Neurotrauma & Critical Care NEWS

American Association of Neurological Surgeons

Spring 2004

AANS/CNS Section on Neurotrauma & Critical Care

Editor:
P. David Adelson, MD, FACS, FAAP

Chairman's Message

In This Issue...

Donald Marion, MD, FACS

For this issue of the newsletter, David Adelson, MD, and I asked L.D. Britt, MD, a leader in trauma surgery, and neurosurgeons Stephen Haines, MD, and Peter Letarte, MD, to contribute their thoughts on what I believe has become the central theme of my term as chair of the Trauma Section, namely the problems with delivery of neurotrauma care in the United States. Drs. Britt, Haines and Letarte describe problems of which we all are aware, albeit from a somewhat different approach.

From my perspective, I agree that we must do all we can to provide for the safe and rapid treatment of neurosurgical patients with life-threatening intracranial or spinal problems, including not only evacuation of enlarging intracranial hematomas, but also treatment of children with acute hydrocephalus or those with deteriorating neurological status secondary to a spinal epidural hematoma. As the three doctors so eloquently point out in their respective articles, there are numerous reasons for the problems we currently face. Many of these reasons seem overwhelming and difficult for us to influence, such as the medical liability crisis and the inequities in reimbursement. But as someone who has found treatment of these patients an extremely gratifying career, I choose to reduce the problem to positive recommendations for my colleagues. I challenge all neurosurgeons to:

- not relinquish their cranial surgery privileges at their hospitals;
- not remove themselves from the call schedule;
- work with your hospitals to develop rational emergency triage systems;
- establish protocols within your hospitals for the consistent management of neurotrauma patients; and
- help general surgeons in rural areas learn the basics of a craniotomy, and develop a relationship with those surgeons in areas of the country that have no available neurosurgeons.

Finally, I challenge all chairs of departments of neurosurgery to periodically take trauma call. This is the best way I know of imparting to your trainees all of the responsibilities of being a physician and neurosurgeon. In my personal view, the concept of "having paid your dues" is far superceded by the responsibility of chairs to instill in their trainees the importance of rapid, high quality treatment of acute neurosurgical diseases, a goal best accomplished through hands-on leadership.

At the 2004 Annual Meeting of the American Association of Neurological Surgeons (AANS) in Orlando, I will be turning over the chair of the AANS/CNS Section on Neurotrauma and Critical Care to Alex Valadka, MD, a friend and colleague who already has distinguished himself as a gifted academician and leader in organized neurosurgery. It has been an honor and privilege for me to have led the Trauma Section over the past two years. I think we substantially have enhanced neurotrauma research activities through our support of the National Neurotrauma Society, and collaboration with Synthes and Codman to enlarge the scope of research grants for residents. We have remained strong supporters of injury prevention education and the ThinkFirst/National Injury Prevention Foundation. A particular focus has been on the promotion of strong educational programs on neurotrauma and its treatment at our national meetings, including a refocusing of our critical care course to a more practical format. We have encouraged the development of a separate, stand-alone practical course specifically to teach contemporary neurocritical care to residents and neurosurgeons. To date, three position statements have been completed and endorsed by both the AANS and CNS: one on appropriate reimbursement for call coverage; a second on reasonable on-call responsibilities; and a third on appropriate first responders to neurosurgical emergencies in

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Neurotrauma and Critical Care Highlights at the AANS Annual Meeting

The 72nd Annual Meeting of the American Association of Neurological Surgeons (AANS), themed "Advancing Patient Care Through Technology and Creativity," will be held May 1-6 at the Orlando Convention Center in Florida. The most up-to-date meeting information is available online at www.AANS.org/education/annual.asp.

Monday, May 3, 2004

Poster Viewing Session **2:00–2:45 PM**
Neurotrauma and Critical Care Posters

Tuesday, May 4, 2004

AANS/CNS Section on Neurotrauma and Critical Care
Moderators: Domenic P. Esposito and Jack I. Jallo

Scientific Session **2:45–3:45 PM**

Synthes Craniofacial Injury Award

2:45–2:55 PM

834 – Assessment of Intracerebreal S100B Levels After Fluid Percussion Injury by MR Spectroscopy
Authors: Andrea Kleindienst, Christos M. Tolias, Frank D. Corwin, Panos P. Fatouros, Anthony Marmarou, Ross M. Bullock

2:55–3:05 PM

835 – Possible Causes of Depressed Cerebral Metabolic Rate of Oxygen after Severe Brain Injury
Authors: Uyi E. Ogbeide, Thomas C. Glenn, Paul M. Vespa, John W. Boscardin, So-Youn J. Lee, David A. Hovda, Neil A Martin

3:05–3:15 PM

836 – Further Development of Reconstructive and Cell Tissue-Engineering Technology for Treatment of Traumatic Paraplegia in Rats
Authors: Shimon Rochkind, Abraham Shahar, Zvi Nevo, Dalia El-Ani, Liliana Astochov, Tami Hayon, Oran Ayalon, Malvina Alon, Luba Barsky

Synthes Spinal Cord Injury Award

3:15–3:25 PM

837 – Tempol a Superoxide Dismutase Mimic, Improves Locomotor Function and Decreases Tissue Loss After Spinal Cord Injury in the Rat
Authors: Virany Huynh Hillard, Yan Zhang, Kaushik Das, Richard Zeman, Joseph Etlinger

3:25–3:35 PM

838 – Evidence of Altered Coherence of Brain Activity in the TBI Patients: The Role of Seizures on Driving Remote Regions of the Brain
Authors: Donald C. Shields, Neil A. Martin, Valeriy Nenov, Marc Nuwer, Paul Vespa

3:35–3:45 PM

839 – Comparison of Pupillometer With Manual Pupillary Examination in the Intensive Care Unit
Authors: Rose Du, Michele Meeker, Peter Bacchetti, Claudio Privitera, Merlin Larson, Martin Holland, Geoffrey Manley

Special Symposium **3:45–5:00 PM**
Title: Surgical Controversies in Neurotrauma
Moderator: Donald W. Marion
Speakers: Domenic P. Esposito, Stephen J. Haines, Alex B. Valadka

2003 Codman Neurotrauma Fellowship Award and Presentation **5:00–5:15 PM**
Recipient: Jason H. Huang

2004 Codman Neurotrauma Fellowship Award **5:15–5:20 PM**
Presented By: Donald W. Marion
Recipient: TBA

Synthes Resident Spine Award **5:20–5:25 PM**
Presented By: Donald W. Marion
Recipient: Virany Huynh Hillard

Synthes Resident Craniofacial Award **5:25–5:30 PM**
Presented By: Donald W. Marion
Recipient: Andrea Kleindienst

Editor's Message

P. David Adelson, MD, FACS, FAAP

As my term as secretary-treasurer comes to a close, in this last edition of the newsletter that I will be editing I wanted to take the opportunity to thank everyone for the wonderful comments and passionate responses to the different topics that have been highlighted in these pages. At the outset of our terms two years ago, Don Marion, MD, and I wanted to do something a little different with the newsletter by providing a "point-counterpoint" approach to important issues. As in this issue, opinions not only from within neurosurgery but also outside the specialty were sought to provide a range of perspectives. While this tactic may have provoked controversy, it made for more interesting reading and widened the spectrum of ideas surrounding a particular issue. As we said at the outset, we hoped that you would enjoy these newsletters not only for the updated news, but also for the differing views, making it not just another throwaway. I am glad that most readers have responded so positively.

Lastly, I would like to thank Dr. Marion for all his support and friendship throughout the years. It has been fun working with him and with all of you. As he detailed in his Chairman's Message, he has taken the section to a new level with regard to the depth and breadth of the section's involvement in neurotrauma both within neurosurgery and outside of it. I look forward to seeing of more great things from the Section on Neurotrauma and Critical Care under the guidance of Alex Valadka, MD.

TBI Guidelines; Position Statement: First Responders

Update Notice: Guidelines for the Management of Severe Traumatic Brain Injury—Cerebral Perfusion Pressure

Recommendations

A. *Standards*

There are insufficient data to support treatment standards for this topic.

B. *Guidelines*

Cerebral perfusion pressure (CPP) should be maintained at a minimum of 60 mm Hg. In the absence of cerebral ischemia, aggressive attempts to maintain CPP above 70 mm Hg with fluids and pressors should be avoided because of the risk of adult respiratory distress syndrome.

Overview

Cerebral ischemia may be the single most important secondary event affecting outcome following severe traumatic brain injury (TBI). The CPP, defined as the mean arterial blood pressure minus ICP, is the physiologic variable that defines the pressure gradient driving cerebral blood flow (CBF) and metabolic delivery and is, therefore, closely related to ischemia. Based on previous studies that document a significant incidence of posttraumatic vasospasm, as well as changes in pressure and metabolic autoregulation, it is clear that cerebral vascular resistance is altered (often increased) by trauma. A low CPP may jeopardize regions of the brain with preexisting ischemia, and enhancing intravascular hydrostatic pressure by increasing CPP can help to improve cerebral perfusion. In most cases, CPP is amendable to clinical manipulation, and enhancement of CPP may help to avoid both global and regional ischemia.

Summary

Available physiologic and clinical evidence supports the recommendation, as a therapeutic guideline, that CPP be maintained at greater than 60 mm Hg in adults. CPP's of 50 mm Hg or lower have been shown to be associated with critical reductions of brain tissue oxygen tensions and with increased mortality and morbidity following severe TBI. No study has found that the incidence of intracranial hypertension, morbidity, or mortality is increased by the active maintenance of a CPP above 60 mm Hg, even if this means normalizing intravascular volume or inducing systemic hypertension. A prospective randomized trial has demonstrated, however, that artificial attempts to maintain CPP above 70 mm Hg may be associated with an increased incidence of adult respiratory distress syndrome.

Key Issues for Future Investigation

Controlled, prospective, randomized studies comparing CPP-based management vs. ICP-based management of head-injured patients will be needed to determine if the former will lead to improved outcomes. Such studies should attempt to determine at which level CPP should be optimally maintained, and for which types of brain injury. A recent prospective study of CBF-based management has contributed to but not directly addressed this question because $PaCO_2$ also was an independent variable in that study design.

These guidelines are copyright © 2000 by the Brain Trauma Foundation. The updated cerebral perfusion pressure guidelines were approved by the American Association of Neurological Surgeons (AANS) on March 14, 2003. Note that a condensed version of the CPP guidelines appears here. The full text is available at: www2.braintrauma.org/guidelines/downloads/btf_guidelines_cpp_u1.pdf?BrainTrauma_Session=f37ee9bc258865d636a9a59b07b422b3 or by going to www.braintrauma.org, selecting Guidelines, then "Management of Severe Traumatic Brain Injury," May 1, 2003, update.

On a related note, the Position Statement on Reconciling On-Call Responsibilities With EMTALA Requirements was published in the Fall 2003 issue of *Neurotrauma & Critical Care News,* available online at www.neurosurgery.org/sections/tr/newsletter/trauma0903.pdf.

AANS/CNS Section on Neurotrauma and Critical Care

Position Statement on Neurological Emergency/Trauma First Responders at Hospitals With Neurosurgery Residency Training Programs

Justification

Neurosurgical training programs are organized in such a way that more junior level trainees perform the initial evaluation of emergent, urgent and elective neurosurgical patients. The junior level trainee then reports to a supervising senior level resident or attending neurosurgeon, at which time appropriate treatment decisions are made. The Residency Review Committee for Neurosurgery, and the Accreditation Council for Graduate Medical Education, both recommend this system.

For emergent neurosurgical cases, communication between the junior level trainee and the senior level resident or attending is immediate, as is the operative decision-making. This system does not delay appropriate neurosurgical care.

Position Statement

The AANS/CNS Section on Neurotrauma and Critical Care, with the endorsement of the Congress of Neurological Surgeons and the American Association of Neurological Surgeons, recommends that residents in their first years of training be recognized as appropriate first responders to emergent, urgent or elective neurosurgical consults, including trauma consults, as approved by their respective Neurosurgical Division or Department Chair.

Why Our Colleagues Are Withdrawing From Trauma Care

Peter B. Letarte, MD, FACS

In Illinois, as in other states, neurosurgeons in some hospitals have renounced their intracranial privileges. Because they are no longer credentialed to do intracranial work, they can no longer treat intracranial trauma. As a result, they are not available to take trauma call at the hospitals that they cover.

Those of us who work in large referral centers have witnessed increased referral of trauma to our centers. In our area, emergency rooms often have to call several centers to find a place for patients who are acutely ill and in need of emergent care. Critical patients are arriving at our emergency rooms with what appear to be increasing delays in care. To those of us who continue to receive and care for these patients, who have not renounced our intracranial privileges, and who do not agree with this tactic, these results are disturbing.

It is important to remember, however, that these tactics are a symptom and indicator of significant problems in the delivery of neurosurgical care and, in particular, neurotrauma care in our country. To our colleagues who have taken this step, the system is broken, and it is broken to the extent that drastic measures are required to fix it.

No matter what one's stance on the renunciation of privileges, all of us who are concerned about the future of neurotrauma care in this country need to understand the factors that have lead to these actions.

Underlying Causes

In Illinois, one precipitating event was a lawsuit in which the settlement against a neurosurgeon exceeded his professional liability insurance coverage. His assets were not protected, resulting in the loss of his personal assets and bankruptcy. The impact of this event on the neurosurgical community was profound. In the face of this event and steadily declining reimbursements, many community neurosurgeons started examining their practices and their liability.

Using data that showed a likelihood of being sued once every two years, a 70 percent chance of decision for the plaintiff in cases involving cognitive impairment and a rising incidence of extremely large settlements, many neurosurgeons concluded that the risk of a settlement against them that significantly exceeded their professional liability insurance coverage was real. These neurosurgeons came to the conclusion that all of the financial rewards of their years of training and subsequent years of hard work could be lost in one lawsuit.

While one could perhaps argue with this data or the conclusions reached, the psychological impact of this decision cannot be denied. The dictum often applied to terrorism, "kill a few, scare a million," appears also to apply here. Neurosurgeons feel themselves to be in a very vulnerable position.

As the liability of doing intracranial work was becoming unacceptable, the reimbursement for doing it was going down. For many community neurosurgeons, intracranial work outside of trauma is a small part of their practice, limited to the occasional removal of simple tumors. Spinal procedures comprise the vast majority of their work. Eliminating non-trauma intracranial work from their practices has very little impact on their billing and collections.

Advantages of Limiting Practice

In addition, eliminating trauma call and emergency call from their practices offers several advantages. First, revenues from trauma call rarely generated much, if any, income; often, these procedures were performed at a loss. In addition, such cases often interfered with profitable elective surgeries by competing for operating room time or by causing surgeons to work many hours the night before elective operative schedules.

Ultimately, however, it is the intolerable liability risk of intracranial work, more than the financial disincentives, which have caused these neurosurgeons to renounce their intracranial privileges. They feel that they are assuming greater liability and staying up nights to care for cases for which they will not be reimbursed and which, in fact, hold a risk to them of personal financial ruin. Under these circumstances, they have opted to eliminate the risk of doing intracranial work and have renounced their intracranial privileges. By doing so they have opted out of trauma care.

There have been other reasons that surgeons have elected to stop caring for trauma patients. Prior to the most recent revisions of the Emergency Medical Treatment and Labor Act (EMTALA) rules, some surgeons found themselves alone on the call schedule as practice changes and retirements eliminated colleagues from the community. Some hospitals insisted that neurosurgeons in solo practice continue to provide emergency call coverage 24 hours a day, 7 days a week coverage. With the recent changes in EMTALA, however, this pressure should be largely removed.

While the business argument for opting out of trauma care may be compelling, there is perhaps a deeper motive behind these actions by our colleagues. In a political environment in which neurosurgeons are increasingly viewed not so much as the providers of complex and essential healthcare services but simply as an insignificant number of votes amongst the total population, many neurosurgeons feel that they have no voice. As economic and political forces have evolved to create this environment, some neurosurgeons feel that they are being unfairly burdened with the consequences of these changes. As attempts to seek social and political remedies to these problems fail, some neurosurgeons have come to the conclusion that dramatic action, such as various forms of withholding of care, are the only remaining vehicles to highlight their concerns to society at large. These surgeons feel that without such action, certain economic and political segments of society will continue to take advantage of our natural predilection to sacrifice and service, to the detriment of our profession and the public that we serve.

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No More Superheroes?

Stephen J. Haines, MD

Smallville is a city of about 100,000 located approximately 100 miles from the major metropolitan center of Gotham. It is just large enough to need the services of two superheroes, the Flash and Superman. Because the Emergency Superhero Act of 2001 prevents the police from requiring that superheroes be on call more then once every three days, problems requiring superhero intervention were being referred to Gotham every third day. The Superhero Reimbursement Act of 1994 established a reward schedule for superhero activities that resulted in greater payment for interventions that prevent loss of working days than those that save lives. An uncontrolled tort system had led to large awards against superheroes whose actions were not successful.

The Flash, the superhero who had been in action in Smallville the longest, had become the superhero of choice for daytime interventions. These were generally short interventions that saved people from injuries that would keep them from work, and with his daytime activities, the Flash lived quite well. Most of the legal risk in superhero work seemed to be attached to nighttime crime when people's lives were at risk and outcomes, uncertain. After much thought, he declared that he could no longer afford to be a superhero if a citizen's life was in danger. Such situations would have to be handled by the superheroes in Gotham two days out of three.

The day after the Flash stopped trying to save lives and was no longer on call, Jack Armstrong, a 35-year-old father of two, was driving home from a late visit to an elderly parishioner who had fallen ill, when an earthquake opened a deep crevasse just in front of his car. It took Superman 10 minutes to be notified, change and fly to Smallville where he found Jack dead in his car at the bottom of the crevasse, only 30 seconds from the Flash's home.

The Question Is—Is the Flash Still a Superhero?

In its official definition, neurological surgery is "…that specialty of surgery that provides the operative and nonoperative management (that is, critical care, prevention, diagnosis, evaluation, treatment and rehabilitation) of disorders of the central, peripheral and autonomic nervous systems, including their supporting structures and vascular supply" (www.abns.org, Dec. 17, 2003) When a neurosurgeon voluntarily relinquishes privileges to treat brain diseases for whatever reason, is he or she still a neurosurgeon?

The problem of neurosurgeons voluntarily relinquishing privileges for treating cranial and intracranial diseases is remarkably complex and nuanced. The field of neurosurgery is so broad that many of us subspecialize, voluntarily restricting our practices in ways that make sense for our individual circumstances. Under severe economic pressures—downward on reimbursement, upward on cost of professional liability insurance protection—and subject to arbitrary and sometimes irrational legal restrictions, it is tempting to choose to concentrate on areas of practice that carry relatively higher reimbursement, lower risk and less after-hours work. In situations where this can most often be accomplished without compromising the provision of necessary neurosurgical care, as in large neurosurgical groups or major metropolitan centers, there can be no objection. Unfortunately, in suburban or rural areas where neurosurgeons are in solo practice or in small groups, restriction of practice only will lead to the compromise of care.

When the relinquishing of privileges eliminates the provision of lifesaving neurosurgical services, particularly when those services previously have been provided, a very important line has been crossed. It is incomprehensible that a physician trained to provide lifesaving surgery, for example evacuation of acute epidural hematoma or revision of an obstructed cerebral spinal fluid shunt, can voluntarily withhold those services. It seems analogous to sitting passively in a restaurant while a diner at the next table chokes to death on an aspirated piece of meat.

Permission to practice neurosurgery in its full and official meaning is one of the greatest privileges that society can bestow. Neurosurgeons train at substantial public expense, are granted a license because of the perceived societal value of their work and take an oath to serve. We must fight vigorously to establish a reimbursement scheme related to the value of the provided service, to rationalize the method for dealing with the medical liability crisis and to have reasonable call demands. Withholding lifesaving services that only neurosurgeons can provide, however, violates the public trust and the personal oath of service that justifies neurosurgery's "special status." Without that trust and special relationship with our patients and the public, neurosurgery cannot hope to retain the special status that society has traditionally given to "brain surgeons." Without that special status, and without maintaining the "high road" despite the pressures that the present system has created, there is little hope of convincing our society to work with its neurosurgeons and medicine to reverse the adverse trends in reimbursement, liability and regulation that all are facing.

Stephen J. Haines, MD, is the Lyle A. French Chair and head of the Department of Neurosurgery, University of Minnesota School of Medicine in Minneapolis, Minn.

NEW CME Verification Policy

As of this spring, the American Association of Neurological Surgeons (AANS) is providing bar coded tickets to registrants of the AANS Annual Meeting and all AANS/CNS section meetings. The tickets need to be deposited into receptacles outside the meeting rooms in order to claim category 1 continuing education credit. This process is in accordance with the rules of the American Medical Association's Physician's Recognition Award (PRA). More information: (888) 566-AANS or www.AANS.org/CME%20flyer3.pdf.

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Subspecialty Abandonment and the Evolution of a New Specialty

L.D. Britt, MD, MPH

There is no doubt that trauma care has evolved over the last several decades. Trauma care was notably sporadic in the 1940s and 1950s. In the 1960s and 1970s, the concept of "trauma system" development was embraced by few, among them David Boyd, MD, who was mainly responsible for implementing the Emergency Medical Services (EMS) Systems Act of 1973. With the development by R.A. Cowley, MD, of a statewide trauma system in Maryland, along with other similar initiatives, the concept of regionalization of care was firmly established. Several organizations have contributed to the progress of trauma management. The two organizations that have made major contributions in this area have been the Committee on Trauma of the American College of Surgeons and the American Association for the Surgery of Trauma.

The advances and innovations have been legendary, including the Advanced Trauma Life Support course (arguably the first widely accepted practice guideline), the trauma center verification process, the National Trauma Data Bank, evidence-based medicine, and multi-institutional trials. However, the discipline of trauma has recently faced many challenges and threats. The landmark article by Richardson and Miller highlighted the growing apathy for this specialty with 82 percent of the resident respondents indicating no interest in trauma as a career or as a major part of their surgical practice[1]. Fakhry and colleagues highlighted the resident experiences with regard to a career in trauma and the declining career incentives[2]. A recent survey done by the American Trauma Society identified six "top concerns" including:

- insufficient numbers of trauma fellows (60 percent);
- insufficient numbers of surgical residents (50 percent);
- difficulty recruiting trauma surgeons/fellows (49 percent);
- increasing workload (83 percent);
- interference with quality of life (55 percent); and
- cost of professional liability insurance (73 percent).

However, this survey, curiously, did not address what is considered by this author to be perhaps the greatest threat to the trauma profession: the neurotrauma and critical care subspecialists (particularly the neurosurgeons and the orthopedic surgeons). These subspecialists essentially are holding the hospital hostage by demanding exorbitant fees to provide coverage for emergencies—even though they have active staff privileges. For example, one Florida hospital (attempting to provide optimal emergency and trauma coverage) was forced to meet the financial demands of the neurosurgeons who threatened to relocate their hospital practices unless each surgeon received $4,000 per day for call covered from home. Although many hospitals are trying to appropriately address the regulations of the Emergency Medical Treatment and Labor Act and provide adequate coverage for all patients, such a practice of demanding these extreme fees by many of the subspecialists will, inevitably, bankrupt any healthcare facility. Understandably, the declining reimbursements, increasing professional liability insurance/malpractice payments, and almost endless compliance demands are causing unprecedented pressure on all healthcare providers. However, this approach is not a long-term solution. In addition to raising ethical concerns, resorting to these mercenary practices will, invariably, dismantle a healthcare system for the injured and acutely ill patients.

As the American Board of Surgery considers new training paradigms, such as the early specialization program (ESP) and the modular core training designs, one of the potential benefits of this restructuring of the educational curriculum would be to broaden the scope of the trauma profession and make it more of an acute care or emergency surgery specialty. The steady drop in operative management by the trauma surgeon is of paramount concern, and the formal adoption of this new specialty would address this concern, for non-trauma operative emergencies would be managed by the acute care or emergency surgeon. As is the case with some of the European models, the scope of this new specialty should also include some of the emergency neurosurgical and orthopedic procedures. While this model will have its detractors, the key impetus of this proposal is the need to make some changes in the current system. If not, the advances that we have made in trauma and emergency care will be rolled back to the period when the emergency management of patients was sporadic at best.

[1]Richardson, JD, Miller FB. Will Future Surgeons Be Interested in Trauma Care? Results of a Resident Survey. *Journal of Trauma* 32(2): 229-233, 1992

[2]Fakhry SM, et al. The Resident Experience on Trauma: Declining Surgical Opportunities and Career Incentives. Analysis of data from a large multi-institutional study. *Journal of Trauma* 54(1): 1-7, 2003.

L.D. Britt, MD, MPH, is the Brickhouse Professor and chairman of the Department of Surgery, Eastern Virginia Medical School.

Why Our Colleagues continued from page 4

No matter what our feelings are on withdrawing from trauma care, the forces that have led honorable colleagues to make this choice cannot be ignored. These forces will increasingly apply pressure to the entire neurosurgical community, affecting our ability to provide the level of care that we believe in. They are forces that threaten not only neurosurgery, but also the entire trauma community's ability to care for the victims of injury. As such, the arguments of our colleagues who have chosen to withdraw from trauma care deserve our careful attention.

Peter B. Letarte, MD, FACS, is an assistant professor of neurosurgery and director of neurotrauma for Loyola University Medical Center in Maywood, Ill.

American Association of Neurological Surgeons

Application for Membership

AANS/CNS Section on Neurotrauma and Critical Care

Eligibility: Members of the AANS and/or CNS who are actively interested in Neurotrauma.
Note: Adjunct Membership is available to non-neurosurgeons who are not members of the AANS or CNS. Please contact 847-566-AANS, ext. 508, for more information.

I. Biographical:

(A) Name: _____

(B) Home Address: _____

(C) Office Address: _____

_____

Phone: _____ Fax: _____

(D) E-Mail: _____

II. Category of Membership Requested:

❑ Active ❑ Associate ❑ International ❑ Resident*

* Membership dues are waived for applicants currently enrolled in a neurosurgical residency program.

III. Membership, Certification and Practice:

(A) Are you certified by the American Board of Neurological Surgery? ❑ Yes ❑ No

(B) For Resident Applicants-Expected Residency Completion Date (month/year) _____

(C) Are you a member of

1. The American Medical Association? ❑ Yes ❑ No
2. A Local or Regional Medical Society? ❑ Yes ❑ No
3. A State or Provincial Medical Society? ❑ Yes ❑ No
   Name: _____
4. American Association of Neurological Surgeons? ❑ Yes ❑ No
5. Congress of Neurological Surgeons? ❑ Yes ❑ No

(D) I would like to support ThinkFirst National Injury Prevention Foundation with my donation of

❑ $50.00 (Recommended) ❑ Other amount $_____

_____ _____

Signature of Applicant Date

Please return completed application with your membership fee of $50 and any donations to:
AANS/CNS Section on Neurotrauma and Critical Care
Dept. 77-7550
Chicago, Illinois 60678-7550

AANS/CNS Section on Neurotrauma and Critical Care
5550 Meadowbrook Drive
Rolling Meadows, Illinois 60008-3852

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Chairman's Message *continued from page 1*

hospitals with residency training programs. I think our most important goal, however, has been to maintain a focus on the responsibility of neurosurgeons to keep involved in neurotrauma care.

I thank David Adelson, MD, for his excellent work as secretary-treasurer and editor of our newsletter. He has clearly elevated the quality of the publications we have produced and helped raise the level of awareness of our section not only in neurosurgery but among the trauma community as a whole. Michael Fehlings, MD, has maintained very positive relations between Codman and Synthes, which has allowed for the continued funding of the residents' awards program. Shelly Timmons, MD, and Dom Esposito, MD, have been untiring in their coordination, design, and execution of our biannual neurotrauma and critical care courses. Jack Jallo, MD, has done a superb job as our membership coordinator, to all of the other members of the Executive Committee, and to you, the reader, my sincere thanks.

AANS/CNS Section on Neurotrauma and Critical Care 2004-2006 Officers

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