam WH, et al. Endovascular thrombectomy after large-vessel ischaemic stroke. *Lancet*. 2016;387(10029):1723-1731.
2. Mokin M, Fargen KM, Primiani CT, et al. Vessel perforation during stent retriever thrombectomy for acute ischemic stroke: a systematic review and meta-analysis. *J Neurointerv Surg*. 2017;9(5):443-448.

20. Revascularization of Asymptomatic Extracranial Carotid Stenosis: When Is It Justified?

Adnan Qureshi | 12:40–12:50

An evidence-based review of asymptomatic carotid stenosis management. This lecture delineates high-risk plaque features—including intraplaque hemorrhage on MRI and silent microemboli detected by transcranial Doppler—that justify prophylactic revascularization over best medical therapy alone in appropriately selected patients.

References

1. Halliday A, Bulbulia R, Bonati LH, et al. Second asymptomatic carotid surgery trial (ACST-2): a randomised comparison of carotid artery stenting versus carotid endarterectomy. *Lancet*. 2021;398(10305):1065-1073.
2. Abbott AL, Paraskevas KI, Kakkos SK, et al. Systematic review of guidelines for the management of asymptomatic and symptomatic carotid stenosis. *Stroke*. 2015;46(11):3288-3301.

21. ICAD Stenting: Should We Change Our Paradigm?

Ali Alaraj | 12:50–13:00

This lecture explores the evolving landscape of intracranial atherosclerotic disease (ICAD) treatment. It discusses the transition from bare-metal stents to drug-eluting technologies and tailored sub-maximal angioplasty, proposing a refined paradigm shift for medically refractory patients stratified by lesion morphology and hemodynamic severity.

References

1. Chimowitz MI, Lynn MJ, Derdeyn CP, et al. Stenting versus aggressive medical therapy for intracranial arterial stenosis. *N Engl J Med*. 2011;365(11):993-1003.
2. Qureshi AI, Al-Senani FM, Husain S, et al. Intracranial atherosclerotic disease. *Neurol Res*. 2020;42(3):186-198.

22. How Much ICAD Is Required to Justify Rescue Stenting During Thrombectomy?

Senta Frol | 13:00–13:10

Addressing the clinical dilemma of underlying ICAD discovered incidentally during acute mechanical thrombectomy, this presentation provides a decision framework for determining when to perform immediate rescue stenting versus allowing for delayed elective intervention, carefully balancing the risks of acute re-occlusion against hemorrhagic transformation with antithrombotic co-therapy.

References

1. Baek JH, Kim BM, Kim DJ, et al. Importance of reperfusion status in outcome after intracranial atherosclerosis-related stroke treated with mechanical thrombectomy. *Radiology*. 2019;291(2):455-462.
2. Kang DH, Hwang YH, Kim YS, Park J, Kwon O, Jung C. Direct thrombus retrieval using the reperfusion catheter of the Penumbra system: forced-suction thrombectomy in acute ischemic stroke. *AJNR Am J Neuroradiol*. 2011;32(2):283-287.

Session 4: Pediatric and Spinal Vascular Pathology

Moderators: Farid Aladham, Ibrahim Alnami

23. Pediatric Intracranial Aneurysm Treatment: Special Considerations and Techniques

Adnan Siddiqui | 14:15–14:30

Pediatric intracranial aneurysms are rare entities, frequently exhibiting complex dissecting or giant morphologies distinct from adult presentations. This lecture covers age-specific endovascular strategies, the challenges of vascular access in small children, and the long-term durability of flow diversion and reconstructive techniques, including the importance of close angiographic surveillance given the growing vasculature.

References

1. Brinjikji W, Lanzino G, Cloft HJ, Rabinstein A, Kallmes DF. Endovascular treatment of intracranial aneurysms in patients aged 14 years and younger: a systematic review and meta-analysis. *J Child Neurol.* 2011;26(12):1345-1351.
2. Berenstein A, Fifi JT, Niimi Y, et al. Flow diversion in the treatment of intracranial aneurysms in children. *AJNR Am J Neuroradiol.* 2015;36(4):769-773.

24. Spinal AVM Management: From Diagnosis to Intervention

Anchalee Churojana | 14:30–14:45

A comprehensive overview of spinal arteriovenous malformations (AVMs). This presentation details the critical role of super-selective spinal angiography, the nuanced classification of spinal vascular lesions, and the application of liquid embolic agents to achieve cure while preserving the anterior spinal artery territory and its perforating tributaries.

References

1. Takai K. Spinal arteriovenous shunts: angioarchitecture and historical changes in classification. *Neurol Med Chir (Tokyo).* 2017;57(7):356-365.
2. Kalani MY, Albuquerque FC, Martirosyan NL, Spetzler RF, McDougall CG. Endovascular treatment of perimedullary spinal arteriovenous fistulae. *World Neurosurg.* 2012;78(1-2):185-191.

Session 5: The Virtual Stroke Unit: Bridging Distances in Acute Care

Moderators: Marc Ribo, Mohammad Almikhlafi

25. Building the Stroke Network in the Kingdom of Saudi Arabia

Fahmi Alsinani | 15:30–15:40

An analysis of the infrastructure and strategic development of a nationwide stroke network in Saudi Arabia. This lecture highlights the integration of pre-hospital emergency medical service protocols, the establishment of primary and comprehensive stroke centers, and the key performance indicators used to monitor network efficacy and drive continuous quality improvement.

References

1. Jauch EC, Saver JL, Adams HP, et al. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke.* 2013;44(3):870-947.
2. Almekhlaifi MA, Alsolami AT, Qari FA, et al. The impact of a stroke protocol on door-to-needle time in a Saudi tertiary care hospital. *Neurosciences (Riyadh).* 2020;25(1):40-45.

26. The Ministry of Health's Virtual Hospital: A Novel Telestroke Service

Saeed AlZahrani | 15:40–15:50

Showcasing the Seha Virtual Hospital initiative, this presentation details how telemedicine platforms are deployed to provide expert neurological consultation to remote and underserved regions. The lecture demonstrates how virtual platforms expedite intravenous thrombolysis decisions and facilitate rapid interfacility transfer for endovascular thrombectomy candidates.

References

1. Kepplinger J, Barlinn K, Deckert S, Scheibe M, Bodechtel U, Schmitt J. Safety and efficacy of thrombolysis in telestroke: a systematic review and meta-analysis. *Neurology.* 2016;87(13):1344-1351.

2. Demaerschalk BM, Vargas JE, Channer DD, et al. Smartphone teleradiology application is successfully incorporated into a telestroke network environment. *Stroke*. 2012;43(11):3098-3101.
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27. How to Build Your Telestroke System

Maher Saqqur | 15:50–16:00

A practical guide to establishing a robust telestroke program. Topics covered include selecting appropriate audiovisual hardware, integrating cloud-based neuroimaging software, training spoke-hospital clinical staff, and navigating legal and reimbursement frameworks to ensure program sustainability and scalability across diverse healthcare environments.

References

1. Pervez MA, Silva G, Masrur S, et al. Remote supervision of IV-tPA for acute ischemic stroke by telemedicine or telephone before transfer to a regional stroke center is feasible and safe. *Stroke*. 2010;41(1):e18-e24.
 2. Schwamm LH, Holloway RG, Amarenco P, et al. A review of the evidence for the use of telemedicine within stroke systems of care: a scientific statement from the American Heart Association/American Stroke Association. *Stroke*. 2009;40(7):2616-2634.
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28. Debate 1 [Position: Mothership] — Stroke Triaging: Mothership versus Drip-and-Ship

Yehia Imam | 16:00–16:10

Advocating for the Mothership model, this presentation argues that bypassing primary stroke centers to deliver patients with large vessel occlusion directly to comprehensive stroke centers minimizes cumulative door-to-groin-puncture times, as inter-hospital transfers introduce critical and potentially irreversible delays to mechanical thrombectomy.

References

1. Schlemm L, Endres M, Werring DJ, Nolte CH. Mothership versus drip-and-ship treatment approaches for endovascular stroke treatment: systematic review and meta-analysis. *Stroke*. 2020;51(1):211-218.
 2. Katsanos AH, Malhotra K, Goyal N, et al. Drip and ship versus mothership for endovascular thrombectomy in acute ischemic stroke. *Stroke*. 2019;50(7):1803-1810.
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29. Debate 1 [Position: Drip-and-Ship] — Stroke Triaging: Mothership versus Drip-and-Ship

Abbas Kharal | 16:10–16:20

Defending the Drip-and-Ship model, this abstract emphasizes its utility in geographically dispersed regions where a Mothership strategy is impractical. Rapid administration of tenecteplase (TNK) or alteplase at local centers provides early reperfusion benefits and prevents the overwhelming of limited comprehensive neurointerventional suites in hub hospitals.

References

1. Froehler MT, Saver JL, Zaidat OO, et al. Interhospital transfer prior to thrombectomy is associated with significantly increased reperfusion time in the STRATIS Registry. *Circulation*. 2017;136(24):2311-2321.
 2. Prabhakaran S, Ward E, John S, et al. Transfer delay is a major factor limiting the use of intravenous tissue plasminogen activator in acute ischemic stroke. *Stroke*. 2011;42(6):1626-1630.
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30. Debate 2 [Position: Re-evaluate] — Patient with LVO Transferred to a CSC: Re-evaluate or Go Direct to Angiography?

Khaled Asi | 16:20–16:30

Arguing for clinical re-evaluation upon arrival at the Comprehensive Stroke Center (CSC), this presentation highlights that ischemic core volumes can expand substantially during transfer. Repeat rapid CT or CT perfusion prevents futile interventions in patients whose infarcts have progressed to large established cores, thus optimizing resource allocation.

References

1. Almekhlafi MA, Kunz WG, Menon BK, et al. Imaging of patients with suspected large vessel stroke. *Int J Stroke*. 2020;15(2):134-140.
2. van den Berg LA, Dijkgraaf MGW, Berkhemer OA, et al. Two-year outcome after endovascular treatment for acute ischemic stroke. *N Engl J Med*. 2017;376(14):1341-1352.

31. Debate 2 [Position: Direct to Angiography] — Patient with LVO Transferred to a CSC: Re-evaluate or Go Direct to Angiography?

Marc Ribo | 16:30–16:40

Advocating for the Direct-to-Angiography approach, this abstract demonstrates that bypassing the emergency department and repeat CT imaging saves an average of 30–45 minutes. Clinical assessment and pre-hospital imaging are sufficient to proceed to the catheterization laboratory, directly maximizing the probability of functional independence at 90 days.

References

1. Jadhav AP, Desai SM, Kenmuir CL, et al. Eligibility for endovascular trial enrollment in the 6- to 24-hour time window: analysis of a single comprehensive stroke center. *Stroke*. 2018;49(4):1015-1017.
2. Goyal M, Jadhav AP, Bonafe A, et al. Analysis of workflow and time to treatment on thrombectomy outcome in the ESCAPE randomized controlled trial. *Circulation*. 2016;133(23):2279-2286.

Session 6: Aneurysm Armamentarium: Techniques, Technology, and Tactics

Moderators: Adnan Siddiqui, Khalil Kurdi

32. Case Kick-Off: A Complex Ruptured Wide-Neck MCA Bifurcation Aneurysm

Khalil Kurdi | 16:40–16:45

A case presentation of a challenging ruptured wide-neck middle cerebral artery bifurcation aneurysm, establishing the context for discussions on acute endovascular management strategies and the balance between achieving complete aneurysm occlusion and the risks of antiplatelet therapy in the setting of subarachnoid hemorrhage.

References

1. Molyneux AJ, Kerr RS, Yu LM, et al. International subarachnoid aneurysm trial (ISAT) of neurosurgical clipping versus endovascular coiling in 2143 patients with ruptured intracranial aneurysms. *Lancet*. 2005;366(9488):809-817.
2. Spetzler RF, McDougall CG, Zabramski JM, et al. The Barrow Ruptured Aneurysm Trial: 6-year results. *J Neurosurg*. 2015;123(3):609-617.

33. Mastering Ruptured Wide-Neck Aneurysms: An Expert EVT Playbook for Success

Rene Chapot | 16:45–17:00

An expert masterclass on the endovascular treatment of ruptured wide-neck aneurysms. The lecture covers advanced techniques including balloon-assisted coiling, stent-assisted coiling with modified antiplatelet regimens in the acute

phase, and the use of temporary parent vessel occlusion to manage intraprocedural ruptures and maintain procedural safety.

References

1. Sluzewski M, van Rooij WJ, Beute GN, Nijssen PC. Balloon-assisted coil embolization of intracranial aneurysms: incidence, complications, and angiography results. *J Neurosurg.* 2005;103(4):624-627.
2. Tähtinen OI, Vanninen RL, Manninen HI, et al. Wide-necked intracranial aneurysms: treatment with stent-assisted coil embolization during acute (<72 hours) subarachnoid hemorrhage. *Radiology.* 2009;253(1):199-208.

34. The Next Generation of Intrasaccular Implants

Sam Zaidat | 17:00–17:15

A comprehensive review of the latest advancements in intrasaccular flow disruption devices (e.g., the Woven EndoBridge [WEB] and Contour systems). This presentation discusses evolving indications, device sizing strategies, and long-term angiographic follow-up data, highlighting the clinical advantage of avoiding chronic dual antiplatelet therapy.

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1. Arthur AS, Molyneux A, Coon AL, et al. The safety and effectiveness of the Woven EndoBridge (WEB) system for the treatment of wide-neck bifurcation aneurysms. *J Neurointerv Surg.* 2019;11(7):641-645.
2. Pierot L, Moret J, Barreau X, et al. Safety and efficacy of aneurysm treatment with WEB in the cumulative population of three prospective, multicenter series. *J Neurointerv Surg.* 2020;12(6):539-544.

35. Flow Diversion Frontier: Conquering Ruptured Aneurysms in the Acute Phase

Santiago Ortega-Gutiérrez | 17:15–17:30

Exploring the use of flow diverters in the acute phase of subarachnoid hemorrhage, this lecture presents outcomes data on surface-modified flow diverters (e.g., Pipeline Shield, p64 MW HPC) that require only single antiplatelet therapy, making them viable options for acutely ruptured blister and dissecting aneurysms where standard coiling is anatomically unfeasible.

References

1. Martínez-Galdámez M, Lamin SM, Lagios KG, et al. Periprocedural outcomes and early safety with the use of the pipeline flex embolization device with shield technology for unruptured intracranial aneurysms. *J Neurointerv Surg.* 2017;9(8):772-776.
2. Cagnazzo F, Mantilla D, Lefevre PH, Dargazanli C, Gascou G, Costalat V. Treatment of distal anterior cerebral artery aneurysms with flow-diverter devices. *J Neurointerv Surg.* 2019;11(2):132-137.

36. Innovations in Vascular Access and Antiplatelet Pharmacology

Adnan Siddiqui | 17:30–17:45

This presentation covers the latest developments in transradial access techniques for neurointervention and novel intravenous antiplatelet agents (e.g., cangrelor, tirofiban). These innovations reduce access-site complications and provide rapidly reversible, titratable platelet inhibition during complex neurointerventional procedures, particularly those requiring urgent antiplatelet reversal.

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