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President’s Message

Kristin R. Engelhard, MD, PhD
SNACC President

At the annual meeting of the International Anesthesia Research Society (IARS) in May, Dr. Deepak Sharma organized, on behalf of SNACC, a very well attended panel discussing the “Controversies in Neuroscience in Anesthesiology & Critical Care.” Dr. Rafi Avitsian presented an interesting and clinically challenging PBLD. The SNACC award for the best abstract of neuroscience in anesthesiology and perioperative medicine was presented to Sinziana Avramescu, MD, PhD from the University of Toronto for her poster with the title “Inflammation Increases Neuronal Sensitivity to General Anesthetics in Mice.” SNACC is very proud to support excellent researchers in the field of neuroscience. The relation of SNACC and IARS has always been fruitful and respectful. Both societies share similar missions and SNACC is pleased to support experimental and clinical science during the IARS annual meeting and thereby increase its visibility. It is intended to intensify these interactions in the near future.

In order to further optimize the education in the field of neuroanesthesia and neurocritical care for SNACC members the Education Committee (chaired by Dr. Deepak Sharma) has worked hard and created some wonderful new educational content, which is now offered on the SNACC home page. The “Chat with the Author” offers SNACC members the possibility of learning more about the background and the interpretation of selected papers. New “Interactive Clinical Case Discussion” or “Interactive Clinical Neuromonitoring Case Discussion” will be presented to our members on a regular basis. In the future, the Education Committee wants to further improve the quality of interaction. However, SNACC needs technical support to realize this. As this technology is very expensive SNACC is urgently searching for skillful help. If you have the knowledge to help SNACC with the programming and if you would like to become part of a very active group, please feel free to contact Dr. Sharma at dsharma@uw.edu. At the first day of each month the “Article of the Month” will be presented on our webpage, summarizing the content of an important scientific or clinical publication in the field of neuroscience. Furthermore, the electronic “SNACC Bibliography” is updated every year. This bibliography contains the latest and most important publications in the field of experimental and clinical neuroscience for more than 60 themes. The bibliography offers a direct link to the articles in PubMed. At the moment, SNACC offers all of this content using the SNACC website and LinkedIn, but in the near future SNACC wants to offer a SNACC APP where each member can easily use the various high quality contents on his/her smartphone. All these activities of our society aim to increase the benefit of being a SNACC member. In the future, we want to add further value to membership. Suggestions from the membership are always welcome.

Over the past ten years, SNACC was engaged in a healthy debate about neuroanesthesia fellowships, which is reflected by important publications in the Journal of Neurosurgical Anesthesiology and the SNACC Newsletter. Now it is time to move forward with our own fellowship program. Accordingly, a fellowship task force was set up by SNACC and they have created a strategy for implementing a system of neuroanesthesia fellowships. Communications with the United Council of Neurologic Subspecialties (UCNS) have been established. UCNS is set up to do both accreditation and certification. UCNS is willing to accept a membership application from SNACC to be a member overseeing neuroanesthesia fellowships. However, as a first for UCNS, they are supportive of initially letting us set up a system of developing UCNS-accredited fellowships. So an application will be prepared to submit to UCNS with this goal in mind. This will be primarily US based, but with the hope the UCNS will become more international. In the future years, SNACC may adopt the role of accrediting international fellowships. This will be a first step. Once SNACC has a system of neuroanesthesia fellowship accreditation, then we can explore the option of graduates of accredited neuroanesthesia fellowships being eligible to enter one-year UCNS sponsored Neuro-ICU fellowships. This process is being overseen by Dr. Andrew Kofke with planned involvement of Drs. Rafi Avitsian, George Mashour, and Greg Crosby. Please contact Dr. Kofke at Andrew.Kofke@uphs.upenn.edu if you have any suggestions or if you want to become involved in the SNACC-sponsored UCNS neuroanesthesia fellowship program.

Kristin R. Engelhard, MD, PhD
SNACC President

SNACC NEWS
Thursday, October 9

• Basic Neuroscience Symposium. Find out how patients wake up from anesthesia and what’s going on when emergence is slower than expected.
• ENLS Workshop. A first of its kind opportunity to become certified in Emergency Neurologic Life Support. A workshop run by leading SNACC neurointensivists.
• Neuromonitoring Workshop. Overview and practice intraoperative neuromonitoring techniques, including Transcranial Doppler.
• Mentoring Session on developing your idea and making it a success.
• Annual Thursday evening Dinner Symposium. Network with colleagues and learn about the meaning of anesthetic effects on EEG. Also learn more about the newly hot area of connections in the brain and how they are important in anesthesia.

Friday, October 10

• Keynote Lecture on Spinal Cord Injury. What’s going on with hypothermia, stem cells, neuroprotection, perfusion pressure and other issues relevant to neuroanesthesia care.
• Personalized medicine: Learn about what’s new in the interface between the electronic health record and genomics. The ultimate in personalized medicine and it will make it to your OR!
• Two scientific poster sessions. All digital with many stations. Read the abstracts and their posters before, during, and after the presentations. Offer questions to the authors digitally.
• Intraoperative catastrophes: Hear opinions of leading clinicians of what to do when all heck breaks out in your OR. Venous air embolism, massive bleeding, epidural hematoma.
• Neurointerventional suite. Dealing with various issues. GA or MAC?
Editor’s Corner

Reza Gorji, MD
Editor

Following the spring newsletter, I received many kind words. It appears that a number of you enjoyed reading the material presented. I appreciate the input I receive from readers of the newsletter. The newsletter is a multidimensional project. No one person can make it successful. Without contributions from fellow SNACC members it will not be something worth looking at. As such I appreciate all the contributions from fellow readers and members and encourage all to contribute. This goes especially for our younger members, including fellows and residents in anesthesia.

Visit the SNACC Website

If you have not visited the SNACC website recently, you are missing quite a bit. Not only is the current newsletter present in English and Spanish languages, but there is an archive going back a few years. There is also information on the SNACC annual meeting coming up in October.

There are many educational opportunities presented by the hard working SNACC Education Committee. This includes the Article of the Month, Chat with the Author, an Interactive Clinical Case Discussion, a fabulous bibliography and suggested references as well as information on past meeting abstracts.

www.snacc.org

JOIN US FOR THE
SNACC-NCS Joint Session:
Post-Operative Challenges in the Neurocritical Care Unit

Featured Programs:
- Targeted Temperature Management
- Clinical Trail Update: TBI & Protect III
- Cutting Edge Scientific Sessions
- Workshops & Practice Updates

and so much more....!

Pre-Meeting Program
September 10, 2014

Neurocritical Care Society
12th Annual Meeting
Improving Outcomes Through Interdisciplinary Collaborations

2014
SEATTLE
SEPTEMBER 11-14, 2014
"THE WESTIN SEATTLE" SEATTLE, WASHINGTON
SNACC Contributions to the International Anesthesia Research Society Meeting

Jeffrey J. Pasternak, MS, MD

The 2014 Annual Meeting of the International Anesthesia Research Society (IARS) was held May 17-20 at the Fairmont The Queen Elizabeth Hotel in Montreal, Canada.

For the second year in a row, SNACC sponsored the Award for the Best Abstract in Neuroscience and Perioperative Medicine at IARS. The winner was Sinziana Avramescu, MD, PhD, a post-doctoral fellow in the laboratory of Dr. Beverly Orser at the University of Toronto. Dr. Avramescu’s abstract was entitled “Inflammation Increases Neuronal Sensitivity to General Anesthetics in Mice.” This abstract was blindly selected as the winner from a group of highly competitive and outstanding abstracts. Dr. Avramescu will receive a $500 award, a complimentary one-year membership to SNACC, and complimentary registration to the upcoming SNACC meeting in New Orleans in October 2014.

SNACC also organized and conducted a panel during the IARS general sessions. The panel was developed and moderated by Dr. Deepak Sharma from the University of Washington and was entitled, “Controversies in Neuroscience in Anesthesiology and Critical Care.” The panel consisted of three experts in their respective subfields of perioperative neuroanesthesiology. Specifically, Dr. John Drummond from the University of California - San Francisco addressed issues related to the effect of beach chair position on cerebral perfusion and outcome. Dr. Gregory Crosby from Brigham and Women’s Hospital – Harvard University discussed the quandary of anesthetic neuroprotection versus neurotoxicity. Dr. Andrew Kofke from the University of Pennsylvania addressed issues related to serum glucose management in perioperative neurosurgical and critically-ill patients with neurologic diseases. This session was followed by very stimulating discussion that will likely serve to change practice and drive further research.

Dr. Rafi Avisian from the Cleveland Clinic developed and conducted a problem-based learning session on behalf of SNACC. The session was entitled, “My Patient Is Not Waking Up After This Craniotomy, What Should I Do?” This sold-out session consisted of a diverse group of participants including anesthesiology residents and staff physicians in both academic and private practice. The diversity among attendees helped to drive the discussion during the session so that it was an educational experience for all.

We look forward to SNACC’s contribution to the IARS Meeting in 2015 to be held in Honolulu, Hawaii.

SNACC Bibliography

Updates to the 2014 SNACC Bibliography are in progress. If you are a contributor the deadline to submit updates is July 1, 2014. If you have suggestions for improvement or you wish to become involved please e-mail Laurel Moore at laurelmo@med.umich.edu. Thank you!

The SNACC bibliography is available free of charge to all SNACC members. For non-members, there is a free 90-day trial. Save yourself some time when looking up a topic and go straight to the bibliography. You will be amazed at the wealth of information presented.

The URL is http://www.snacc.org/biblio.iphtml.
Interview with Monica Vavilala, MD

The following is an interview with Monica Vavilala, MD, the new director of Harborview Injury Prevention and Research Center in Seattle, Washington, USA. Thank you for allowing me to interview you. I know that you are a busy and a successful neuroanesthesiologist. Congratulations on your new position as Director of Harborview Injury Prevention and Research Center.

Reza Gorji, MD
SNACC Newsletter Editor

Reza Gorji, MD: Can you tell our readers a little about Harborview Center and what it aspires to accomplish?

Monica Vavilala, MD: The Harborview Injury Prevention Center is a worldwide leader in injury research, education, training and outreach. We aim to reduce injury burden and improve injury outcomes. The Center was founded in 1985 and is an interdisciplinary environment, ripe for transdisciplinary endeavors. Moving forward, the center will focus its work on 1) safe transport such as distracted driving and the effect of legalizing marijuana on driving safety, 2) violence, 3) injury care and 4) traumatic brain injury.

Reza Gorji, MD: I believe that you are in a unique position. I am not aware of an anesthesiologist in the United States that leads an injury research center. No doubt your previous experience played a role in your appointment. Could you give us a little background and how you plan to go forward in this new position?

Monica Vavilala, MD: The areas of focus as described above are the result of a strategic plan to increase our already high impact locally, nationally and internationally. We hope to attract visiting faculty interested in learning about injury methods, and we look forward to making inroads to decreasing the burden of injuries globally.

Reza Gorji, MD: Do faculty from University of Washington and other centers participate in the center?

Monica Vavilala, MD: The center has 12 core faculty and 24 affiliate faculty. A total of 32 trainees from surgery, pediatrics and anesthesia are colocated at HIPRC. Our center faculty include surgeons, pediatricians, nurses, social workers, epidemiologists and biostatisticians all working together towards our common goals and mission. It is my job to bring large teams like this together to solve injury related problems.

Reza Gorji, MD: Do you see or hope that more neuroanesthesiologists will become involved in this aspect of neuroscience?

Monica Vavilala, MD: I think that neuroanesthesiologists can be involved in and lead research centers effectively. We understand acute clinical care and we can be trained formally in neuroscience and/or clinical research addressing problems pertaining to neuroscience. We are well positioned for these types of endeavors.

Thank you very much again for your assistance and congratulations on your new position.
The Harborview Injury Prevention and Research Center (HIPRC), located on the Harborview Medical Center campus, is a worldwide leader in injury research, education, outreach, and training. Founded in 1985, HIPRC is supported by the University of Washington and Harborview Medical Center in Seattle. HIPRC faculty and staff are devoted to programs aimed at diminishing the personal impact of trauma and broadening the effectiveness of injury prevention and treatment programs regionally, nationally, and internationally. The Center, with its interdisciplinary faculty, has a clear focus on work in traumatic brain injury, safe transport, trauma care and violence, development and evaluation of prevention programs, and training of next generation leaders in the field.

HIPRC directs its programs towards groups at greatest risk of injury: children, the elderly, the poor, underrepresented minorities, and residents of rural areas. HIPRC aims to reduce the rates of injury and death among these groups from unintentional events such as car crashes and drowning and from purposeful acts such as suicide and murder. Efforts span the continuum of medical care, from epidemiological research to determine injury causes, to acute care of trauma patients, to rehabilitation in the hospital and home. HIPRC works to:

- Translate injury research into policy.
- Develop and evaluate new injury prevention programs using behavior change, education, government action, and environmental modification.
- Use principles of biomechanics to study injury causes and treatment.
- Develop more effective ways to resuscitate and treat injury victims.
- Improve rehabilitation strategies.
- Train new investigators in injury research and educate health professionals, policy makers, and the public about trauma’s magnitude, costs, and prevention.

Stakeholders in the University of Washington School of Medicine, School of Public Health, School of Nursing, School of Social Work and UW Medicine selected Monica S. Vavilala, MD director for HIPRC effective April 1, 2014.

Dr. Vavilala is Professor of Anesthesiology and Pediatrics and Adjunct Professor of Neurological Surgery and Radiology at the University of Washington. She received her undergraduate education from the University of Houston and her medical degree from University of Texas Medical School in Houston, Texas. She completed two residencies, her first in pediatrics at the University of Texas Medical School and the second in anesthesiology at the University of Washington. Dr. Vavilala is an expert in the care of injured patients, has authored over 150 peer reviewed publications related to injury, and is internationally known for her work in traumatic brain injury. As a 20 year faculty member in the UW School of Medicine, she has mentored over 27 fellows across UW, has current research support from the National Institute of Neurological Disease and Stroke, and is the co-director of the NICHD sponsored UW Pediatric Injury Training Program.

Dr. Vavilala is the first anesthesiologist in the nation to lead an injury research center and the only anesthesiologist on the Brain Trauma Foundation Guidelines working group pertaining to the acute care management of patients with severe traumatic brain injury. “Dr. Vavilala brings to the Center the energy and commitment to move it ahead and keep it at the forefront of injury research and prevention,” said Dr. Frederick P. Rivara, UW Professor of Pediatrics and founder of the Center.

Visit www.snacc.org

There is a link on the SNACC home page for 
Current Job Opportunities

We encourage you to visit this link to submit a posting or to edit and remove a posting. Your member login is required.
SNACC is our international society of Neuroanesthesiologists and Neuroscientists from across the world and as you know, the aim of SNACC is to advance the art and science of the care of the neurologically impaired patient through education, training and research in perioperative neuroscience. Despite our common goal, within our wide community, there is considerable variation and diversity in not only in our practice patterns but also in the education and training in Neuroanesthesiology. Many of us are members of various other national societies of Neuroanesthesiology and Neurocritical care as well. Would it not be interesting to know about the Neuroanesthesiology education and training requirements for anesthesia residents in different countries? And what about Neuroanesthesiology fellowship training? We decided to approach some prominent Neuroanesthesiologists in different countries ask them the same four questions:

1. What are the Neuroanesthesiology training requirements during anesthesiology residency in your country?
2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
3. What are the opportunities for advanced training in Neuroanesthesiology in your country? What is the duration of advanced Neuroanesthesia training program? How many centers/positions are there every year?
4. Is there a formal Neuroanesthesiology society?

Here are some of the responses:

Dr. Kristin Engelhard is the Vice-Chair of the Department of Anesthesiology, Universitätsmedizin der Johannes Gutenberg-Universität Mainz/University Medical Center of the JGU and also the President of SNACC.

She replies:

1. Neuroanesthesiology training requirements during anesthesiology residency:
   
   Answer: In Germany all anesthesiologists are trained for the major subspecialties with a certain amount of cases for each subspecialty. For neurosurgery, every anesthesiologist has to anesthetize at least 25 patients for intracranial procedures.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
   
   Answer: No special training is mandatory to become a Neuroanesthesiologist. However, there is a special certification for Neuromonitoring, which can be achieved by an anesthesiologist after a special course, analyzing 100 EEGs, and passing an oral exam.

3. Opportunities for advanced training in Neuroanesthesiology:
   
   Answer: In Germany there exist no advanced training in Neuroanesthesiology and therefore, no special training program.

4. Formal Neuroanesthesiology society:
   
   Answer: In Germany we do not have formal separate Neuroanesthesiology society. The German Anesthesia Society (DGAI) has several subspecialty groups. The subspecialty group for Neuroanesthesia is called “Wissenschaftlicher Arbeitskreis Neuroanästhesie (WAKNA) der DGAI” (http://www.neuromedizin-online.de/ and http://www.wakna.dgai.de/). The number of members is 152. The WAKNA creates standards for Neuroanesthesia management, takes care of the certification for “Neuromonitoring”, and organizes two annual meetings.

Dr. Pirjo Manninen is Associate Professor and Director of Neuroanesthesia at the Toronto Western Hospital, Toronto, Canada.

She replies:

1. Neuroanesthesiology training requirements during anesthesiology residency:
   
   Answer: The actual requirements for Neuroanesthesia training vary from center to center but basically they cover the all core knowledge of Neuroanesthesia. Recently, there has been the development of a “Core Material Outline” that will direct teachers and instruct residents in what they should know in each field. We hope this will become national. Essentially all residents will do a set time in the Neurosurgical operating rooms during their five years of training. There is no definite time in their training for Neuroanesthesia. Most centers do this by “block rotations” by the week or by the month. The final examinations by the Royal College of Canada will include Neuroanesthesia material in both parts of the exam.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
   
   Answer: No special training is mandatory to become a Neuroanesthesiologist.
3. Opportunities for advanced training in Neuroanesthesiology:
Answer: There are about 5-6 universities that offer Neuroanesthesiology fellowships. This changes from year to year. Most are 1-year term and most offer only one position per year. In Toronto we offer three (at times 4 positions) and also 1-2 Neurotrauma positions.

4. Formal Neuroanesthesiology society:
Answer: We have a section/society of Neuroanesthesia in Canada. This is in conjunction with the Canadian Anesthesiology Society. We have about 50 members (fluctuates). We meet once a year during the Annual Canadian Anesthesiology Society meeting in June with a lunch or breakfast session (2 hours). Our section is run by an elected executive. Occasionally, we send out a newsletter.

Dr. Masahiko Kawaguchi is Professor & Chair of Anesthesiology and Director of Neuroanesthesiology at the Nara University, Kashiwa, Japan.
He replies:
1. Neuroanesthesiology training requirements during anesthesia residency:
Answer: There are no specific Neuroanesthesiology training requirements during anesthesia residency in Japan. Education for Neuroanesthesia is included in general anesthesiology education program. However, the Japanese Society of Anesthesiologists provides the guideline for Neuroanesthesiology training requirements to get the board certification.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
Answer: There is no advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesia in Japan.

3. Opportunities for advanced training in Neuroanesthesiology:
Answer: There are no specific advanced training program in Neuroanesthesiology in Japan.

4. Formal Neuroanesthesiology society:
Answer: We have a section/society of Neuroanesthesia in Canada. This is in conjunction with the Canadian Anesthesiology Society. We have about 50 members (fluctuates). We meet once a year during the Annual Canadian Anesthesiology Society meeting in June with a lunch or breakfast session (2 hours). Our section is run by an elected executive. Occasionally, we send out a newsletter.

Dr. Jeffrey J. Pasternak is Associate Professor and Director of Neuroanesthesiology in the Department of Anesthesiology, Mayo Clinic, Rochester, USA. He is also a Director-at-Large on the Board of Directors of SNACC and the Chair of Scientific Committee of SNACC.
He replies:
1. Neuroanesthesiology training requirements during anesthesia residency:
Answer: There are no specific advanced training program in Neuroanesthesiology in Japan.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
Answer: There is no advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology in Japan.

3. Opportunities for advanced training in Neuroanesthesiology:
Answer: There are no specific advanced training program in Neuroanesthesiology in Japan.

4. Formal Neuroanesthesiology society:
Answer: We have a section/society of Neuroanesthesia in Canada. This is in conjunction with the Canadian Anesthesiology Society. We have about 50 members (fluctuates). We meet once a year during the Annual Canadian Anesthesiology Society meeting in June with a lunch or breakfast session (2 hours). Our section is run by an elected executive. Occasionally, we send out a newsletter.

Dr. Baoguo Wang is a senior Neuroanesthesiologist at the Beijing Sanbo Brain Hospital, Capital Medical University, Beijing, China.
He replies:
1. Neuroanesthesiology training requirements during anesthesia residency:
Answer: In China, anesthesia residency training is divided into two parts. The first part (3 years) is called “clinic base period”, including basic anesthesiology theory studying and skills training. There are no special requirements on Neuroanesthesiology. The second part (two years) is called “clinic anesthesia period”. In this part, Neuroanesthesiology training is an important part. The residents need to spend more than three months in this field and complete more than 20 neurosurgical anesthesia and learn general Neuroanesthesiology procedures, methods and techniques.

Continued on page 10
Neuroanesthesiology Education and Training
Continued from page 9

Residents have the option to complete more than two months of Neuroanesthesiology but that is generally institution dependent. Further, the ACGME also requires that residents provide intra-operative care for at least 20 patients requiring intracranial procedures.

2. Is advanced training / certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
Answer: Advanced training in Neuroanesthesiology is available, but not necessary to care for neurosurgical patients in the United States.

3. Opportunities for advanced training in Neuroanesthesiology:
Answer: Since subspecialty training in Neuroanesthesiology is not subject to certification, it is difficult to determine with accuracy the number of programs which offer fellowship training in Neuroanesthesiology within the United States. The Society for Neuroscience in Anesthesiology and Critical Care (SNACC) fellowship database currently contains information pertaining to 27 Neuroanesthesia training programs in the United States. Most training programs encompass one year of fellowship training. However, some programs may allow for extension beyond one year for additional training in research and Neurocritical care. Since US Neuroanesthesiology fellowships are not accredited by the ACGME, the specific details of training are institution dependent. In general, training will consist of intra-operative anesthetic management of patients having neurosurgical procedure and may also include research, neurocritical care, neurologic electrophysiologic monitoring, and transesophageal echocardiography.

4. Formal Neuroanesthesiology society:
Answer: Yes, SNACC consists of over 500 members including members from within the US as well as overseas. The primary mission of SNACC is “to advance the art and science of the care of the neurologically impaired patient”. As such, SNACC facilitates education, research, and quality improvement in neuroscience and the clinical care of patients with neurological disorders. To accomplish its tasks, SNACC hosts an annual meeting which consists of lectures, workshops, and poster sessions providing able opportunity for education and discussion of research and advances in the fields of neuroscience and neuroanesthesia. Further, the SNACC website (www.snacc.org) contains a wealth of information and resources including educational and teaching material.

Dr. Hari H. Dash is the Director of Anesthesia and Pain Management, Fortis Memorial Research Institute, Gurgaon, India and the President of Asian Society of Neuroanesthesiology & Critical Care (ASNACC). He is also a founder member and ex-president of Indian Society of Neuroanesthesiology & Critical Care.

He replies:
1. Neuroanesthesiology training requirements during anesthesiology residency:
Answer: A minimum of 2-3 months training in Neuroanesthesiology is imparted to the Anesthesiology residents. During this period the resident has to exclusively work in the neurosurgical operation theatre, in the Neuro ICU and has to perform emergency duties.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
Answer: Currently, advance training in Neuroanesthesiology has become almost essential particularly in government teaching/academic hospitals and major private hospitals.

3. Opportunities for advanced training in Neuroanesthesiology:
Answer: Post residency fellowship in Neuroanesthesiology and critical care is a one-year course available in 8-10 government institutions in India. DM (Doctor of Medicine) course in Neuroanesthesiology is a three years course encompassing training in clinical Neuroanesthesiology & Neurocritical Care as well as mandatory research experience is available at five leading academic institutions in India. In addition, the ISNACC has started one-year certificate course in select private institutions where facilities for Neuroanesthesiology and Critical Care and experienced teaching faculty are available.

4. Formal Neuroanesthesiology society:
Answer: The ISNACC was founded in 1999. It organizes an annual scientific conference and supports various local/regional symposia and seminars throughout the year. The society has recently started publishing its own journal – the Journal of Neuroanesthesiology & Critical Care. The ISNACC also provides monitory help to conduct pilot research in Neuroanesthesiology and critical care in different hospitals in India and travel grants to residents to present their scientific papers in international conference.
Dr. Matthew T.V. Chan is Professor in the Department of Anesthesia and Intensive Care, The Chinese University of Hong Kong and Honorary Consultant, Prince of Wales Hospital, Shatin, NT Hong Kong, SAR. He replies:

1. Neuroanesthesia training requirements during anesthesia residency:
   Answer: There is no formal training program.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
   Answer: No, it is not.

3. Opportunities for advanced training in Neuroanesthesiology:
   Answer: There are five neurosurgical centers in HK. The Chinese University of Hong Kong is starting to take trainees from China for six months rotation in Neuroanesthesia. Most of the local specialists go overseas for Neuroanesthesia attachment.

4. Formal Neuroanesthesiology society:
   Answer: Our neuroanesthesia society is named “Association de NeuroAnesthésie-Réanimation de Langue Française (ANARLF)” – French-speaking Neuroanesthesia and Neurocritical Care Society. A board is elected every year (each member is elected for three years). The objectives of the society are available at http://www.anarlf.eu. One member of the society is in charge of organizing the annual meeting. Other activities are to take part in establishing guidelines with the French Society of Anesthesia for Neuroanesthesia or Neurocritical care practice, write books or handbooks, and raise funds for clinical research. We have approximately 90 paid members. The audience at our annual meetings range from 120-140 anesthesiologists.

Dr. Nicolas Bruder is Professor & Head of the Department of Anesthesiology and Intensive Care at the University Hospital La Timone, France. He is also the past president of the Association de NeuroAnesthésie-Réanimation de Langue Française (ANARLF)” – French-speaking Neuroanesthesia and Neurocritical Care Society.

He replies:

1. Neuroanesthesia training requirements during anesthesia residency:
   Answer: There are specific Neuroanesthesia and Neurocritical Care topics to cover during residency. Training in anesthesia and critical care is organized at the French level. It is organized in seven French regions with a Professor of Anesthesiology in charge of coordinating teaching. For example, in the South East part of France, we organize a 3-day meeting with approximately 120 residents from the region, for Neuroanesthesia and Neurocritical care.

2. Is advanced training/certification in Neuroanesthesiology mandatory to practice Neuroanesthesiology?
   Answer: There is no need of specific Neuroanesthesia training or certification to practice Neuroanesthesia.

3. Opportunities for advanced training in Neuroanesthesiology:
   Answer: There is a national postgraduate Neuroanesthesia training program (advanced Neuroanesthesia – Neurocritical care training). The theoretical background is explained during four 3-day meetings in Lyon (easy to access from other parts of France) and a 1-week clinical experience in an approved neurosurgical center is mandatory (this is organized by the French Neuroanesthesia society). There are approximately 20-30 anesthesiologists (and also a few neurosurgeons) registered every year.

Welcome New Members

ACTIVE

Wael M. Ali Sakr Esa, PhD ......................... Westlake, OH
John F. Butterworth, MD ......................... Richmond, VA
Verghese Cherian, MBBS, MD ................... Hershey, PA
Jay W. Johansen, MD, PhD ...................... Jacksonville, FL
Guy Kositratna, MD ................................. Bangkok, Thailand
Massimo Lamperti, MD ......................... Catharpin, Italy
Anushirvan Minokadeh, MD ...................... San Diego, CA
Jorge Rubio, MD .......................... Toluca, Mexico
James S. Jacob, MD ................................. Kansas City, KS

SNACC FELLOW

Umeshkumar Athiraman, MBBS, MD ............ Seattle, WA
Junji Egawa, MD ........................ San Diego, CA

RESIDENT

Rebecca Campbell, MBBS ......................... London, UK
Tasha L. Welch, MD .............................. Rochester, MN
Title: What is an electroretinogram?

Presenter: Reza Gorji, MD

Electroretinography measures the electrical responses of various cell types in the retina, including rods and cones, inner retinal cells including bipolar and amacrine cells, and the ganglion cells. Electrodes are placed on the cornea and on the skin near the eye. Signals are small and measured in micro and nanovolts.

The signals presented represent the depolarization of the retina to high intensity red diode flash stimulation. The responses at the top are the earliest samples chronologically later signals towards the bottom of the picture with the later traces towards the bottom of the page.

Electroretinography measures the electrical responses of various cell types in the retina, including rods and cones.

Pictured to the left: A sample electroretinogram during a neuromonitoring case.

REMINDER! The SNACC elections ballot will open June 23 and close on July 20. All active members are eligible to vote. You will need your member login ID to be able to vote.
SNACC’s newsletter is open to submission by members of SNACC. Please adhere to the following schedule. Submissions do not guarantee publication. We are interested in news and articles of interest from the membership at large. In addition, if you have a question to ask any of the officers of SNACC, you can submit them as well. Due to time and the volume of issues anticipated, not all questions can be answered. Please send your submission to Dr. Reza Gorji at reza@gorji.com.

Publication & Submission Deadlines

Fall and Pre-Meeting Issue
Published September 15, 2014
August 15, 2014 - Copy Deadline

Winter Issue
Published December 15, 2014
November 15, 2014 - Copy Deadline

Spring Issue
Published April 15, 2015
March 15, 2015 - Copy Deadline

Summer Issue
Published June 15, 2015
May 15, 2015 - Copy Deadline

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