Young Neurosurgeons' News

Spring 2012

Chairman's Message: One Step Further

by Edward Smith, MD, FAANS

As the spring meeting for the AANS draws near, the challenge of deciding what to address from the pulpit of the President's Message in the newsletter from the Young Neurosurgeon's Committee (YNC) again presents itself. Fortunately, we are bursting at the seams with good news, exciting new initiatives and an abundance of activities to engage the constituency of the YNC. We have the Neurosurgical Top Gun competition, made better all the time by our dedicated volunteers (stop by at the meeting and compete with your friends). The YNC has an expanded stake in the annual softball tournament, which has grown under the direction of young neurosurgeons (perhaps a bit ironic that a fundraiser initially focused on tumor research has "grown"). New liaisons in section committees, subspecialty groups and affiliated organizations – including a recently created Think First position – have integrated the YNC across the broad fields of medicine related to our profession. Interest in the committee has grown and membership is full (although always eager to recruit!).

These achievements – coupled with the many others detailed throughout this newsletter – reveal the impact that young neurosurgeons can deliver. Our substantive, quantifiable efforts demonstrate that we – even as medical students, residents and new faculty – can contribute meaningfully to the advancement of our chosen field. One of the greatest resources that we bring to organized neurosurgery is our collective enthusiasm – our willingness to act on behalf of causes that we believe important. More so than any other demographic, I would contend that the YNC embodies the idealism that drives our profession one step further.

This energy is a driving force for our colleagues. It is incumbent on us to remind our senior colleagues that we help to set the agenda for neurosurgery and that there is a place for excitement, passion and desire in how we shape our careers. I would cite the example of Bill Ashley, Jr., MD, PhD, MBA, who felt committed to medical student engagement and helped to engineer the new MISSION fellowship that was just approved at the last executive session. We have members in the armed services, like our own secretary Stacey Quintero, MD and former pediatric section liaison Paul Klimo, Jr., MD, FAANS who safeguard our country while also serving in the YNC, advocating for the issues that they feel are important. As you will read below, we have an incredible public service award winner in Robert Louis, MD, PhD. Another example of this energy is Ric Komotar, MD, who has helped to build a small softball fundraiser into a juggernaut that supports neurosurgical research, while also infusing a sense of fun and camaraderie into our work.

The point I am trying to convey here is that *we matter*. The YNC is the place where the best and brightest of our field come to contribute. One has only to look at the achievements of this group – especially in the past few years – to see how important our perspective and initiative is to all those around us. We are the most immediate role models for college and medical students, the people that influence residents to commit to a type of practice. Our example of going **one step further** – on behalf of our constituency, our colleagues, our trainees, and our patients – sets us apart at the forefront of our field.

To those already serving in the YNC, I thank you for your efforts. For those considering getting involved – please come see us. We need you – neurosurgery needs you. As president, I invite you to engage us with your vision and help us – together – to take neurosurgery one step further.

Secretary's Message: One Step Further

Stacey Quintero Wolfe, MD

As neurosurgeons, we are called to be great physicians, skilled surgeons, compassionate doctors and cutting edge researchers. In our profession, this is an expectation, and no less will suffice. But as neurosurgery continues to attract the best and brightest, we have the privilege of going one step further. As you read this newsletter, we hope that you will be inspired by examples of our Young Neurosurgeons who excel not only with their patients, but in all realms of life. As mentors, teachers, parents, and public servants, members of the YNC change lives. Just as we are inspired by the science presented at our annual meetings, we encourage you to become involved in the Young Neurosurgeons Committee and benefit from those whom you will meet.

Additionally, in this newsletter, we would like to begin highlighting selected committee reports brought to us by our YNC liaisons. This will provide YNC members with information on what has been going on within organized neurosurgery over the past 6 months and help prepare them for the upcoming meeting. For those who are not yet initiated into organized neurosurgery, we hope that this provides you with a framework and understanding of some of the committees and work that is performed by our parent organizations in order to enhance and further the specialty of neurosurgery. This plethora of opportunities is just waiting for each one of you to become involved! On behalf of the YNC Executive Committee, we would like to recognize and thank all the members of the YNC who have helped this organization flourish as a result of their hard work, and would like to invite ***All* young neurosurgeons: students, residents, and faculty alike; to come to the YNC meeting at the AANS in Miami on Monday, April 16, 2012 from 5:00 – 7:00 p.m. at the Loews Miami Beach American Ballroom Salon 2.**

Selected YNC Committee Reports

The Young Neurosurgeons Committee is a committee of the AANS designed to serve, develop, and represent those who are beginning their neurosurgical careers. From students to residents to new faculty, the YNC provides countless opportunities for early involvement in organized neurosurgery. The YNC functions in two capacities: (1) The YNC serves the AANS through the YNC Subcommittees, and (2) YNC provides liaisons to key AANS committees in order to represent the interests of young neurosurgeons in the AANS.

The following are a selection of YNC liaison reports from the October 2011 meeting in Washington, DC.

YNC Subcommittees

Neurosurgical Top Gun: One of the most popular events amongst the residents and fellows attending the AANS Annual Meetings is the Neurosurgical Top Gun competition. The competition is designed to introduce young neurosurgeons to virtual training methods. The competition has grown over the last few years to include five virtual skills stations. These stations test various types of neurosurgical brain and spine operative techniques. The virtual haptic feedback stations modeled spine instrumentation and brain tumor resection. Computerized synthetic models test skills in ventriculostomy placement and lumbar instrumentations. Lastly, a bone scalpel provided the most fun by challenging participants to carve a raw eggshell. The stations are provided free of cost by the vendors, and the event is generously supported by major neurosurgical vendors. Last year, we had an unparalleled participation of over 70 residents and fellows with a net collection of $10,029.38. The budget surplus is used to support the NREF program. We hope to expand the program by introducing endovascular virtualization and also look to the future with interest as the AANS hopes to introduce virtual stations for all members as a part of the Annual Program.

Marshals: The YNC Marshals assist with order and efficiency during the annual meetings. Krystal Tomei, MD is Chairman and Maya Babu, MD will serve as the Co-Chair at the 2012 AANS meeting. We're excited to say that there is no longer a need to have supplemental volunteers at the iPod help booth as the growing pains from the transition to a paperless meeting have subsided. For those interested in volunteering to serve as a Marshal, please contact the AANS Department of Education and Meetings at aansam@aans.org.

Medical Student Task Force: The YNC Medical Student Task Force is tasked to develop a pathway for interested and capable students to pursue careers in neurosurgery. With that in mind the AANS YNC announces the **M**edical **S**tudent **O**rganized **N**eurosurgery Fellowship, or MISSION Fellowship, a competitive fellowship for two senior U.S. medical students to involve these students in the workings of the YNC and mentor them in a topic of interest for presentation and publication. Please see the featured article for further information.

Real World: This year's Real World course, "Choosing and Developing a Neurosurgical Practice", will be featured in Miami on Wednesday as Breakfast Seminar 322. Moderated by Kathryn Beauchamp, MD, FAANS, this course includes an outstanding array of faculty in both academic and private practice. It will cover the basics of starting a neurosurgery practice upon finishing residency. Topics will include office management, billing and coding, medical pitfalls, government regulations, building a practice, and will culminate in a panel discussion.

YNC Luncheon: Come join the YNC as they celebrate 21 years of service at 1PM, Monday, April 16th, at the annual YNC luncheon, free for students and residents (registration is required to assure sufficient seating). Hear how one of today's leaders became established. Find out how tomorrow's leaders are shaping neurosurgery. Learn about the impact that young neurosurgeons can make. Catherine Mazzola, MD, FAANS, has been invited to give her perspective on what it means to be a leader in neurosurgery and how you can make an impact in the AANS and neurosurgery. Dr. Mazzola is also the Director of the Craniofacial Center at Atlantic Health Systems-Goryeb Children's Hospital and also developed the Pediatric Neuromuscular Center at Goryeb Children's Hospital. As an active and concerned pediatric neurosurgeon, Dr. Mazzola enjoys mentoring the medical leaders of the future. She was elected to the Executive Committee of the Congress of Neurosurgical Surgery in April 2008 and currently serves as the Chairperson for the northeast quadrant of the CSNS.

Charity Softball Tournament: In 2012, twenty-eight teams of neurosurgeons from top medical institutions will compete on June 9th in Central Park at the 9th Annual Neurosurgery Charity Softball Tournament (www.NeuroCharitySoftball.org). Endorsed by the AANS and hosted by Columbia University, the event benefits brain tumor research via the Neurosurgery Research and Education Foundation (NREF) of AANS. The Annual Neurosurgery Charity Softball Tournament has rapidly evolved into an international competition, with Toronto joining the field in 2010. The first two championships were claimed by Columbia University in 2004 and 2005, while the University of Pennsylvania repeated their title runs in 2006 and 2007. Harvard followed by winning in convincing fashion during the 2008 tournament. Columbia won their third overall championship in 2009 and the Barrow has won in 2010 and 2011. The championship trophy, named "The J. Lawrence Pool Memorial Trophy" in honor of the former Columbia chairman, is currently housed in Phoenix. For the ninth consecutive year, the Steinbrenner family and the New York Yankees will sponsor the tournament. Supported by Mayor Michael Bloomberg, this date is declared "Neurosurgery Charity Softball Tournament Day" in the City of New York. Partnership with the AANS has been instrumental for transitioning from an institutional effort to an international initiative, with this collaboration allowing funding to support NREF neuro-oncology research fellowships. Approximately $300,000 has been raised to date.

AANS Committees

AANS Neurosurgeon: The AANS Neurosurgeon is now fully online for quarterly publication. Each publication is centered around a theme, the next being the neurosurgeon as a patient. They are always looking

for articles regarding important socioeconomic issues, as well as scientific articles of interest to the AANS constituents.

IOC: The International Outreach Committee is working toward a simplified on-line application for international surgeons, making it very easy for international residents to apply. The International Symposium at the annual AANS meeting will be with FLANC (Federation of Latin American Societies). IOC continues to develop a volunteer speaker program at international meetings and courses. IOC is helping to facilitate a joint effort between the WFNS, AANS, and the CNS for equipment distribution to third world regions.

IT: In the Information Technology committee the main focus right now is the AANS Connect. Over the last year this has been in development mostly by an outside service. We are now getting much closer to a working product. It is now up on the AANS website but not yet available to members. In the next couple weeks members of the IT committee will begin testing various components of it. In the future there are many features of this that will be pertinent to young neurosurgeons such as the blog portion, case study portion, etc. Once the site goes live the IT committee envisions asking YNC for help testing and using some of the features.

NREF: The NREF had another successful year of supporting research. They award 10 $40,000 grants out of 69 applications (52 research and 17 young clinical investigator) received. They encourage research proposals in basic science or clinical research. The relatively new Post Residency Clinical Fellowship program supported 20 fellows. Because of great interest, NREF increased the $2,500 medical student summer research grants from 15 to 20 per year. NREF is looking forward to helping with the next annual charity softball tournament in New York City.

Public Relations: In addition to the usual events, this year there has been an increasing public awareness on concussions. All members of the PR committee have been given a set of slides reviewing concussion data, and we have all been asked to present this in our community.

Scientific Planning: This committee reviews all submitted abstracts and puts together the high quality scientific program at the annual AANS meeting. The YNC liaison sits on this committee to assist in representing YNC interests and the YNC executive committee assists in choosing the YNC winning abstract, through anonymous program evaluation process.

Featured AANS Sections

CV Section: The CV section is a dynamic and productive section. The CV section welcomes all residents and neurosurgeons with an interest in cerebrovascular disease. They are particularly interested in engaging young neurosurgeons and are looking to expand membership. There are many opportunities for members to contribute in a meaningful way.

CV Section Website Expansion: There is an initiative to expand and revitalize the website. A committee has convened to advance this initiative. A comprehensive proposal has been drafted and initial bids have been obtained from web design firms.

Senior Society Training Matrix**:** The Senior Society has an initiative to systematize residency training by defining a set of goals and objectives for learning and competency within the neurosurgical subspecialties. To this end they have created the "matrix" concept. The matrix for endovascular neurosurgery is complete. Work on the critical care matrix is ongoing, to be followed by the microneurosurgery matrix.

Grants: The Massimo Collice Foundation Announces an Award for Cerebral AVM Research. This will be an annual international prize of 10,000 euros for experimental or clinical research on Cerebral Vascular Malformations. Further information regarding the prize can be obtained at www.massimocolliceonlus.org. The

NINDS has initiated a new K12 award specifically for neurosurgery with a 14 percentile pay line. New investigators are given special consideration.

Tumor Section: The Tumor Section held a Young Member Reception at the 2011 AANS meeting in Denver. Medical students, residents, fellows, and attendings came together in record numbers (over 100 participants) – proving this to be a cherished venue for young neurosurgeons to meet the leaders in neuro-oncology. Bob Carter, MD, FAANS spoke on "Next Generation Neurosurgery-The Road Ahead", highlighting the mentorship and training in his career that allowed him to go from trainee to chairman.

Related Organizations

AMA: The American Medical Association Interim Meeting of the House of Delegates (HOD) took place Nov 12-15. Immediately preceding the HOD meeting is the Resident and Fellow Section (RFS) and Young Physicians Section (YPS). Krystal Tomei, MD continues to serve as the AANS Delegate to the RFS as well as the HOD and will be attending her first meeting as a member of the AMA Council on Medical Education. The AMA delegation is welcoming a new YPS Delegate and AANS Alternate Delegate to the HOD, Zachary N. Litvack, MD. Maya Babu, MD will be serving her first meeting on the RFS Governing Council as the RFS Delegate to the HOD. The neurosurgery delegation is submitting a resolution to the HOD to increase transparency in the development and implementation of third party coverage decisions and policies at both state and national levels.

ThinkFirst: ThinkFirst is an important injury prevention group which works closely with the AANS. They have recently given the YNC a new liaison position in order to develop a collaborative partnership between the YNC and ThinkFirst. ThinkFirst recently celebrated its 25th anniversary and to commemorate the milestone, held a bike helmet drive for 200 Denver-area kids at the 2011 AANS meeting. Krystal Tomei, MD attended as a representative from the YNC meeting and had a wonderful opportunity to talk to the ThinkFirst chapter liaisons about their local efforts. ThinkFirst is also revamping the online curriculum on injury prevention for kids and adolescents and is looking for YNC volunteers to help with this effort. Mark Proctor, MD, FAANS, Chairman of the Board of ThinkFirst, has expressed an interest in collaboration with the YNC. Brian Nahed, MD and Dr. Tomei will serve as coordinators for those YNC members that are interested in either connecting with their local ThinkFirst chapter or establishing a ThinkFirst chapter at their institution.

WINS: Women in Neurosurgery represents and promotes women in neurosurgery. Every female neurosurgeon and resident is eligible for membership and it is a great way to connect with female mentors in our field. WINS sponsors the mentorship program for medical students and will be hosting their semiannual WINS breakfast on Wednesday, April 18, 2012 in Miami, featuring Dr. Cynthia Breazeal, the 2012 Louise Eisenhardt Lecturer. Dr. Breazeal is the director of the Personal Robots Group (formerly the Robotic Life Group) at the MIT Media Laboratory. Please contact Jennifer Moliterno, MD, or go to the WINS website, www.neurosurgerywins.org, for more information.

The YNC provides a framework for meeting colleagues, an entry point for participation in organized neurosurgery and an easy place to find resources. Through serving on YNC subcommittees, early participation of young neurosurgeons in the AANS committee structure and promoting participation in the annual AANS scientific program, the YNC produces the upcoming leaders in neurosurgery. Join us in Miami!

Up and Coming…A YNC Medical Student Fellowship

William W. Ashley, Jr., MD, PhD, MBA

Neurosurgery is a rapidly evolving specialty and is facing complex new challenges. This offers exciting new opportunities for growth and improvement. As a specialty, we must leverage these opportunities to our best advantage. In order to ensure that we can do this effectively we must continue to attract and retain the best medical students. One of the goals of the YNC, and specifically the Medical Student Task Force, is to develop and nurture student relationships in an effort to create a pathway for interested and capable students to pursue careers in neurosurgery. With that in mind the AANS YNC developing a proposed **M**edical **S**tudent **O**rganized **N**eurosurgery Fellowship or MISSION Fellowship.

The MISSION Fellowship will be a competitive, annual fellowship selecting two senior US medical students. As a fellow, students will –

- Attend meetings and participate on subcommittees under the direction of YNC mentors.
- Participate in the discussions and decision making processes that are critical to the success of the YNC and AANS.
- Identify a research topic that addresses an issue in the realm of organized neurosurgery. The topic will be selected or approved by the YNC and mentored by the Medical Student Task Force with the goal of completing the project and submitting an abstract for publication.

Organized neurosurgery is an integral facet of modern neurosurgery. By encouraging early medical student involvement, we hope to build lasting personal and professional relationships that will help strengthen a student's desire to pursue neurosurgical residency and stay active in neurosurgical organizations after the completion of training. Students can have the opportunity to be involved in projects with real world significance that impact our specialty as a whole. We are very excited about the MISSION Fellowship and ask for your assistance to make it a success. Please forward any questions or suggestion to Chris Philips at cap@aans.org.

Neurosurgical Top Gun Competition

For the seventh consecutive year, the Young Neurosurgeons Committee will host a competition for neurosurgical residents and fellows located in Booth #1348 in the Exhibit Hall at the Miami Beach Convention Center, April 16-18, 2012. This three day event will include stations such as an image guided lumbar pedicle screw, bone scalpel, virtual ventriculostomy and thoracic vertebroplasty simulators. Each participant has one opportunity at each intricate and demanding surgical station and is scored on his or her performance. The resident or fellow with the best combined score will be awarded the distinct honor of being the Neurosurgical Top Gun and a prize of $1,000, as well as $1,500 for their residency program. Top scorers at each individual station will win a prize of $200.

Be one of the first 50 participants and receive a Neurosurgical Top Gun t-shirt!

How Do You Do It?

Kathryn Beauchamp, MD, FAANS

As a full time academic neurosurgeon and a mother of seven children under the age of 12, I am often asked by colleagues, medical students, and random grocery store clerks (they only see the kids); "How do you do it?" The answer to how I do "it" is very similar to the way millions of other working mothers get it done. I have baskets of unfolded clothes stacked in the laundry room, piles of papers on my desk and kitchen counters, beautiful Crayola works of art hanging off my refrigerator doors, and science fair projects growing slimy goo on my dining room table. I love being a mother and I love being a neurosurgeon. Making these two very important parts of my life harmonious was not so much about choosing the "right" medical specialty, but finding the right medical practice to fit my lifestyle.

The type of medical practice that anyone chooses must accommodate their lifestyle in some way. Every job will have drawbacks, and every medical specialty will have a "niche" that will fit. For some, private practice is appealing; others may think that sounds horrible. If you are drawn to hospital work, what sounds better, an urban or rural setting? Perhaps field work, a huge research lab, or teaching? For me, a multi-specialty academic practice at a level-one trauma center made sense. It works for me and my family. Yes, it is a busy, crazy hours kind of life; but neurosurgery is what I want to do and neurotrauma is what interests me. There is also the "right" mix of publications, committees, and administrative work. This would be a good time to acknowledge that my supportive spouse is an asset (although not necessary to achieve success in this field), and helpful when I have to leave the house in the middle of the night. (Also noteworthy is that I chose to live close to my job. Do not underestimate the drain factor of a long commute.)

The bottom line is this; do what you love, what you are driven to do, something that captures you, motivates you. That is where success lies. Choose your passion and then find, or create, the job that works for you. There are a myriad of practice templates in all medical specialties. Remember that your needs will change as your life circumstances do; your first job does not have to be your forever job. Neurosurgery is demanding and fulfilling, but it doesn't have to be intimidating; it can be tamed into working for you. And no matter what you choose, as soon as the kids come, there will be stacks of laundry and sticky counters no matter how hard you try to do "it" all.

Neurosurgical Relief Effort in Africa

Robert Louis, MD, PhD

Recipient of the 2011 YNC Public Service Citation

In August-September of 2010, a multidisciplinary team from the University of Virginia embarked on a neurosurgical relief mission to Africa. Dr. Robert Louis, a PGY-4 resident in neurosurgery, organized a comprehensive team which included Marcel Durieux, MD (Professor in neuroanesthesia), Justin Ford, MD (PGY-4 in anesthesiology), and Kendall Greiner, CCRN (Neuro-Intensive Care nurse). The team travelled to Tanzania as part of the non-profit organization Madaktari, which was founded by another UVA neurosurgical alumnus, Dilantha Ellegala, MD, FAANS.

Image 1: From left to right: Marcel Durieux MD (Professor of Anesthesiology), Kendall Greiner CCRN, Robert Louis MD (resident, neurosurgery), Justin Ford MD (resident, anesthesiology) in front of Bugando Regional Medical Center in Mwanza, Tanzania.

With a population of 41 million people and only three trained neurosurgeons, Tanzania has the worst doctor to patient ratio for neurosurgical care of any

Image 2: Dr. Louis teaching Tanzanian General Surgeon Dr. Emmanuel Saguda, performing emergency craniotomy for subdural hematoma evacuation.

country in the world. The prospects for improvement in this situation are grim, as regional training programs do not exist for neurosurgery and it is unlikely that a western trained neurosurgeon would relocate to rural Tanzania. In a novel attempt to solve this problem, Dr. Louis aligned himself with Dr. Ellegala of the Medical University of South Carolina. In 2006, after completing his neurosurgical residency at UVA, Dr. Ellegala founded Madaktari with the goal of establishing self-sustainable health care through training of local physicians, nurses, and health care staff. Their model was to use education, training, and resources available locally to establish the kind of health care that would be sustainable long after visiting western physicians vacated their temporary support posts. With a lifelong passion for education and humanitarian work, Dr. Louis expanded on this concept to include the entire spectrum of neurosurgical care. His idea was that in order to provide optimal neurosurgical care, the peri-operative and post-operative teams would also need education and training. Though a comprehensive approach, Dr. Louis' hope was to train the Tanzanian team to achieve the best possible outcomes while working with very limited resources.

Prior to departure, the team worked tirelessly to procure supplies and donations of equipment in order to maximize their capabilities once they hit the ground. Over the five weeks, they performed nearly fifty neurosurgical cases, working day and night to train the local surgeons, anesthetists, and support staff in emergency neurosurgical care. Their efforts were met with much enthusiasm from the local medical staff and significant progress was made towards advancing their regional capabilities. Upon returning to Virginia, the UVA Madaktari team remains driven to keep the effort alive and organized a return trip in September of 2011, led by fellow UVA neurosurgical resident, Ricky Medel, MD. Ultimately, Dr. Louis' goal would be to spend two months teaching neurosurgery in Africa each year.

Image 3: Dr. Louis teaching Tanzanian Orthopedic Surgeon Dr. Isidore Ngayomela, performing cervicothoracic instrumented fusion for a traumatic cervical fracture-dislocation.

"The real credit should go to Dilan," Dr. Louis says, "his visionary leadership and continued efforts are what have made this all possible." As a result of Dr. Ellegala's work, Madaktari has now expanded their mission to include Tanzania, Kenya, Uganda, and Ethiopia and has helped to organize the first neurosurgical residency training program for East Africa. Long frustrated by a lack of opportunities for neurosurgeons to work with international humanitarian relief efforts, Dr. Louis credits Dr. Ellegala and Madaktari for helping to bring his dreams to fruition.

In recognition of his work, Dr. Louis has been recognized by the American Association of Neurological Surgeons with the 2011 Young Neurosurgeons Committee Public Service Citation. This citation is awarded annually for extraordinary or unusual public service outside of any service specific to organized neurosurgery.

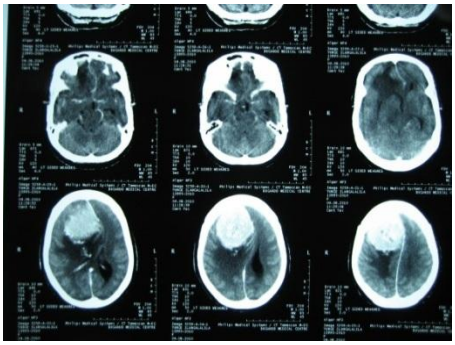

Image 4: Right frontal meningioma resected during the trip.

Image 5: Dr. Louis examining patient on neurosurgical teaching rounds in Tanzania.

Book Reviews

by Stacey Quintero Wolfe, MD

Hemorrhagic and Ischemic Stroke: Medical, Imaging, Surgical, and Interventional Approaches

Bendok BR, et al. Thieme: 2012

A practical text on stroke has long been elusive due to the variable presentations and treatments of cerebrovascular disease. *Hemorrhagic and Ischemic Stroke* is an outstanding compilation of current standards presented in a thorough yet concise practical guide by today's leaders in cerebrovascular disease.

This text addresses both ischemic stroke as well as intracerebral hemorrhage, subarachnoid hemorrhage, and ruptured AVMs. It is separated into four separate sections, or "pillars" of stroke care: Medical Management, Imaging, Open Surgical Approaches, and Interventional Approaches. These topics are all presented in a comprehensive manner that is easily readable and include the most current studies and trends, such as fibrinolytics and critical care management. The imaging section provides an excellent review of current and upcoming modalities, presented for the non-radiologist in a systematic and understandable format. There is an excellent review of how to evaluate CT, MRI, ultrasound, PET, and angiograms in those with cerebrovascular pathology. The open surgical section covers the gamut of special anesthetic considerations, bypass, MoyaMoya, craniectomy, endarterectomy, aortic arch surgery, aneurysm and AVM surgery, and even spinal dural fistulas. Finally, the neurointerventional section presents the current uses of endovascular thrombolysis, stenting, coiling, and embolization, as well as a look toward promising advances.

Each section is color coded for ease and concisely presents the current standards of care based on the literature. Every chapter begins with a selection of pearls for quick reference and contains outstanding tables and algorithms for ease of use. The 200+ illustrations are excellent and augmented by online videos of endovascular and operative procedures. It is one of the few books that acts as both a didactic resource and a surgical atlas, all within just over 500 pages.

Hemorrhagic and Ischemic Stroke is an outstanding resource and an enjoyable read that provides cutting-edge information in this dynamic field. It is a must for every all who care for patients with cerebrovascular disease, from student to professor.

Handbook of Neuroendovascular Surgery

Deshaies EM, Eddleman CS, Boulos AS. Thieme: 2012

I must preface this by admitting to a slight bias, as I am one of the contributors, but the *Handbook of Neuroendovascular Surgery* is an outstanding new resource for those training in cerebrovascular and neuroendovascular surgery. As the field has rapidly evolved, all neurosurgical residents, as well as many radiology and neurology residents, care for these patients, making a concise understanding of the pathology and treatment essential. This text provides a quick reference for clinical pearls, equipment, and techniques in preparation for a neuroendovascular case or the care of a neurovascular patient.

The book is divided into three primary sections: Introduction, including vascular anatomy, anticoagulation, and anesthesia; Equipment and Techniques, including radiation physics, vascular access, endovascular techniques and complication; and Treatment of Specific Diseases, including aneurysms, AVM, DAVF, stroke, intra- and extracranial stenosis, vascular injuries, spinal arteriovenous malformations, and tumors. Each chapter begins with background information, proceeds with a summary of the most important evidence-based medicine and then highlights the essential equipment and surgical techniques. Technical pearls provide the reader with key experience

and complication avoidance, and the recommended readings have been carefully selected to provide historical and comprehensive background. Importantly, alternative therapies are highlighted when open surgical treatment may be superior, such as in cases of certain types of dural arteriovenous fistulae or select middle cerebral artery aneurysms.

The *Handbook of Neuroendovascular Surgery* is an incomparable resource for those training in the field, as one navigates the vast array of catheters, wires, coils, embolic materials, and closure devices, not to mention the actual pathologies. Written by neurosurgeons, radiologists, and neurologists, this practical text contains the current core information needed in daily practice.

Principles of Posterior Fossa Surgery

Nanda A. Thieme: 2012

Focusing solely on the posterior fossa, this text fills an important gap in neurosurgical knowledge and helps us to draw even further from the morbidity that caused Cushing to refer to the posterior fossa as the "gloomy corner" of neurosurgery. Following a detailed anatomic review, *Principles of Posterior Fossa Surgery* provides a pathology-based review of the posterior fossa, including medical pathology, congenital lesions, infection, trauma, aneurysms, cavernomas, arteriovenous malformations, tumors, and even shunts. It includes outstanding stepwise surgical approaches and illustrations to all areas of the posterior fossa, including difficult regions such as the clivus and jugular bulb. Additionally, there are excellent reviews on endovascular and radiosurgical therapy in this region.

Principles of Posterior Fossa Surgery is a comprehensive review of surgical approaches and techniques for the posterior fossa. It provides insight from some of the most prominent neurosurgeons of this era into this challenging domain, making posterior fossa surgery safer and more accessible. This book is a valuable tool for every practicing neurosurgeon and trainee.

Handbook of Spine Surgery

Baaj AA, et al. Thieme: 2012

The *Handbook of Spine Surgery* is an outstanding specialty handbook that provides a concise and practical, yet detailed, guide to spinal disorders. It is divided into four principal sections: Anatomy, Pathology, Surgical Techniques and a Clinical section including chapters on spinal imaging, neuromonitoring, radiation, and interventional procedures. The Technique section is excellent, covering nearly all common, and a few not as common, spinal procedures. Each chapter is dedicated to a different surgical technique and reviews indications, technique, complications, postoperative care, and outcomes in a bullet point format. Additionally, the chapters contain useful illustrations to enhance understanding of each technique. Each chapter contains surgical pearls, tapping into the author's experience, and ends with several questions, excellent for board study and review. The appendix is an especially helpful reference for trainees, including an overview of positioning, orthoses, and grading scales.

The *Handbook of Spine Surgery* distills a vast amount of current information in an organized and succinct manner. All will enjoy reading it and find new and useful information to expand their armamentarium. It is a welcome resource for those training in spine surgery as well as a contemporary refresher before surgery.

Sellar and Parasellar Tumors

Laws ER, Sheehan JP. Thieme: 2012

Our knowledge of the sella and its pathology has grown enormously since Cushing first published *The Pituitary Body and its Disorders* in 1912. This is a beautiful review of this region by those who have mastered this field.

Sellar and Parasellar Tumors takes a disease-oriented approach to this area. Following a historical and comprehensive anatomical review, the book focuses on surgical treatment for pituitary adenomas, meningiomas, craniopharyngiomas, chordomas and chondrosarcomas, and rathke cleft cysts. There is an excellent review of transsphenoidal, endoscopic, and transcranial approaches to this area, as well as multidisciplinary radiation and chemotherapy treatment options. Notably, there is an outstanding chapter dedicated to ophthalmologic evaluation and even rehabilitation.

This is a well written, insight and authoritative reference for any clinician who manages patients with sellar and parasellar disease.

The Neurosurgical Instrument Guide

Eddleman CS. Thieme: 2012

The Neurosurgical Instrument Guide is the first visual reference guide to neurosurgical instrumentation. This concise handbook provides a detailed guide to nearly 500 neurosurgical tools through a large photograph, title (and nick-names), and purpose of the instrument. It is conveniently divided into operating room set-up, basic neurosurgical trays, microsurgical instruments, spine instruments, and transsphenoidal trays.

This user-friendly handbook will facilitate the learning of the entire neurosurgical team, from surgical technicians to nurses to students and residents, and is an excellent reference and educational tool.

Published for the AANS Young Neurosurgeons Committee by:

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