

CV Section News

Chairman's Message

Editor: Ketan R. Bulsara MD
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Earlier this year I was honored to take over from Sean Lavine as chair of the Joint Cerebrovascular Section. I am extremely grateful to Sean for his leadership during a busy year in our rapidly evolving specialty. 2015-16 saw the rise of mechanical thrombectomy for acute ischemic stroke as a truly evidence based, life changing intervention and the CV Section's members have been at the forefront of the interventional management of ischemic stroke. This year's CV Section Annual Meeting, as well as the subsequent International Stroke Conference, provided evidence and discussion to solidify the role of mechanical thrombectomy in acute stroke treatment. This year's conferences also saw an emphasis on intracranial hemorrhage with the results of the CLEAR III trial and a renewed interest in minimally invasive approaches for the treatment of intracerebral hemorrhage (ICH). While CLEAR III was not positive for its primary endpoint, the trial's

results did suggest that an external ventricular drain based strategy of intraventricular hemorrhage removal can reduce overall mortality and can improve functional outcome in situations where a large clot burden is removed. Likewise devices for ICH removal have demonstrated an impressive ability to remove clot. However, none of these devices have actually demonstrated a clinical benefit in a prospective randomized trial. Lest we suffer a repeat of the early mechanical thrombectomy experience, I encourage our members to participate in randomized controlled trials to test the true clinical efficacy of these devices. Going forward, we can look for continued advances in our field, particularly on the endovascular side, where new intrasaccular and flow diverting devices will be heading to the U.S. market soon. As with all new devices, however, it is important that we remain vigilant for complications and carefully track our outcomes.

This spring and early summer saw continued progress on many areas of interest to the section. Thanks to persistency of Nick Bambikidis a strong editorial reinforcing our desire for stricter standards regarding the management of intracranial aneurysms and subarachnoid hemorrhage at facilities seeking Comprehensive Stroke Center certification has been completed. The editorial has been endorsed by the other members of the Cerebrovascular Coalition and will soon be heading to print. The Society of Neurological Surgeons (SNS) Committee on Advanced Specialty Training (CAST) under the leadership of Art Day and Steve Giannotta is now certifying individuals in neuroendovascular, as well as accrediting fellowship programs for both neuroendovascular and open cerebrovascular surgery. That the criteria for neuroendovascular certification were agreed upon by all three major societies dealing with neurovascular disease – the CV Section, the Society of NeuroInterventional Surgery and the Society of Vascular and Interventional Neurology – was a triumph for the cooperative nature of our specialty. A “grandfather” system is in place until 2020 and I encourage all of our members with neuroendovascular expertise to

consider obtaining CAST certification. Speaking of participation, the Quality Outcomes Database for Neurovascular (QOD-Neurovascular, formerly N2QOD-Vascular) has now been fully operational for over a year and for this registry to achieve its fullest potential we need as many centers as possible to join and enter patients.

This September will see the Annual Meeting of the Congress of Neurological Surgeons head to San Diego, California. CV Scientific Program Chair, Brian Jankowitz and Co-Chair Stav Tjoumakaris have an excellent program planned. This year's Drake Lecture will be given by Gary Steinberg of Stanford University. Dr Steinberg is an outstanding microvascular surgeon with an active NIH-funded laboratory. Early in his career he was fortunate enough to spend some time with Dr Drake and he is sure to be able to offer some interesting perspectives on our dynamic field. In February, we will again join forces with the SNIS for our annual scientific meeting to be held in Houston, Texas immediately preceding the 2017 International Stroke Conference. Adam Arthur will be coordinating the scientific program on behalf of the CV section. Both meetings will be valuable opportunities to learn about cutting edge neurovascular science and I strongly encourage our members to attend both meetings. As we all know, the majority of strokes are ischemic and for us to be at the forefront of the management of this disease we need to also be actively engaged in the national discourse and policy making activities that are part and parcel of this field.

Finally, thanks as always to our CV section executive committee and to our many active section members whose dedication and volunteerism allow this organization to function at the highest level. I look forward to a productive year as your section chair and wish you all an enjoyable, safe and healthy summer.

Sincerely,

Kevin M. Cockroft, MD, M Sc, FAANS, FAHA

Chair, AANS/CNS Cerebrovascular Section

SECRETARY'S MESSAGE



The AANS/CNS Section on Cerebrovascular Surgery continues to lead in the field of cerebrovascular surgery, providing important benefits to its membership. Over the past year, the Section has represented the neurosurgical community, not only within the AANS and CNS, but also through important relationships with the AHA, the FDA, and other critical stakeholders in the CV space. You can rest assured that the section has been hard at work to ensure cerebrovascular patients, and the physicians that care for them, continue to have access to the best available scientific evidence and most advanced treatment options.

We are excited for our upcoming annual meeting in Houston, TX. The AANS/CNS Joint Cerebrovascular Section continues its outstanding partnership with the Society of Neurointerventional Surgery (SNIS) in planning and executing the annual meeting. Over the past few years this cross-specialty collaboration has created a meeting of outstanding quality and incomparable value. This year's meeting program is future-focused, thought-provoking, and evidence-based. We should all make every effort to attend. Dr. Adam Arthur serves as the CV Section chair of this year's annual meeting and Dr. Rob James serves as the SNIS chair.

Policy development, education, research, and collaboration with numerous cerebrovascular organizations continues to be an important focus of the CV Section. Numerous recent guidelines have been reviewed by the section, with those efforts led by Drs. Kevin Cockroft and Alex Khalessi. Additionally, Dr. Henry Woo continues to advocate for important changes in coding and insurance coverage.

The National Quality Outcomes Database CV module has become a critical tool in the evaluation of CV quality. It is quickly approaching the 1000 patients enrolled mark, across 12 centers, with more centers joining every month. This is an incredibly important initiative and we strongly encourage all members to join this quality effort. If your center already participates in the spine module then there are no additional startup costs, aside from the staff to collect the data.

Lastly, the section continues to develop and refine its educational efforts, with a continuum of endovascular and cerebrovascular educational experiences in order to provide residents level-appropriate training over the breadth of their training.

The CV Section is committed to advocating for patients and advancing the care of cerebrovascular disease worldwide. We encourage all neurosurgeons and cerebrovascular practitioners to become involved in our educational, research and advocacy activities. It is only through our dedicated membership's efforts that we will continue to provide these important opportunities.

J Mocco, MD, MS

MEMBERSHIP UPDATE

William Mack, MD

The membership of the Section is currently 2333. It has increased over the past year in every category (385 active, 104 lifetime, 60 international, 43 adjunct, 1705 resident/fellow, 36 medical students). The membership committee will continue to work with the parent organizations (AANS/ CNS) and the young neurosurgeons committee to recruit new members in neurosurgery and allied specialties. Membership benefits include priority access to seminars and courses at the Annual Meeting, and receipt of the Cerebrovascular Section Newsletter.

MEETING UPDATES

CNS CV SECTION ANNUAL MEETING (September 24-28, 2016, San Diego, CA)

Brian Jankowitz, Stavropoula Tjoumakaris

The CV section sessions at the upcoming 2016 CNS meeting should be of great interest to vascular and non-vascular surgeons alike. Monday, September 26, will focus on abstract presentations and include the Drake Lecture by Dr. Gary Steinberg on "The Future of Cerebrovascular Surgery." Tuesday, September 27, will wrap up the abstract presentations and showcase two panel discussions. The first will focus on "Creating the Optimal Neurovascular Team" and will have representatives from neurosurgery, INR, and neurology. The second panel will provide updates on the current intracerebral hemorrhage clinical trials by the study principle investigators.



INTERNATIONAL STROKE CONFERENCE (February 22-24, 2017, Houston, TX)

Andrew Ducruet, Judy Huang, Louis Kim

The 2016 International Stroke Conference in Los Angeles was extremely successful. The scientific program featured multiple sessions planned by the CV section planning committee. The first session, “Treatment of Dural Arteriovenous Fistulas” was moderated by J Mocco and featured talks by Felipe Albuquerque and Babu Welch. The second session was entitled “Issues in the Neurocritical Care Management of Aneurysmal Subarachnoid hemorrhage”. Additional sessions with CV section input were “Towards Definitive Medical Therapies for Intracerebral Hemorrhage”, which was moderated by Kevin Cockroft, and “Surrogates of rupture for intracranial aneurysms”, which was moderated by Bill Mack and Sander Connolly and featured talks by Brian Hoh and Loch Macdonald. These sessions were very well attended.

The 2017 International Stroke Conference is planned for Houston Texas on February 22-24 following the CV section meeting. The program committee is currently in the final stages of topic selection. We encourage all CV section members to stay to attend the ISC following the upcoming CV section meeting.



CV SECTION ANNUAL MEETING (February 20-21, 2017, Houston, TX)

Adam Arthur, Rob James

Save the Date.

AANS/CNS Joint Cerebrovascular Section ANNUAL MEETING

Programming in conjunction with SNIS

FEBRUARY 20-21, 2017

W Marriott Houston Galleria
Houston, Texas



**Congress of
Neurological
Surgeons**



TECHNOLOGY FORUM

Andrew F. Ducruet, MD

Barrow Neurological Institute, Phoenix, AZ

Following the introduction of the Guglielmi detachable coil in 1996, there has been a relative dearth of significant modifications to the fundamental design of endovascular coils. Over the same epoch, we have witnessed a remarkable leap in related aneurysm treatment technologies including the development of flow-diverting stents. Despite the remarkable efficacy of flow diverters for sidewall aneurysms, there remain situations where endosaccular occlusion is ideal, such as cases of broad-necked, bifurcation aneurysms.

In an effort to improve treatment options for these aneurysms, several embolization devices deployed directly within the aneurysmal sac have been developed. These devices serve to both occlude the aneurysm as well as potentially to capitalize on diverting flow at the neck of the aneurysm. These devices include the WEB device, which is currently under investigation in a multi-center clinical trial in the United States following extensive evaluation in Europe (1). Although preliminary experience suggests that this device can be safely deployed within the aneurysm and enables successful aneurysm occlusion in most cases, sizing these devices in aneurysms with irregular shapes remains difficult.

The Medina coil system represents the most significant advance in coil technology to date. Medina incorporates the known safety and ease of deployment of standard coils but features a novel design. The device is constructed of a 3D radiopaque core coil wire coupled to outer filaments which are shaped into petals. The design of the device facilitates delivery of these petals into aneurysms of varying morphology. The Medina device is deployed through a 0.021 microcatheter and subsequently detached, and it can be retracted and repositioned prior to deployment. Medina is designed to treat any saccular aneurysm of any morphology or location, both framing and filling coils are available (the smallest device is 5mm in diameter). The broad petals help to distribute forces along the walls of the aneurysm. This construction also aims to increase long-term durability through flow diversion from the outer petals spanning the neck of the aneurysm.

The initial human experience with Medina was recently reported (2). Nine wide-necked aneurysms of varying anatomic locations were treated in five patients. In 4 patients, aneurysms were treated with the Medina system alone. In one case, a single traditional coil was used at the neck of the aneurysm to achieve occlusion. There were no technical or procedural complications. Some amount of residual filling within the aneurysm was seen in all cases where the Medina coils alone were used. One month follow-up was available in 3 of the aneurysms, and all of these studies each demonstrated >95% aneurysm occlusion.

This preliminary study was limited in size and duration of follow-up; however, a few points can be derived from this data. Medina can be rapidly deployed and fewer devices are necessary than standard coils, which potentially increases procedural speed. Additionally, persistent aneurysm filling noted at the conclusion of the procedure may not be as relevant when petals are covering the neck. Therefore the concepts of ‘packing density’ may not apply. In this way, the device may incorporate some of the best qualities of both coils and flow diverters. Furthermore, based on this limited experience, deployment of this device appears to be very safe.

There remains no “magic bullet” for the endovascular treatment of all intracranial aneurysms. Rather, the judicious application of several complementary technologies enables the safe and effective treatment of an ever-expanding range of aneurysms. The Medina system represents another significant step forward in this process.



References

1. Clinical and Anatomic Follow-up in Patients with Aneurysms Treated with the WEB Device: 1-year Follow-up Report in the Cumulated Population of 2 Prospective, Multicenter Series (WEBCAST and French Observatory). Pierot L, Spelle L, Molyneux A, Byrne J and Investigators, WEBCAST and French Observatory. 2016, Neurosurgery, pp. 133-41.
2. Periprocedural safety of aneurysm embolization with the Medina Coil system: the early human experience. Turk AS, Maia O, Ferreira CC, Freitas D, Mocco J, Hanel R. 2016, Journal of Neurointerventional Surgery, pp. 168-72.

OPPORTUNITIES FOR FUNDING

AANS FELLOWSHIP/GRANTS

<http://www.aans.org/Grants%20and%20Fellowships.aspx>

CNS FELLOWSHIP/GRANTS

<https://www.cns.org/grants-awards/grants-awards-and-fellowships>

AMERICAN HEART ASSOCIATION

http://my.americanheart.org/professional/Research/FundingOpportunities/Funding-Opportunities_UCM_316909_SubHomePage.jsp

BRAIN ANEURYSM FOUNDATION

<http://www.bafound.org/applying-research-grant>

THE ANEURYSM AND AVM FOUNDATION

http://www.taafonline.org/pr_grants.html**Calendar****September 24-28th, 2016****CNS Annual Meeting**

San Diego, CA

February 20-21, 2017

Cerebrovascular Section Meeting

Houston, TX

February 22-24, 2017

International Stroke Conference

Houston, TX

April 22-26, 2017

AANS Annual Meeting

Los Angeles, CA