

Society News

➔ The 3rd Annual Meeting of the Society of Vascular and Interventional Neurology recently convened at the Palace Hotel in San Francisco, CA. The meeting included joint programming with the American Society of Neuroimaging and also a new “Cases and Complications” session, open to presenting speakers and moderators. Meeting attendance continued to show growth over prior years and an excellent panel of speakers, with highlights by honorees, Dr. Peter Kim Nelson, New York University Medical Center, New York, NY; Dr. Antoni Davalos, Hospital Universitari; Doctor Josep Trueta, Girona, Spain; and Dr. Martin Gizzi, JFK Medical Center, Edison, NJ.

➔ SVIN Executive Board has approved action to include the participation of vascular neurologists to the Board. Invitation letters to initial nominees have been sent.

➔ Recent scientific progress of the SVIN has been exceptional with receipt of all articles for the planned Roundtable on Endovascular Treatment of Ischemic Stroke Neurology Supplement. These articles are now entering the final editing stage, prior to submission and publication in the green journal. Data obtained from the vertebral origin stenting registry has been compiled and the manuscript is being distributed among contributing authors for editing. New scientific projects to culminate in future peer

review publication were solicited at the last Executive Board conference call.

➔ SVIN has obtained tax exempt status for the society as of the 2010 fiscal year.

➔ The Intersocietal Commission for the Accreditation of Carotid Stenting Facilities (ICACSF), composed of members of varying medical organizations from fields of neurology, radiology, and neurosurgery with interest in carotid stenting is drafting guidelines for centers seeking carotid stenting accreditation. The SVIN representative to ICACSF, Dr. Alex Abou-Chebl, provided an update to the SVIN executive board at the board meeting January 15, 2010. SVIN continues to maintain the position that neurological testing before and after carotid stenting procedures should be mandatory to maintain excellent outcomes in patient care.

➔ SVIN will hold a Cases and Practicum meeting tentatively scheduled for October 2010 in Atlanta, GA, with Drs. Dileep Yavagal and Alex Abou-Chebl selected as meeting chairs. The next annual meeting is planned for September 2011, location to be announced, under the meeting chairmanship of Dr. Raul Nogueira. An Executive Board retreat and business meeting will be scheduled in Fall, 2010 prior to the planned practicum session.

Science and Industry News

➔ Concentric Medical Corporation (Mountainview, CA) has received market approval in Europe and Canada for their new “stentriever” thrombectomy device, the Trevo®. This device incorporates design elements of a non-implantable, retrievable stent to remove clot in cerebral vasculature. Animal data in the U.S. was presented at the SVIN 3rd Annual Meeting by Dr. Raul Nogueira.

➔ The final results of the Carotid Revascularization Endarterectomy versus Stenting Study were recently presented at the International Stroke Meeting in San Antonio, TX. This 5 year multi-center, National Institutes of Health Care sponsored randomized controlled study found carotid stenting to be equally efficacious to carotid endarterectomy for extracranial carotid stenosis.

Inside this issue

➔ As Vascular & Interventional Neurologists, it is prudent for us to stay knowledgeable of trends in the rest of the interventional & vascular world in effort to benefit us in research, and advancing the field for neuro-interventions, as well as to identify current trends in training, job market, and scope of practice. Two articles describe changes in training requirements for vascular surgery and interventional radiology:

- Vascular Surgery approves new “0 + 5” pathway for training in peripheral endovascular surgical techniques (see article, page 6)
- The Society of Interventional Radiology is promoting an alternate pathway for direct certification in peripheral interventional radiology (see article, page 5).

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Upcoming Neurology Meetings

American Academy of Neurology
April 10-17, 2010, Toronto, CA

European Stroke Conference
May 25-28, 2010, Barcelona, Spain

8th Society of NeuroInterventional Surgery Practicum
May 21-22, 2010, Boston, MA

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President's Message: Every Member Counts



During this issue of the SVIN quarterly newsletter; a few items deserve discussion.

The third annual SVIN meeting was an astounding success, thanks to the hard work of the annual meeting committee (co-chairs Sophia Janjua and Jawad Kirmani and the members Thanh Nguyen, Raul Nogueira, Alex Abou-Chebl, and Tudor Jovin.). The remarkable honorary lectures and the award lectures were excellent in quality and awarders' choices. The meeting would not have been a success without the attendance of the SVIN members and the support of our meeting sponsors.

The business board meeting during SVIN annual scientific meeting has also voted to support the following items :

1. The next annual meeting will be a 'stand alone' meeting with fixed date for the annual scientific meeting during a week end between 9/15-10/15 of every calander year.
2. To keep the momentum of this year's annual meeting, a "Cases and Practicum" week end meeting will be hosted the first week end of October 2010 that we encourage people to attend. This will be co-chaired by Dr. Abou-Chebl and Dr. Yavagal.
3. Expand the voting board of directors membership to include vascular neurologists without interventional training by two members. SVIN had four candidates and Drs. Andrei Alexandrov and David Liebeskind were voted in during the board of directors meeting held during the International Stroke Conference (ISC). I would like to congratulate them and looking forward to their contribution to SVIN
4. Increase involvement of vascular neurologists in the annual meeting committee and other SVIN committees.
5. Vote to support the coverage for endovascular acute ischemic stroke therapy and submit this letter to insurance company and the government agencies as a SVIN position statement.
6. Vote to support the Carotid Center Facility Accreditation program with a strong clause to require neurologist evaluation before and after the carotid stenting procedure.

The last issue I want to cover is the release of the Carotid Revascularization Endarterectomy versus Stenting Trial (CREST) results during the ISC conference in San Antonio, Texas, February 26, 2010 showing equivalency between the two procedures with more myocardial infarction in the surgical group and greater stroke incidence in the interventional group, with rates of disabling stroke of about 4.1% in the stenting and 2.3% in the surgical groups. Interestingly, patients younger than 70 years of age fare better with stenting and those older than 70 years of age fare better with endarterectomy. The impact of the CREST results on the field of neurointervention remains to be seen. Additional factors may plan a major role; the most critical factor is whether Center for Medicare Services (CMS) reimbursement decision on carotid stenting procedure coverage will change as a result of this trial. If the carotid center certification is to be approved by CMS; it may also affect the number of carotid artery stenting (CAS) procedures across the country. The bottom line, policy aside, is that we are offering our patients a non-inferior, and less invasive, CAS procedure for both symptomatic and asymptomatic carotid artery disease in low and high surgical risk patients.

The final issue at SVIN is the "every member counts" mission, in which we hope to see our society as the main voice for interventional neurologists and vascular neurologists. We are excited in getting every junior, associate and active member from interventional and vascular neurology background all involved in our various society activities. Opportunities to be involved in SVIN are wide open in areas of the annual meeting planning, billing and coding, advocacy, education and research, international reach. Please spread the message and contact us. See you in Atlanta, GA in October this year for the first case and practicum meeting.

*Osama (Sam) O. Zaidat, MD
 SVIN President
 Milwaukee, Wisconsin*

Editor's Corner – Symbiosis between Vascular and Interventional Neurology

Recently SVIN executive action approved expansion of the current board by two vascular neurologists, in addition to the existing 15 interventionalists. This decision arose out of long standing interaction and mutual support between our two groups. Clinical vascular neurologists spearheaded our very entry into the endovascular arena, the history of which was poignantly recounted by Dr. Larry Wechsler in our second annual meeting in Miami, FL. The burgeoning interest among graduates has led to the process of ACGME accreditation of stroke fellowships and development of the board examination, as necessary prerequisites of the neurological pathway for what is officially entitled Endovascular Neuroradiological Surgery.

The relationship is symbiotic; because of the necessary vascular neurology background, interventional training naturally generates more stroke neurologists. This will help increase the number of trained physicians who can care for stroke patients throughout the country—numbers which are currently inadequate. Additionally, momentum in the field continues to grow, as there is constant excitement and interest among new, energetic members. As a practicing interventional neurologist (and also stroke neurologist), I know just how important my vascular neurology colleagues are to the success of my career. Our common 'neurological language' leads to referrals from clinical vascular neurologists, who may feel more comfortable to interact with us rather than non-neurological interventionalists. Also, as most of us have overlapping interventional and clinical duties, our colleagues provide backup for those services as needed, a situation which is not uncommon for those with active clinical as well as interventional practices.

More and more it seems that the issues of a vascular neurologist are the issues of an interventional neurologist and vice versa. Because of the possibilities of endovascular treatment on the horizon and with greater political and public health interest in the subject (among private and federal insurance agencies as well as other non neurologists such as interventional cardiologists), any neurologist who is involved in the care of a stroke patient has no choice but to become knowledgeable on this subject. Endovascular treatment of acute stroke and intracranial stenting may be the most important fiscal matters pertaining to this subject. Though we treat all forms of cerebrovascular disease, ischemic pathology makes up the vast majority of all stroke types and is far more recognized among lay public. This is our calling card to the public, patient, and health legislator. Without any other body of literature devoted solely to the needs of stroke physicians, I hope that this newsletter will function as a voice for all vascular neurologists. Even the American Stroke Association, by virtue of its origin from the

American Heart Association, has more general cardiovascular public and professional interest. Our society as a whole must maintain focus on vascular neurology related issues. Indeed our very name, the Society of Vascular and Interventional Neurology, speaks to this. With this in mind, we welcome our new board members.

*Nazli Janjua, MD
SVIN Quarterly Editor
Brooklyn, New York*

How Would You Treat This Aneurysm?

A 60 year old woman with an unruptured left parieto-occipital brain arteriovenous malformation, s/p multi-staged embolization and resection has residual parent vessel aneurysms. A 5 mm basilar tip/ right posterior cerebral artery (PCA) remains unchanged, without significant regression two years post-operatively. The contralateral PCA appears dysplastic. Considerations for treatment include the primary coil embolization, stent supported embolization with single or "Y" stenting technique. Concerns for treatment are the possibility of change in flow dynamics resulting in worsening of the left PCA dysplasia.

Post your comments or suggestions for treatment on the SVIN website: www.svin.org or email us at director@svin.org.



Do you have an issue you wish to discuss? Please send your "Letters to the Editor" to svin.org@gmail.com.

SVIN Meeting Summary

by Darwin Ramirez-Abreu, MD & Susan Law, MD
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Over 170 people participated in the 3rd Annual Meeting of the SVIN held on January 16-17th, 2010 in San Francisco, California, which offered a myriad of talks on current clinical and procedural practices, new diagnostic approaches to cerebrovascular disease, practice management issues and relevant active clinical trials.

The meeting held jointly with the American Society of Neuroimaging (ASN), kicked off the combined inter-societal section with a new "Interactive Cases" forum, which offered the opportunity for sharing clinical experiences to both ASN and SVIN members.

Other highlights of the meeting included:

Drs. Rishi Gupta, Dileep Yavagal, and Andrew Xavier provided revascularization strategies including clot retrieval, thrombus aspiration, and stenting, with concurrent use of intra-arterial and intra-venous tissue plasminogen activator (tPA) – termed "bridging of tPA." Dr. Nazli Janjua presented advice on initiating an Interventional practice, in another new conference item.

During the Pioneering Award lunch lecture, the renowned Dr. Antoni Davalos, presented his extraordinary journey from initiating the usage of tPA up to the modern interventional experiences in Barcelona, Spain.

The afternoon session continued with Drs Jawad Kirmani,



Dr. Jawad Kirmani welcomes guest speaker, Dr. Martin Gizzi, who lectured on "The State of Stroke" and comprehensive stroke centers during a luncheon session.

Alex Abou-Chebl and Osama Zaidat explaining the current indications and methods of carotid, vertebral artery and intracranial stenting. Other techniques – balloon assisted coiling, stent assisted coiling of cerebral aneurysms, cyanoacrylate and Onyx embolization of brain AVMs, patent foramen ovale closure, and treatment of neonatal arteriovenous shunts – were presented by top vascular interventionalists and other guest speakers.

For the second year in a row, the annual meeting offered high quality, origi-

nal scientific work in the morning oral abstracts session. Among these submissions, Dr. Ahmed El-Gengahy, Interventional Neurology fellow, received the "Best Resident or Fellow Award" for his abstract "Volume Reduction in Brain AVMs" and Dr. Arnd Dorfler from University of Erlangen, Germany was presented with the "Best in Show" award for his analysis of outcomes with Penumbra

device for acute ischemic stroke. SVIN selected Dr. Peter Kim Nelson, New York University Medical Center, as the Recipient of the "Outstanding Contribution" for his tremendous work in the Neuroendovascular field. The award lecture was followed by a special luncheon lecture on the state of the stroke address, regarding comprehensive stroke center designation and its implication for health care.

In the Update on Clinical Trials, guest speakers Dr. Pooja Khatri (University of Cincinnati), Dr. Mark Chimowitz (Emory University), and Dr. Steven Hetts (University of California at San Francisco) gave updates on the Interventional Management of Stroke III study, the Stenting and Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis, and the Matrix and Platinum Science trial. SVIN member, Dr. Alex Abou-Chebl, gave an update on the Asymptomatic Carotid Trial.

The meeting culminated with a final new addition, a closed "Cases and Complications" session in which members had a rare opportunity to present interventional complications in a peer review environment in order to learn from these very difficult experiences. The session was moderated by Dr. Nelson and Dr. Janjua. Dr. John Chiloupka of the University of Iowa, also in attendance at the meeting, provided additional senior mentoring during this session.

With increasing attendance each year, the 3rd annual SVIN conference provided excellent comprehensive information for those interested in the field of neurointervention.



Dr. Nazli Janjua awards Dr. Ahmed El-Gengahy, Interventional Neurology fellow at the University of Medicine and Dentistry New Jersey, the Best Resident or Fellow Paper award for his abstract on "Volume Reduction in Brain AVMs"



Dr. Antoni Davalos, Girona, Spain, presents his honorary lecture discussing the evolution of usage of thrombolysis in Spain as well as modern interventional experiences there.



Dr. Peter Kim Nelson received the Outstanding Contribution Award presented by Dr. Jawad Kirmani

Primary Certificate Application for Vascular Interventional Radiology by Society of Interventional Radiology

by Dhruvil J. Pandya MD, Medical College of Wisconsin Milwaukee, WI

Vascular Interventional Radiology (VIR), a specialty encompassing endovascular and fluoroscopic guided interventions for peripheral vascular and visceral pathologies, requires competency in skills learned outside standard diagnostic radiology (DR) training. Clinical VIR activities involve other fields such as vascular surgery and these other disciplines also offer specialized education in VIR techniques. Currently vascular interventional radiology includes training in image guided procedures, patient selection, and direct patient care. The traditional educational paradigm of one year of internship, four years of DR, and one or more years of fellowship is now under scrutiny by the Society of Interventional Radiology (SIR).

SIR has crafted two pathways to VIR, providing the graduate with secondary certificates after obtaining primary certificate in diagnostic radiology. The clinical pathway in VIR track proposed in 2001 is constructed within the framework of existing radiology residency requirements. The clinical pathway provides additional exposure to VIR and clinical rotations during four years of DR residency without altering length of training or altering the minimum number of imaging rotations required by American Board of Radiology (ABR).

The diagnostic and interventional radiology enhanced clinical training (DIRECT) pathway lengthens the requirements for pre-radiology clinical training to two years. The overall length of DR training is reduced by one year and the VIR fellowship takes place in the third or fourth years of radiology training. In the DIRECT pathway the diagnostic imaging training is reduced to 27 months, not including VIR rotations. The goal of both DIRECT and Clinical pathways track is to produce radiologists with added expertise in VIR. All pathways (traditional, clinical, and DIRECT) can lead to primary certification in DR by the ABR which is followed by additional certificate in VIR. The difference is both DIRECT and clinical pathways provide broader in-depth experience in the clinical diagnosis and care for patients with diseases commonly treated by interventionalists.

Report from the 2005 Intersociety Conference suggested that complete training in DR maybe unnecessary for contemporary VIR practice. According to Dr. John Kaufman, president of the Society of Interventional Radiology, the next step is to obtain primary certification in VIR by the ABR without prerequisite in DR. Primary certificates are generally recognized by the ABMS as one of basic medical specialty while additional certificates have no such recognition. The goal of this certificate would be to combine the skills in imaging, interventional, and direct patient care necessary for the practice of VIR without DR training, attracting greater number of interventional radiologists with shorter training pathways compared to traditional pathways. The primary certificate will allow development of sub-sub specialty certificates in areas such as interventional neurology requiring extra years of training in these sub-sub-specialties.

Currently there are three pathways leading to interventional neurology: interventional neuroradiology, endovascular surgical neuroradiology (ESN), and interventional neurology. All follow basic principals which involves percutaneous entry into the femoral, radial, and brachial artery to perform intracranial or

extracranial interventions for disorder of nervous system. The main differences lie in the training pathways between the three groups. According to the Accreditation Council for Graduate Medical Education (ACGME), neurologist trainees must complete four years of neurology residency including a medicine internship year, one year of vascular neurology fellowship or equivalent (e.g. neurocritical care), one year of preparatory neuroradiology training, and two years of fellowship training in ESN. Radiologist trainees must complete five years of radiology residency, one year of diagnostic neuroradiology fellowship, and one to two years of fellowship in ESN. Neurosurgery trainees must complete six to seven years of residency, inclusive of a general surgery internship, one year of preparatory neuroradiology training and one year of ESN fellowship. The final pathway for all trainees includes fellowship in ESN, using catheter technology, radiologic imaging, and clinical expertise to diagnose and treat diseases of the central nervous system. As per these guidelines the average training length for neurology trainees is eight years, as opposed to seven to eight for radiology trainees, and eight to nine years for neurosurgery trainees. If primary certificate in VIR is obtained via alternate pathway, the trainees in radiology track can fulfill requirements for interventional neurology within six to seven years.

The details of the alternate VIR training proposal are unknown. Kaufman et al (*J Vascular Interventional Radiology*, 2006) gave an example of primary certificate program which may involve two years of sequential clinical training in a recognized core specialty such as general surgery, internal medicine or pediatrics; 12 to 18 months of imaging with emphasis on cross sectional modalities such as computed tomography (CT), magnetic resonance imaging (MRI), and ultrasound (US); and 24 to 30 months of VIR which include formal training in non-invasive vascular examinations such as CT Angiography, MR Angiography. The imaging training would de-emphasize areas such as mammography and nuclear medicine. The structure would be similar to other procedurally based specialties having junior and senior residents, outpatient and inpatient responsibilities, and examination by the ABR during the training.

Following graduation, the final certifying examination could occur after one year in practice. It is not known if the board exam required for the alternate pathways would be same as traditional pathways or if further certifying exams would be necessary for sub-sub-specialty certification like interventional neurology. The residents graduating from the program will not be able to perform general DR duties, but could interpret body CT, MRI, and US. Graduates will only be allowed to practice as a full-time interventional radiologist (IR) without diagnostic radiology license. If primary certificate is approved, ABR will continue to offer an IR subspecialty certificate to graduates from traditional and DIRECT training programs.

In general the process of changing physician training is cumbersome and reactionary, requiring many years to gain approval; and additional time for program recognition. The projected length of such change could well encompass eight to 10 years.

Highlights from the International Stroke Conference 2010

by Nazli Janjua, MD, Long Island College Hospital, Brooklyn, NY

Many SVIN members were invited for oral platform presentations at the recent International Stroke Conference, held February 24-26, 2010 in San Antonio, TX. Dr. Alex Abou-Chebl spoke about the role of carotid stenting in a Wednesday morning conference opener on extracranial carotid dissection.

Neuro-imaging held center stage in numerous sessions debating the predictive value of diffusion and perfusion imaging versus vascular imaging with or without clinical correlate of neurological symptoms in the setting of acute stroke. Other clinical studies using advanced imaging included Dr. Raul Nogueira's presentation demonstrating that "Neither Time to Treatment Nor the Use of Adjunctive Intra-Arterial Thrombolytics Increase the Risk for Symptomatic Intracranial Hemorrhage After Endovascular Treatment."

Dr. Rebecca Sugg presented pooled results from the Mechanical Embolus Removal in Cerebral Ischemia (MERCi) and the Multi-MERCi studies as well as the Mercr Registry for patients presenting six to eight hours from symptom onset. Despite slightly lower rates of good outcome in the group of patients presenting beyond eight hours, compared with those before, the number needed to treat for one patient to benefit was remarkably low (NNT = 8). Other combined results from these studies included reporting on outcomes among octogenarians by Dr. Nogueira.

Dr. Italo Linfante spoke on mechanical thrombectomy using the Merci Concentric retriever® versus the Penumbra aspiration system, in combined programming with the Society of Neurointerventional Surgery and joint section of the American Academy of Neurological Surgery/Congress of Neurological Surgery Cerebrovascular Section.

Dr. Adnan Qureshi presented data from the Antihypertensive Treatment of Acute Cerebral Hemorrhage (ATACH) study relating baseline National Institutes of Health Stroke Scale scores to outcome.

Clinical issues of intracranial stenting among elderly patients (Drs. Robert Taylor and Fareed Suri), the use of anesthesia versus conscious sedation (Dr. Rishi Gupta), and techniques for repair of complex aneurysms in the acutely ruptured setting (Dr. Yahia Lodia) also held great interest during the meeting.

The meeting closed with presentation of the much anticipated results of the Carotid Revascularization Endarterectomy versus Stenting Trial (CREST), which showed that carotid artery stenting is equally efficacious as surgery for the repair of atherosclerotic stenosis of the extracranial carotid artery.

Look out for selected abstract summaries in upcoming issues of the SVIN Newsletter.

0+5 New Vascular Surgery Training Paradigm

by Mohamed Teleb, Barrow Neurological Institute, Phoenix, AZ
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As interest in endovascular treatment increases, training requirements for vascular surgery fellows are shifting from the traditional two year fellowship (one year of vascular surgical training and a second year of research) to having the second research year replaced with an endovascular training year. Both of these fellowship options are after five years of general surgery for a total of seven years training. The alternate training paradigm is also reflected in changes with the approval of a direct or "0 + 5" vascular surgery residency program, by the Accreditation Council of Graduate Medical Education (ACGME), in 2007, with Dartmouth, Pittsburgh and University of Rochester as the vanguard programs. For the 2010 residency match there will be a total of 20 such programs entering the match as seen in ACGME website "www.acgme.org"

In the neurosurgical world a similar training shift is taking place. Most programs mandate three months of endovascular training during junior residency years. In addition many neurosurgery residents are creating infolded endovascular fellowships during the research year of their residencies; graduating with 12 to 24 months total of endovascular as part their training.

Changes in training requirements mirror requirements seen in practice, defining minimum procedural competency to perform carotid stenting and acute stroke intervention across multiple disciplines, including non-neuroscience fields such as interventional cardiology and interventional radiologist (Devries et al, *Cathet Cardiovasc Interv* 2009; 73:692-698; Connors et al, *J Vasc Interv Radiol* 2009; 20:1507-1522).

The implication for Interventional Neurologists in training is potential job market saturation. With neurosurgical and other candidates vying for limited attending interventional positions, other aspects of Neurology training such as stroke certification, neurocritical care training, and general neurology skill set may be important for maintaining competitive advantages in the post-graduate setting.

Online web forums and surveys show of the great interest in Interventional Neurology from Neurology Residents as evidenced by the last newsletter article "Interventional Neurology is the 'Hottest Fellowship' for Aspiring Neurologists!", which referenced a Student Doctor Survey on Neurology subspecialties. Critical masses in academic and private practice Interventional Neurology must be maintained in order for Neurologists to continue to have a voice in the endovascular field.