

CV Section News

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CHAIRMAN'S MESSAGE



Babu Welch, MD

As the Chair of our Section, I am pleased to provide you an update that I will call the State of the Section. To paraphrase, the State of the Section is strong. Since my appointment as Chair-Elect in 2018, our Section's Executive Committee has worked diligently to create a plan that we expect to execute over the next few years. We expect this plan to culminate in an even stronger section that that will continue the leadership of cerebrovascular neurosurgeons in the arenas of stroke and cerebrovascular disease.

The foundation of our strategic plan has been a topic of discussion for a number of months with an overarching goal to maintain and grow a stable, funded section that will satisfy our mission. That mission is to promote and assure advancement in the diagnosis and the surgical and endovascular management of cerebrovascular disease. We have made multiple strides over the past few months and we are well on our way to success. In the next few paragraphs, I would like to provide you with an update on the more immediate components of the plan as well as a look toward the future of the Section. I will address our national meeting, the growth of our financial resources and a change in corporate relationships that is tied to both of the prior concepts. I will complete the update with a discussion surrounding the international opportunities that exist for the development of the endovascular neurosurgeon abroad and maintenance of the open surgical techniques at home.

In 2018, Drs. Jay Howington, Patrick Han and I surveyed the membership to assess the impact of the Section on the academic and community practices of our members. One of the questions in that survey directly addressed the possibility of unifying our national meeting with another existing meeting that was not the International Stroke Conference. From choices that included the annual SNIS meeting and the CNS meeting (among others), a clear favorite was the annual SNIS meeting that occurs in the summer. The clear benefits of such a unified meeting would include condensation of our annual meetings schedules and a more focused venue for multispecialty collaboration. Additional possibilities would include a modification of corporate sponsorships

along with an increase in revenue from the meeting that could be applied to initiatives important to the Section.

With these possibilities in mind, a Steering Committee composed of SNIS and CV Section members created a proposal for meeting unification that was presented and accepted by the SNIS board in July of this year. Since that time, a memorandum of understanding (MOU) was created that detailed a cost-sharing agreement that would benefit both groups. This MOU is in the final stages of approval by the leadership of our parent organizations (AANS/CNS). We are now officially announcing that the Combined Cerebrovascular Section meeting will take place in conjunction with the Annual Meeting of SNIS from August 4-7, 2020 at the Marriott Marquis in San Diego, CA. Dr. Scott Simon will represent our Section on the scientific planning committee. Please support Scott in our new meeting endeavor by providing unique ideas for discussion and a thought-provoking presentation of your ideas when called upon to do so. Details can be found on the website at www.cvsection.org.

Financially, the Section is very strong based on investment performance and income from the meetings over the past couple of years. On that front, I am pleased to announce two very positive developments that will also increase our bottom line. The first of these is directly related to the transition of our national meeting. Following the formal agreement with SNIS, we formally asked the larger exhibitors at our national meeting to consider donations to funds directed by the CV Section that are housed within the Neurosurgery Research Education Fund (NREF). At the time of publication of this letter, I am pleased to announce that we have multiyear commitments from Medtronic and Penumbra. We are still awaiting formal agreements from Stryker, Microvention, Cerenovus and Balt but the proposals were received favorably. We hope to announce very soon that these be available to the CV Section membership for cerebrovascular educational or research projects on the condition that the member is also a member of SNIS.

A second positive financial development is our Section involvement in the new CNS Foundation initiative. In an effort to accelerate the growth of the Foundation, a match of up to \$250K was offered to those who contributed. Based on our strong financial standing, we were able to contribute \$250,000 and receive the full matching. Accordingly, \$500K (minus administrative fees) will soon be available to the Section. These funds are available to the CV Section regardless of SNIS affiliation as long as the proposed initiative meets the requirements of the CNS Mission Advancement Fund. That mission is to advance education, research and patient care in the area of vascular diseases of the brain.

As I hope you can see, the leadership of the Section has been busy. Personally, I would like to thank the Executive Committee for the selfless commitment to these initiatives. Responsible stewardship of the resources is our next task. We will seriously entertain proposals that advance our Section mission. While the transitions and funding opportunities mentioned above are important, I would also like to highlight a more important challenge that exists for

cerebrovascular neurosurgery. That challenge is relevance.

Are you more relevant as an endovascular neurosurgeon or cerebrovascular neurosurgeon? Please take a step back from your ‘daily grind’ to appreciate the evolution of cerebrovascular neurosurgery. Our predecessors were daring enough to enter the sacred cranial vault and confront the most immediate of morbidities, stroke. From maximal exposure and vessel sacrifice through isolated repair to microcatheter based reconstruction, neurosurgeons have influenced or executed many of our advancements in cerebrovascular disease. To use a Brexit term, we have also been the ‘backstop’ for many a failed endovascular therapy. Even the best neurointerventional radiologist or neurologist should feel the responsibility to come to the OR to witness the truth. As many of us have experienced the defeat from which we learn, we have also had innumerable victories and discoveries that have motivated the individual and propelled the specialty. During the merger of meetings and sharing ideas, it is crucial that each surgeon that is a part of this Section keep in mind the unique background and training that has shaped us. We can manage the delicate when necessary but also know how to behave when we are the last resort. The cerebrovascular surgeon who is collaborative and open is the most relevant and valuable to what is now the cerebrovascular team.

As I fulfill some of the international obligations of my role as Chair, the opportunity to witness the variability the neurosurgical approach to cerebrovascular disease internationally has been eye opening. On the one hand, neurosurgeons in the European Community have limited access to an endovascular practice such that training “is not worth the time”. This has resulted in a less than uniform neurosurgical involvement in the admission to discharge treatment of patients with cerebrovascular disease. Outside of the European community the cost of endovascular devices continues to limit access to these therapeutic advances. Clip versus coil discussions still occur in what is now the back room to where the surgeons are relegated. While the surgical approaches are alive and well, the discussion of maximizing both techniques for patient benefit is still infrequent. Fortunately, the tides appear to be turning and many of the larger neurosurgical units are beginning to train endovascular neurosurgical partners and create opportunities for them to use their training. Our membership has the opportunity to serve an advisory role as our overseas colleagues encounter many of the challenges we saw 15-20 years ago. Alternatively, I would argue that the larger European, Indian and Japanese units could contribute to our continued surgical experience. An example would be the International Fellowship that exists with the unit Helsinki that can be found on our [International page](#) on our website. I hope to increase this international collaboration that has excellent potential to elevate the level of care that any cerebrovascular patient receives regardless of country or unit.

Again, the state of the Section is strong. As we enter our new relationship with SNIS, please consider a renewed effort to attend the meeting and emphasize the relevance of the cerebrovascular neurosurgeon. Reach out to your mentors and trainees and motivate them to do the same. I also encourage you to consider new directions for education of not only residents and Fellows but patients. The educated patient will participate more effectively in

their own care. Our specialty is enjoying successes that are the direct result education, research and just plain hard work. I am encouraged and enthusiastic ... I hope you are too.

SECRETARY'S MESSAGE

Midway through 2019 the AANS/CNS Joint Section on Cerebrovascular Surgery remains engaged in the issues concerning cerebrovascular surgery with engagement from its members, aiming to providing value to its members.

The annual meeting in collaboration with SNIS in Honolulu, HI was a tremendous success. Not only was the venue a welcome, albeit difficult to reach diversion from the wintertime, but we managed to attract many attendees and exhibitors for an overall great turnout. The day of exchange with colleagues from all around the world in collaboration with WFNS and especially with our colleagues from Japan was also very successful.

The section is open to members representing all cerebrovascular specialists, from interested medical student to emeritus and we seek to offer value all members, ranging from trainees who will benefit from another iteration of the fellows' course during the upcoming meeting, to the CAST training pathway for individuals, to the established practitioners who are looking to specifically visit a center of excellence for a particular disease or procedure and want to find a way to take time out of their own busy practices to do so.

The section created a traveling fellowship for established practitioners who are looking to specifically visit a luminary in the field. This is now entering its third iteration and we hope that this allows our members who apply to find a way to take time out of their own busy practices to learn new skills. The application is administered through NREF and will open again soon. The program continues to be graciously supported by our industry partners from Medtronic and Microvention. At our next meeting we will also hear reports from Drs. Kim Rickert from NY and Gaurav Gupta from NJ who were awarded the last round of awards. We are also again looking forward to awarding the next Ralph Dacey medal for a body of collaborative cerebrovascular research, the next recipient will again be announced at the next meeting.

At the same time, new and exciting opportunities lie ahead. The section continues to represent us as the only group of practitioners who are able to provide comprehensive care for cerebrovascular disorders, bringing expertise ranging from radiosurgery to clipping of aneurysms, and if nothing else we know that detractors pointing out any of these modalities are niches and bound to disappear will likely be proven wrong. At the same time, we need to try and collaborate with the right partners and are currently exploring options to make our annual meeting better and aligned with future developments in the field going forward. It bears remembering that our members bring tremendous value to our patients and also to health systems and stroke centers. Being aware of this value is important when advocating for our stance.

I again want to also emphasize the culture of giving in our section. I encourage all of you to contribute – we have created an easy pathway that allows anyone to give money towards CV section

activities using the charitable donation process through the CNS foundation or NREF foundation - both designated and earmarked for CV section activities. Robust giving will allow us to create the funds for more research and training activities for tomorrow, which will directly influence the future of our profession and specialty.



Clemens M. Schirmer, MD, PhD, FAANS, FACS, FAHA

Secretary, AANS/CNS Cerebrovascular Section

TREASURER'S REPORT

Adam Arthur, MD



I am happy to report that the Joint Cerebrovascular Section is doing well and remains strong financially. With over \$1.2 million in assets under management, the section is committed to finding new ways to use some of those funds to help you and your patients.

With your support, we have over \$600,000 in NREF funds. Cerebrovascular section members and others have donated to the NREF with funds that are now earmarked to support research, education and patient outcomes as well as to the Charles Drake Fund and the Selman Fund. With the help of corporate sponsors Microvention and Medtronic our traveling fellowship

endowment is growing and can continue to support travel for section members to grow their skills and knowledge. The CV section is working on an exciting new initiative in conjunction with the CNS Foundation and we will have more to tell you about this in the near future.

Please consider making a donation to one of the above mentioned funds in support of research and education for the Section. Philanthropy is an important part of the culture of the section and we are grateful for your support.

MEETING UPDATES**CNS ANNUAL MEETING (October 19-23, 2019, San Francisco, CA)***Josh Osbun*

The CV content for the 2019 CNS Meeting has been finalized and promises to deliver high quality presentations on current research combined with topics relevant to every day clinical practice, education and training. The CNS meeting will offer courses on intracranial stenting and bypass techniques, a dinner seminar on multi-modality treatment of brain AVMs, and interactive sessions on the treatment of cerebral aneurysms and AVMs/DAVFs. Morning sunrise sessions and luncheon seminars will highlight topics such as guidelines for subarachnoid hemorrhage and stroke, the management of ICH, cerebral vasospasm, venous stenting for pseudotumor cerebri, transradial approaches to cerebral angiography and cerebral intervention, device development and artificial intelligence in cerebrovascular neurosurgery. Our main afternoon sessions will feature panel discussions on the implementation and management of community stroke networks and thrombectomy centers, building a multidisciplinary cerebrovascular team in a hospital-based practice, and the future training of cerebrovascular physicians.



INTERNATIONAL STROKE CONFERENCE (February 19-21, 2020, Los Angeles, CA)

Judy Huang, Louis Kim, Andrew Ducruet

There has been a concerted effort to update the invited sessions to avoid perennial repetition of topics. In the SAH and Neurocritical Care section the contributed session is “Controversies in Airway and Mechanical Ventilation in Acute Stroke.”

As a part of a newly minted Neurointerventional Track at ISC, CV section representatives established a new transradial session entitled, “Transradial approaches for stroke and cerebrovascular disease: The end of femoral complications?” This exciting, new session will be led by section members Eric Peterson and Michael Levitt.

AANS ANNUAL MEETING (April 25-29, 2020 Boston)

Josh Osbun

The AANS meeting will feature a presentation by CV Section Past President Dr. J. Mocco, and we are excited to announce Dr. Hunt Batjer as the Yasargil Lecturer and Dr. Mika Niemela as the Donaghy Lecture. Along with abstract presentations on the latest research in cerebrovascular disease, there will be a point/counterpoint focused on the multimodality management of MCA aneurysms.

**CV SECTION ANNUAL MEETING (August 4-7, 2020, San Diego, CA)**

Scott Simon

The Joint CV Section annual meeting will be held in concert with with SNIS August 4-7 in San Diego. We will keep members updated on abstract submission, courses, and meeting content as details are finalized.

TECHNOLOGY FORUM**Middle Meningeal Artery Embolization for Chronic Subdural Hematoma****Ndi Geh, MD and W. Chris Fox, MD****University of Florida**

Chronic subdural hematoma [cSDH] is a pervasive problem in neurosurgery and various surgical approaches - burr holes, burr holes with subdural and/or subgaleal drains, endoscopic approaches, craniotomy, and craniotomy with membranectomy - have been used for the treatment of these.^{1,2,3} In the last decade, middle meningeal artery (MMA) embolization has emerged as a viable alternative treatment for new or recurrent cSDH or as an adjunct to burrholes.^{1,2,3,4,5}

Recurrence rates of cSDH following surgical evacuation range from 5-33%,^{1,3} likely indicating a more complex pathophysiology than traditionally understood. Recent theories describe an inflammatory response that occurs in the dura resulting in dural border cell proliferation and granulation tissue formation with subsequent macrophage deposition. The end result is the formation of inflammatory membranes accompanied by neovascularization. Subsequent rebleeding from this immature neovasculature results in the accumulation of the cSDH.^{1,3} The middle meningeal artery is thought to be the predominant supply of this subdural membrane. Takizawa *et al.* retrospectively observed statistically significant enlargement of the middle meningeal artery on MR angiography (MRA) in patients with cSDH compared to age and gender-matched controls. Furthermore, in subjects with MRAs obtained prior to development of cSDH, post-cSDH MRAs demonstrated interval enlargement of the MMA.⁴ Nakagawa *et al.* further describe a means of characterizing the extent of cSDH membrane enhancement using superselective MMA angiography-DynaCT.³ These were classified in 3 stages: Stage 1 – no remarkable enhancement, Stage 2 – enhanced outer membrane, Stage 3 – enhanced inner and outer membranes. An advanced stage of enhancement correlated with a shorter time to recurrence from initial burr hole treatment.

In their systematic review and case series evaluating the safety and effectiveness of MMA of embolization for cSDH, Waqas *et al.*¹ included 2 prospective nonrandomized studies, 8 case series, and 5 case reports involving 193 cases in 182 patients (52% female) who presented with new or recurrent cSDH. In 49% of cases MMA embolization was used as the primary therapy; in 46% it was used for recurrence and in 5% as an adjunct after surgical evacuation. There were no procedure related complications or mortalities. The overall recurrence rate was 3.6% and 1.9% in cases where MMA embolization was used as primary therapy. Of note, all cases of recurrence underwent surgical evacuation. Perioperative use of anticoagulant or antiplatelet therapy did not increase the risk of recurrence.

In the largest U.S. single center series of 60 cases in 49 patients, Link *et al.*⁶ report upfront

treatment for new cSDH in 42 patients, recurrence in 8, and prophylaxis to prevent recurrence after surgery in 10. There were 3 mortalities (none related to procedure) and no complications. Of the 50 nonprophylactic cases, there were 4 cases of recurrence requiring surgical evacuation. Nearly 70% of patients had resolution or reduction in size of SDH >50%. Overall, 41 were stable or decreased in size and able to avoid surgery.

MMA embolization, based on the available literature, is a promising treatment option for cSDH, not only as primary therapy but also as an adjunct to surgery in appropriately selected patients. Given the delay in time to resolution of cSDH after MMA embolization, it is likely best suited for patients who do not require urgent/emergent brain decompression. Advantages of the procedure include safety, the ability to maintain anticoagulant or antiplatelet therapy peri-procedurally, and potentially lower rate of recurrence compared to established treatment methods. Notably, there are no large-scale, randomized clinical trials on the subject. These studies, when available, will help clarify patient selection to determine who may best benefit from MMA embolization for cSDH, whether new or recurrent.

References

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for chronic subdural hematoma: a series of 60 cases. *Neurosurgery* 2018 Nov 9. Doi: 10.1093/neuros/nyy521. [Epub ahead of print]. PMID: 30418606.

MEMBERSHIP UPDATE

Stavropoula Tjoumakaris, MD

The Join Cerebrovascular Section continues to enjoy increasing membership all across the member classes. The growth in membership for active and international members has been the highest over the past 5 years; 10% and 20% increase in memberships respectively. Also, the growing number of residents that have joined our society has now reached nearly 2,000 members!

Please consider prompt payment of present and past dues, so that our society continues to grow and fund our annual meeting, resident and fellow education. Also, please encourage participation of medical students, residents and fellows, since there are no membership fees in those categories.

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

JOE NIEKRO FOUNDATION

<http://www.joeniekrofoundation.com/research-grants/joe-niekro-research-grant/>

JOINT AANS/CNS CV SECTION

<http://www.cvsection.org/research/awards-and-grants-217>

BE BRAVE FOR LIFE (BENIGN BRAIN TUMORS OR CEREBROVASCULAR DISEASE)

<https://bebrave.life/micro-grants/>

THE BEE FOUNDATION

<http://www.thebeefoundation.org/brain-aneurysm-research-grant/>

Calendar**October 19-23, 2019**

CNS Annual Meeting
San Francisco, CA

February 19-21, 2020

International Stroke Conference
Los Angeles, CA

April 25-29, 2020

AANS Annual Meeting
Boston, MA

August 4-7, 2020

SNIS Annual Meeting
San Diego, CA
(CV Section Annual Meeting plans being finalized as partner meeting with SNIS)