SVIN Quarterly Newsletter • Volume 4, Number 1 • May/June 2011

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Society News

Please mark your calendars! The **4th SVIN Annual Meeting** will be held **October 21 to 23, 2011 at the Westin Diplomat in Fort Lauderdale, Florida.** This year's program is chaired by Dr. Raul Nogueira and promises to deliver an exciting scientific and clinical program. Abstract submissions will be open June 1st, 2011. ***The deadline for abstract submission is August 30, 2011.***

At the SVIN board of directors meeting in Los Angeles, February 2011, several developments ensued.

1) New officers were elected to the SVIN council in February 2011. We would like to extend congratulations to:

Dileep Yavagal, president
Tudor Jovin, vice president
Rishi Gupta, Treasurer
Andrew Xavier, Secretary

2) Dr. Raul Nogueira has been elected to serve on the AHA Stroke Council. Dr. Nogueira will represent SVIN and be the liaison to the AHA Stroke Council meetings. Congratulations Raul, and thank you for representing SVIN.

3) The board of directors voted to add four new members to the board of directors every three years to expand the society and bring new people to the SVIN leadership, vision, and workforce. The board of directors would have no more than 20 board members, of which 20% of the board-elect are to be non-interventional neurologists.

Congratulations and a warm welcome are extended to new board members or 2011:

Vascular Neurologists:
Pooja Khatri, Jeffrey Saver

Interventional Neurologists:
Joey English, Nils Mueller, Robin Novakovic

4) The NINDS issued a clinical alert to stop the SAMMPRIS study due to a higher complication rate seen in the interventional arm. Further details with commentary by Dr. Zaidat can be found on page 6.

PRESIDENT'S MESSAGE

Dear SVIN Members,

As we begin the term of the third team executive officers of SVIN, I would like to thank all of you for giving me the extraordinary privilege to serve as your President for the next two years. I take this opportunity you have given me with tremendous excitement as well as a humble acknowledgment of the trust that you have placed in me to lead our fledgling society.

Accomplishments and New Beginnings

SVIN has just completed an unbelievably productive and eventful three years under the exemplary leadership of Dr. Osama (Sam) Zaidat. I congratulate Sam on his numerous noteworthy accomplishments for SVIN during his term and thank him for his unending commitment to our society. A list of Sam's achievements for SVIN would be too long to enumerate, but one of his key successes has been to lead SVIN to financial security for the next few years. With his vision and leadership, SVIN, a 503(C) non-profit organization, has obtained financial support that allows our day-to-day functioning and sustains our growth. While, we must continue to strengthen our financial foundation, we can plan for our present and future finances without immediate anxieties due to Sam and his team's work over the last three years,.

I also want to heartily congratulate my new SVIN co-officers, including our President-Elect, Tudor Jovin, Secretary, Rishi Gupta, and Treasurer, Andrew Xavier, on their election. They are not only amazingly accomplished individuals, but also form a team with great synergy. Sam remains on the executive committee as Past-President where we can draw on his tremendous experience and wise counsel.

I feel extremely fortunate to work with this fantastic team in leading SVIN. You will also be happy to know that the SVIN board made the bold decision to expand its membership to the fully allowed capacity of 20 members. This move affirms SVIN's commitment to increasing representation on the Board for Vascular Neurologists as well as the rapidly growing Interventional Neurology membership. The addition of new board members will bring increased leadership capabilities to SVIN as we pursue a growing number of initiatives.
In addition, I am delighted to welcome our new editor of the "The Core": Thanh Nguyen! She brings unparalleled enthusiasm, tremendous writing skills and wisdom beyond her years to our newsletter. I am sure that you will eagerly anticipate the newsletters to come under her leadership and she welcomes your contributions.

SVIN Marches Forward

A casual observer may surmise that SVIN exists to safeguard the interests of Interventional and Vascular Neurologists. However, our reasons for existence go far beyond collective self-interest. As stated in our mission, one of the critical functions of SVIN is to bring together individuals with similar vision of how to benefit the neurovascular patient. SVIN allows us to focus our collective expertise, energy, and commitment on advancing the field of neuro-endovascular therapy. This consolidation of our energies in SVIN has already led to promising accomplishments and holds unparalleled

potential in advancing clinical practice, delivery of care and research in this new field.

Over the next two years, my goal is to provide the leadership that will allow SVIN to become a leader in the field of Ischemic Stroke Intervention. Together, we can claim the preeminent position in this rapidly advancing field by establishing the highest standards of clinical practice, by supporting the seeds of cutting edge, innovative research, and by continually educating ourselves and other practitioners so that we achieve better patient outcomes.

SVIN has already had an impact on the clinical practice of endovascular ischemic stroke therapy. Most of us are leaders in our individual communities in the interventional treatment of acute ischemic stroke. SVIN has facilitated the pooling of our shared clinical expertise to set the highest standards for delivery of such care at the national level. Last year, the American Stroke Association-American Heart Association (ASA-AHA) invited us to endorse the landmark guidelines for Comprehensive Stroke Center (CSC) metrics (1) recognizing SVIN's important stake in such a certification. On May 11th, 2011, The Joint Commission invited SVIN to send experts to the Technical Advisory Panel (TAP) that is developing an advanced certification program for comprehensive stroke centers, again recognizing the alliance of our mission to the formulation of CSC certification guidelines. One of the newest goals of SVIN that excites me greatly is our goal to develop standards for Neuroangiography suites performing intra-arterial thrombolysis for acute stroke. I invite you to contribute your energies to this critical initiative by contacting the task force leader for this initiative, Dr. Vallabh Janardhan (drvallabh@yahoo.com). Our goal is to publish much needed standards for angiography suites to achieve the best patient outcomes. I am determined to devote SVIN resources to developing other new practice guidelines and encourage each of you to contact me personally with your ideas to consolidate our leadership position in ischemic stroke interventional practice.

SVIN's Commitment to Neuroendovascular Research

In collaboration with St. Louis University, St. Louis, MO, SVIN has created a well-organized, internally funded, internet-based research consortium: SVIN Research Consortium (SVIN-RC). The goal of the SVIN-RC is to promote the strongest possible collaboration between SVIN members needed to conquer new scientific frontiers in this young field. I would like to congratulate Dr. Randy Edgell, who leads the SVIN-RC, on successfully completing the first SVIN-RC study: the largest multicenter case series of vertebral artery stenting. Late last year, the SVIN board voted to allocate $ 30,000.00 annually to fund an SVIN competitive seed-grant program (SVIN CSGP) for SVIN members that allows for funding of two research projects. SVIN-RC and SVIN-C SGP are poised to allow SVIN investigators to pursue initial critical research that can lead to external funding. While retrospective studies are currently the easiest to get started, as the SVIN-RC grows, our goal is to work towards prospective studies in SVIN-RC. I am fully committed to supporting the SVIN-RC in accomplishing a prospective registry study within

SVIN has already had an impact on the clinical practice of endovascular ischemic stroke therapy.

the next two years and publication of at least two studies supported by SVIN-RC over the next two years.

Recently, a new initiative to create a SVIN clinical trial network under the umbrella of SVIN-RC has been proposed. The SVIN-RC will be reaching out to invite your site to participate in this important network. I am sure you will agree that clinical research by SVIN-RC has tremendous potential for high impact on our field due to its multicenter nature, and the large number and results of multiple contributors. Such an impact could be expected due to the importance of similar consortium-based research, most notably by oncologic societies in North America. I strongly urge you to participate in SVIN-RC research in addition to your individual research initiatives.

SVIN Educates with Aplomb

SVIN has completed three fabulously successful annual meetings since 2007 and a much-hailed first SVIN Practicum in 2010. Our meeting is now an eagerly awaited fixture on the industry and practitioner meeting calendar. This success is a testament to the devotion and commitment of SVIN members and leaders to disseminating the best knowledge in neuroendovascular therapy. Our upcoming Fourth SVIN Annual Meeting, chaired by Raul Nogueira, promises to top the successes of previous meetings.. I look forward to seeing all of you at the meeting at the Westin in Hollywood, Florida on October 21st-23rd.

All of us share the privilege of being practitioners of the amazing craft of Interventional Neurology. In return for this privilege, we are committed to giving back to the field with all our energies. As comrades in SVIN, we will advance our craft for the benefit of our patients. Please join me as SVIN marches ahead!

Sincerely,

Dileep Yavagal, MD
SVIN President

Editor's Corner

EDITOR'S CORNER

With the passing of the baton, it is a great privilege and honour to serve as the next SVIN Newsletter Editors. This task is most humbling, as Dr. Janjua has done an outstanding job as the previous editor. She conceptualized the idea of the newsletter, gave its title "The Core," and led a team of news writers to produce a quarterly newsletter with a wide breadth of clinical, scientific, and industry content: society news, science and industry news, interesting cases, and interviews with interventional neurologists from around the world. Dr. Janjua's creativity, hard work, energy, and leadership as the initiating SVIN newsletter editor over these past three years are unsurpassed. On behalf of SVIN, we are extremely grateful to Dr. Janjua for her diligent efforts with "The Core" and hope we can continue to recruit her and her team for their ideas and talent on developing future SVIN newsletters.

I am very grateful to continue this newsletter under the leadership of SVIN president Dr. Dileep Yavagal, and with Dr. Syed Hussain, who has kindly volunteered to serve as associate editor. We hope to continue to recruit another associate editor and other SVIN members or interested readers at large to maintain an informative newsletter. This will require a coordinated team effort and we are looking forward to working with all of you.

In this June 2011 edition of the newsletter, we review breaking news from the SAMMPRIS trial with expert commentary from Dr. Osama Zaidat and how this trial will impact future patients with intracranial atherosclerotic disease (ICAD). Highlights from the International Stroke conference are outlined and the importance of a uniform board exam for the neurointerventional specialty is reviewed.

Updates from the AAN Neuroimaging summit, the Neurovascular Coaltion are also provided. One of the new additions we hope to regularly provide to the newsletter is a section on review of a new device, which, in this edition, will be inaugurated by the new Penumbra coil.

In the next editions of the SVIN Newsletter, we will also plan to add a new section, **SVIN Members in the News.** This section will include SVIN members who have been featured in the news, awarded with new research grants or interim publications. We welcome you to contribute to this section to help us highlight your achievements.

If you have any ideas or interest in writing articles, editorials, or commentary for future SVIN newsletter editions, this would be most welcome. Thank you for the opportunity to serve as your SVIN newsletter editors.

Sincerely,

Thanh Nguyen
SVIN Newsletter Editor

Syed Hussain
SVIN Newsletter Associate Editor

CLINICAL TRIAL UPDATES

NINDS ISSUES ALERT TO STOP SAMMPRIS STUDY

On April 11, 2011, the National Institue of Neurological Disorders and Stroke (NINDS) issued a clinical alert to stop enrollment in the Stenting and Aggressive Medical Management for Preventing Recurrent stroke in Intracranial Stenosis (SAMMPRIS) trial. This was the first prospective randomized trial to study patients with symptomatic intracranial atherosclerotic disease (ICAD) > 70% treated with intracranial angioplasty combined with the Wingspan stent and aggressive medical therapy, compared to aggressive medical therapy alone. Neurointerventionalists were carefully selected to participate in this study, with the obligation to submit case logs of previously stented patients prior to being considered as a trial center. The device used in this study consisted of the Gateway balloon in conjunction with the Wingspan self expanding stent (Stryker Neurovascular, Fremont, CA).

In this study, patients were enrolled within 30 days of a TIA or non-disabling stroke attributable to ICAD. Aggressive medical management was issued in both arms, which included aspirin 325 mg daily indefinitely (unless other contraindications arose) and clopidogrel 75 mg daily for 90 days. Intensive management of vascular risk factors was also pursued with the aid of a company that would call the enrolled patient periodically to issue reminders to take their medications, and adhere to lifestyle changes. Blood pressure was targeted < 140 mm Hg systolic or < 130 mm Hg systolic if the patient was diabetic.

The study began recruiting patients in November 2008 and was stopped in early April following the Data Safety Monitoring Board (DSMB) review of 451 (59%) of the planned 764 patients. Fourteen (14) % of patients treated with angioplasty combined with stenting experienced a stroke or died within the first 30 days after enrollment compared with 5.8% of patients treated with medical therapy alone. The 30-day rate of stroke or death in the intensive medical treatment arm was lower than the estimated rate of 10% based on historical controls, most of whom received standard medical care. The 30-day rate of stroke in the stented patients was higher than the estimated rate of 5%-10% based on registry data. There were 5 stroke-related deaths within 30 days after enrollment, all in the stenting arm. There was one non stroke-related death in the medical arm within 30 days after enrollment. After 30 days, the rate of stroke in the territory of the stenotic artery were similar in the two groups, but fewer than half the patients were followed for one year.

We conducted an interview with Dr. Osama Zaidat, one of the lead recruiters participating in the SAMMPRIS trial to provide comment.

1. **What do you think the impact of the SAMMPRIS trial will be on your practice and what do you think its impact will be (or should be) nationwide?**
   The SAMMPRIS trial will impact the number of patients offered interventional therapy in my practice and nationwide. Depending on the local IRB and hospitals it may still allow HUD indication for >50% stenosis refractory to medical therapy.

CLINICAL TRIAL UPDATES (continued)

2. **Are trials for ICAD dead? What should the next trial be, if any?**
I don't think so, it is a technology and the experience with the Wallstent Carotid Trial in the mid 90s gives an example how adapting technology very early may lead to such unfavorable outcome of stenting. The next trial should include a planning symposium dedicated to high volume stent users for brain storming. A discussion on means needed to be considered in future trial design to lower the early risk of intervention should be addressed.

3. **Are there patients whom you think can still benefit from ICAD endovascular intervention?**
Yes, patients with symptomatic ICAD refractory to medical therapy, have a high rate of recurrent stroke in the first 30 days as demonstrated by the Albers data in Neurology. In addition, patients with CT perfusion or MR perfusion showing hypoperfused territory could benefit. Patients at low technical risk, such as petrous to cavernous, M1, V4 lesions could also be considered.

4. **What is the role for balloon mounted stents for ICAD? Why do we think this design might be superior (if applicable) to self expanding stents?**
I am not sure if it is superior, there have been no head-to-head study with self expanding stents. The advantage of balloon mounted stents, however, is that there are a less number of steps. Disadvantages are that you may have to optimally size the balloon and occasionally inflate to nominal pressure to be able to remove the balloon after deploying the stent.

5. **Any other thoughts?**
In my mind, there is still question of a learning curve about lesion selection, stent selection and procedure selection, or should we only do balloon angioplasty in some cases. One idea is that endovascular therapy with the option for interventionalists to choose what is safe and optimal and to have back up when he or she believes the lesion is too risky to treat.

THANK YOU FOR YOUR SUPPORT . . .

Thank you to the following companies for their support of the SVIN Fall Practicum held October 29-30, 2010 at the Georgia Tech Global Learning Center, Atlanta, GA

Boston Scientific
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For more information on upcoming educational events, please visit www.svin.org

SELECTED ABSTRACTS FROM THE INTERNATIONAL STROKE CONFERENCE

FEBRUARY 9 - 11, 2011
LOS ANGELES, CA

MOHAMED TELEB, MD

The International Stroke Conference was in sunny Los Angeles this year. The four day event started with a Pre-conference symposium on "Advances in Emergency Treatment and Prevention" along with Nursing Symposium. Dr Hemphill emphasized the quick treatment of intracerebral hemorrhage & reversal of coagulopathy. Dr Lutsep gave an update on current stroke treatment & guidlines. She reiterated the longer IV tPA time window & went over intra-arterial treatments and trials including the SWIFT trial (SOLITAIRE vs MERCI Device). She also emphasized that goal is treatment as soon as patient arrives & not waiting for time window. She went over SITS-STIR showing the use of IV tPA has increased in not only the 3 to 4.5 hrs but also the less then 3 hour time window with no effect on admission to treatment time. Finally, Dr Schwamm showed the benefit of regionalization of stroke care and telestroke.

On Wednesday the New Investigator Award in Stroke went to MingMing Ning from the Massachusetts General Hospital for her work "How the Heart Whispers to the Brain: Serotonin as Neurovascular Mediator in Patent Foramen Ovale Related Stroke." She highlighted that serotonin itself plays a role in making a patient hypercoagable & inflammatory markers along with serotonin level decreases after closing of PFOs.

Thursday was highlighted with late-breaking science oral abstracts of which two are below.

Interventional Acute Stroke Therapy with the Merci Retriever Embolectomy Device: Results from 1000 patients in a Open Label Prospective Multicenter Registry Marilyn M. Rymer, MD, St. Luke's, Kansas City, MO

Rymer et al. looked at the prospectively collected registry of MERCI device use in acute ischemic stroke. Results evaluated 90 day modified Rankin (≤2 defined as good outcome) and recanalization score using TICI classification with 2a, 2b, and 3 considered as success. A total of 1000 patients were registered. Median patient age and NIHSS were 68 and 17, respectively and 52% were male (similar to MERCI and MultiMERCI). The frequencies of key co-morbidities were: hypertension 74%, diabetes mellitus 23%, atrial fibrillation 40%, coronary disease 30%, prior stroke history 15%. Median time from symptom onset to treatment onset was 5 hours. IV lytic was used in 31%, and IA lytic was used in 47%. Treated arterial occlusions were M1 MCA (53%), ICA (32%), M2 (8%), and vertebrobasilar (8%). Tracheal intubation occurred in 63% of cases. Successful recanalization was achieved in 80% of cases. Good outcomes were seen in 32%, and 33% died by day 90. Overall, real-world use of the Merci Retriever mechanical embolectomy devices in acute ischemic stroke patients yielded similar results to those obtained in previous prospective studies.

COSS: Results of the Carotid Occlusion Surgery Study William J. Powers, MD, University of North Carolina School of Medicine, Chapel Hill, NC

MEETING HIGHLIGHTS (continued)

Powers reported the preliminary results of the long awaited COSS trial. The purpose of the trial was to evaluate does adding extracranial-intracranial bypass surgery (EC-IC) to medical therapy reduce the risk of ipsilateral stroke in patients with a recent stroke and complete carotid occlusion? This was a randomized, controlled, prospective, blinded end-point, trial. 139 patients were followed for 2 years and randomized to medical therapy only (98) or to additional EC-IC bypass surgery(97). Results revealed 2-year ipsilateral stroke rate: 21% (surgical group); 23% (non-surgical group) ; p=0.7279. Surgical graft patency 98% at 30 days; 96% at 2 years. Improvement in mean ipsilateral/ contralateral oxygen extraction fraction (OEF) ratio improved from 1.258 to 1.109 for surgery patients. Conclusion was because of improved non-surgical recurrence, there was no overall EC-IC bypass surgical benefit for 2-year stroke recurrence rate.

Friday's plenary session included in the results of the CONSCIOUS-2, The Scandinavian Candesartan Acute Stroke Trial (SCAST), and Locomotor Experience Applied Post-stroke (LEAPS) studies. There was also an interesting look at the use of intracranial angioplasty and/or stent placement in general practice. Finally the session and meeting ended with the David G Sherman Lecture given by Dr Gregory Albers from Stanford University titled "Misperceptions in Brain Ischemia: Technology, Terminology, Tissue and Time". He emphasized that stroke treatment of the future should be based on salvageable tissue, not time windows. CONSCIOUS-2 revealed no statistically significant difference in mortality. SCAST showed that acute use of antihypertensives in hospital had a negative effect on stroke outcomes. LEAPS did not establish superiority of locomotor training that included BWS on a treadmill and over ground training at either of 2 intervals after stroke versus home-based physical therapy that emphasized strength and balance and general encouragement to walk. Below are selected abstracts from Friday's session.

Effect of Clazosentan on Clinical Outcome After Aneurysmal Subarachnoid Hemorrhage and Surgical Clipping: Results of the CONSCIOUS-2 Study R. Loch Macdonald, MD, PhD, St. Michaels Hospital University, Toronto, ON, Canada.

Dr. Ralph Sacco, president of the American Heart Association, delivers the inaugural speech to the 2011 International Stroke Conference

Macdonald et al evaluated the use of clazosentan, an endothelin receptor antogonist, vs placebo in reducing angiographic vasospasm (VSP) morbidity and all cause mortality after aneurysmal subarachnoid hemorrhage (aSAH). This was a randomized, double-blind, placebo-

controlled trial. Patients were 18-75 years old with SAH due to ruptured saccular aneurysm secured by surgical clipping, with diffuse clot and WFNS grades I-IV. A total of 1147 patients (clazosentan n=764 vs- placebo n=383) were enrolled. Patients were randomized 2:1 to clazosentan (5mg/hr) or placebo for up to 2 weeks. Primary composite endpoint assessed at 6 weeks were: VSP related new brain infarcts; all-cause mortality; delayed ischemic neurological deficits due to VSP, and rescue therapy in confirmed angiographic VSP within the 6 weeks of the SAH. Primary endpoint occurred in 21% of clazosentan patients and in 25% of placebo patients. (RRR 17%, 95% CI, -4 to 33%; p=0.10). The study concluded that there was a non-significant 17% RR in mortality/ VSP related mortality.

Intracranial Angioplasty and/or Stent Placement in General Practice: An Analysis of 370,061 Patient Admissions with Ischemic StrokeAdnan I. Qureshi presented for Dr Mohammad, MD, Minnesota Stroke Initiative, Minneapolis, MN

Mohammad et al looked at the use of angioplasty and or stent placement in nationwide inpatient survey database to determine rate of use in general practice from 2005 to 2007. There were 370,061 admissions (mean age 71 years) for ischemic stroke or transient ischemic attack. Of these, 158 (0.042%, mean age 64 years) and 169 (0.045%, mean age 62 years) had primary angioplasty or a combination of angioplasty and stent placement; 12 patients underwent stent placement alone. Most procedures were performed at urban teaching hospitals (80% and 83% of angioplasty and angioplasty-stent procedures, respectively). Other primary angioplasty vs angioplasty-stent data: in-hospital mortality (16% vs 4%); and mean hospitalization charges ($89,175 vs $61,050). In-hospital mortality and charges was prominently higher than those incurred for patients with ischemic stroke who did not undergo either of the procedures (3.3%, $24,303). Their conclusion was both primary angioplasty and angioplasty-stent are being performed for ischemic stroke in urban teaching hospitals. Higher hospitalization charges highlight the need for cost-effective utilization of these procedures.

The endovascular contribution continued to be large with multiple sessions on aneurysm treatment techniques, stenting vs endarterectomy continued to be topic of debate, intracranial atherosclerotic disease (medical vs endovascular treatment), and acute stroke treatment. There was even a session on endovascular treatment of posterior circulation stroke specifically.

A full list of abstracts, summary slides, interviews, ongoing clinical trails, and more can be found at

sciencenews.myamericanheart.org/strokeconference.

NEUROVASCULAR COALTION UPDATE

NVC advocates that any intervention for venous insufficiency for multiple sclerosis be offered in the context of a randomized trial

In February 2011, representative members of the Neurovascular Coalition met. Dr. Alex Abou Chebl represented SVIN. At this meeting, there was a vision to increase the political activities of the Neurovascular Coalition, in the setting of the new health care changes under the Obama plan. Angiography reimbursement could be affected, whereby codes may be bundled together with the CMS changes. Dr. Abou Chebl suggested to focus their efforts on areas where there is not strong consensus on good outcomes.

The topic of venous stenosis and strictures related to multiple sclerosis was discussed. Dr. Abou Chebl and other members advocated the intervention only be offered as part of a randomized trial as this is the best level of evidence to learn whether any intervention is beneficial or harmful to patients with multiple sclerosis. An editorial to voice this position will be written for the Neurology journal shortly.

The Neurovascular Coalition is a coalition of societies whose mission is to ensure excellence in medical education, training, and research related to vascular conditions affecting the brain and promote high quality patient care. The Coalition is composed of the following societies: American Academy of Neurology, AAN/CNS cerebrovascular section, American Society of Neuroradiology, Society of Interventional Radiology, Society of Neurointerventional Surgery, Society of Vascular and Interventional Neurology.

2011 NEUROIMAGING & NEUROINTERVENTION SUMMIT MEETING

January 20, 2011, Fort Myers, Florida - Representatives of the American Academy of Neurology (AAN), American Society of Neuroimaging (ASN) and Society of Vascular and Interventional Neurology (SVIN) attended the first Neuroimaging and Neurointervention Summit Meeting in Fort Myers Florida, on January 20, 2011. This meeting was forged to explore areas in need of advocacy from the ASN and SVIN to the AAN. Top agenda items included implementation of a section for interventional neurology in the Neurology Journal, support for a supplement with various subspecialty topics in the Neurology Journal, and earlier introduction of interventional neurology into the neurology residents' training. The ASN advocated for more neuroimaging exposure to the neurology residents during their training and increasing the number and accessibility of neuroimaging fellowships to interested neurology resident candidates.

Introduction of a SVIN education task force was explored to expose neurology residents to cerebral angiography and its practice at an earlier stage, as a means to inseminate interest. Providing procedure time to vascular neurology fellows during their fellowship as part of their education was also suggested and introduced.

SVIN 4th ANNUAL MEETING
Octobr 22-23, 2011

Westin Diplomat
Hollywood, FL

Registration and abstract submission opens July 1, 2011

SVIN Attendees: Osama Zaidat, Dileep Yavagal, Tudor Jovin, Alex Abou-Chebl, Randy Edgell, Raul Nogueira, Nils Mueller, Joey English, Syed Hussain, Jane Svincki, Thanh Nguyen

ENDOVASCULAR SURGICAL NEURORADIOLOGY TRAINING: FROM ACGME PATHWAY TO BOARD EXAMS

YOUSEF HANNAWI MD,
SOPHIA JANJUA MD,
RAMY EL KHOURY, MD

Endovascular Surgical Neuroradiology is an evolving clinical subspecialty for the diagnosis and treatment of neurovascular diseases using x-ray fluoroscopy and angiography. Devices designed for the treatment of intracranial cerebral aneurysms, cerebral arteriovenous malformations, head and neck tumors, acute stroke, and intracranial stenosis are gaining Food and Drug Administration approval at varying levels, each aiming for specific approved indications for therapies in the brain, head, neck, and spinal cord. Neuro-endovascular therapy is rapidly evolving, and is currently part of ongoing multiple clinical trials. This high demand specialty is requiring more specialists to work in. Currently, different training background physicians including neurologists, neuroradiologists and neurosurgeons are being trained in this subspecialty in different ACGME or non ACGME accredited institutions. Until now, there is no formal board exam for these trainees.

In 1998, the World Federation of Therapeutic and Interventional Neuroradiology published guidelines about fellowship training in interventional neuroradiology. In 2006 ACGME announced revised criteria for fellowship training in ESN, which included residents with neurological residency training. However, no formal board is available. Since many physicians with different training backgrounds provide patient care in this area, writing a board exam gathering these physicians under one umbrella can be challenging. There are many benefits of writing a board exam. First of all, this will establish this field as a new subspecialty which is important in order to meet the rapid development of it. It will also attract more excited physicians into this young field as well as it will help to find a solid knowledge background for practicing physicians. On the other hand, it will be a helpful tool for hospitals to choose appropriate and credentialed candidates for practice.

In the last two decades, neuroscience has evolved rapidly on different levels including new discoveries in the pathogenesis of neurological diseases, diagnostic tools and more importantly treatment options. This development included the introduction of TPA into acute stroke management, the benefits of hypothermia in the management of cardiac arrest survivors, and the new techniques in management of aneurysmal subarachnoid hemorrhage, intracranial hemorrhage as well as the development of neurosurgical techniques. This resulted in the birth of neurocritical care and vascular neurology as two new subspecialties of neurology. At the same time, many neurologists have become involved in endovascular surgical neuroradiology as a natural response to this expansion and due to the close contact with this field.

Historically, the first cerebral angiogram was performed by a neurologist, Dr. Egas Moniz, in 1927. The field was much later developed by radiologists and neurosurgeons' participation. Currently this field is run mainly by neuroradiologists, neurosurgeons and to a lesser degree by neurologists. These three different specialties have different training backgrounds. Neurosurgical training is a residency based training with further subspecialization at the end of it. Neurosurgeons have a board exam covering dif-

ferent subspecialties as spine surgery, vascular neurosurgery, functional neurosurgery, etc.. Interventional neuroradiology does not have a distinct board exam.

The fact that the field is being practiced by different physicians of different training backgrounds makes it hard to develop a board exam. On the other hand, it amplifies the importance of implementing a board exam to integrate the converging specialties and standardize practice based on evidence based medicine and the art of neurointerventional radiology. Medical knowledge and an evidence based approach are important elements of neurological training. This may help to develop a universal board exam for all of these specialties.

Here we list the ACGME criteria for surgical endovascular neuroradiology fellowship with a neurology based training:

1) Completion of an ACGME-accredited residency in neurology

2) Completion of an ACGME-accredited 1-year vascular/stroke fellowship that includes at least three months of neurocritical care training or a neurocritical care fellowship

3) Completion of 3 months of clinical experience within an ACGME-accredited neurologic surgery program

4) Completion of a preliminary year within neuroradiology during which the program will provide education and clinical experience to ensure that the fellow will receive the following training

a. A course in basic radiographic skills, including radiation physics; radiation protection; and the pharmacology of radiographic contrast materials acceptable to the program director where the neuroradiology training will occur

b. Performance and interpretation of a minimum of 50 diagnostic neuroangiograms under the supervision of a qualified physician (board-certified neuroradiologist, interventional neuroradiologist, or endovascular neurosurgeon with appropriate training)

c. Instruction in the use of needles, catheters, guide wires, and angiographic devices and materials

d. Recognition and management of complications of angiographic procedures

e. Understanding the fundamental noninvasive neurovascular imaging studies pertinent to the practice of endovascular surgery including CT/CTA, MR/MRA, and sonography of neurovascular disease.

Finally, this exciting multidisciplinary field is expanding rapidly and will need a joint effort among these different specialties to set an uniform, complete training among all graduates with certifying board exam.

PENUMBRA 400 SYSTEM

SYED HUSSAIN, MD

The Penumbra Coil system and Penumbra coil 400™ is the latest device from Penumbra Inc (Alameda, CA) and represents their first endeavor into Neuroendovascular therapeutics for cerebral aneurysms. It received an FDA clearance of equivalence and permission to be marketed in the USA on January 26th 2011 and was showcased at the Exhibition Hall at the 2011 International Stroke Conference in Los Angeles, California in February.

The Penumbra coil system distinguishes itself from the various other coils on the market by combining Penumbra's prior innovative experience with intracranial microcatheter access and a new design of bare platinum coil. The coil itself is a bare platinum/tungsten & Nitinol design with a 0.020" diameter making it the widest coil currently available on the market. It is connected to a flexible Nitinol coil PTFE reinforced pusher that uses a mechanical handheld detachment system.

The coil comes in four shapes Complex Standard, Complex Soft, J Soft and Extra soft to be used in different aneurysm configurations and coiling stages.

The coil is deployed through the Penumbra PX400 microcatheter system. The microcatheter has a standard length of 150 cm with a 8cm flexible tip, is available in four shapes (straight, 45degree, 90 degrees and J) has an Inner Diameter (ID) of 0.025" and is compatible with a 0.018"microwire.Due to the large diameter of the coil it is only compatible with the Penumbra PX system which limits other options for intracranial microcatheter access.

The 0.020"diameter translates to a greater volume per Penumbra 400 coil when compared head to head to the other coils available in the market. This has potential implication for packing density, volumetric filling of the aneurysm, procedure time and recanalization rates. Additionally the coil design confers more softness when compared to other coils on the market and preliminary experience from various centers is suggestive that the coil breaks optimally within the aneurysm allowing for optimal filling.

As experience with this coil accumulates it will be interesting to see how this coil performs and promises to be an area for research and discussion within the coil embolization world.

Penumbra 400™ System

Coil

PX 400™ Microcatheter (straight, 45º, 90º, J, Preshaped)

UPCOMING MEETINGS

8th Annual Society of Neurointerventional Surgery Meeting
Colorado Springs, Colorado
www.snisonline.org
July 25-28, 2011

19th Zurich Course on Interventional Neuroradiology
Zurich, Switzerland
www.cinr-zurich.ch
August 24-28, 2011

9th Annual Neurocritical Care Society Meeting
Montreal, Canada
www.neurocriticalcare.org
September 21-24, 2011

1st International Congress of Interventional Neurology
Minneapolis, MN
October 6-8, 2010

4th Annual Meeting of the Society of Vascular and Interventional Neurology
Fort Lauderdale, Florida
www.svin.org
October 21-23, 2011

11th Congress of the World Federation of Interventional Neuroradiology
Capetown, South Africa
www.wfitn.org
November 8-11, 2011

Dear SVIN Members,

We would like to add a new section in the SVIN Newsletter: SVIN Members in the News. This section will include SVIN members who have been featured in the news, awarded with new research grants or interim publications. We welcome you to contribute to this section to help us highlight your achievements. Please send announcements to info@svin.org.