Neurotrauma & Critical Care NEWS

American Association of Neurological Surgeons

Spring 2014

AANS/CNS Section on Neurotrauma & Critical Care

Editor: Martina Stippler, MD, FAANS

In This Issue...

Message from the Secretary

Daniel B. Michael, MD, PhD, FAANS

Dear Colleagues.

Greetings and many thanks from the Executive Committee for your support of the American Association of Neurological Surgeons (AANS)/ Congress of Neurosurgoens (CNS) Section on Neurotrauma & Critical Care (SN&CC). We are committed to disseminating the latest information to help you take care of your patients. The section supports research by students and residents interested in our field by providing a showcase for their work during our national meetings. We also partner with industry to recognize outstanding neurotrauma and critical care researchers with awards and named lectureships though organized neurosurgery's new "One Ask" program.

Current scientific trends in research continue to focus on fundamental injury primary and secondary injury mechanisms. New models of blast injury have characterized these military type injuries at the cellular and molecular level (see Blast-related traumatic brain injury.Rosenfeld JV, McFarlane AC, Bragge P, Armonda RA, Grimes JB, Ling GS.*Lancet Neurol*. 2013 Sep;12(9):882-93. doi: 10.1016/S1474-4422(13)70161-3. Epub 2013 Jul 22. Review.).

Concussion is one of the current "hot topics" in the public eye, particularly as it relates to sports injury and long-term adverse sequelae (see Concussions and their consequences: current diagnosis, management and prevention. Tator CH.*CMAJ*. 2013 Aug 6;185(11):975-9. doi: 10.1503/cmaj.120039. Epub 2013 Jul 22. Review.). The SN&CC is committed to maintaining neurosurgeons' central role in the research and treatment of these most common of brain injuries.

Despite vast amounts of research the answers to certain basic questions as to the care of neurotrauma and critical care patients continue to elude us. Are ICP monitors necessary in order to provide high quality critical care in brain injury? (Traumatic brain injury in Latin America: lifespan analysis randomized control trial protocol*. Chesnut RM, Temkin N, Carney N, Dikmen S, Pridgeon J, Barber J, Celix JM, Chaddock K, Cherner M, Hendrix T, Lujan S, Machamer J, Petroni G, Rondina C, Videtta W. *Neurosurgery*. 2012 Dec;71(6):1055-63. doi: 10.1227/NEU.0b013e31827276b7.) Should steroids ever be used in spinal cord injury treatment? (Guidelines for the management of acute cervical spine and spinal cord injuries: 2013 update. Walters BC, Hadley MN, Hurlbert RJ, Aarabi B, Dhall SS, Gelb DE, Harrigan MR, Rozelle CJ, Ryken TC, Theodore N. *Neurosurgery*. 2013 Aug;60 Suppl 1:82-91. doi: 0.1227/01.neu.0000430319.32247.7f.) The role of the SN&CC in these and other controversies is to facilitate open and professional discussion, and contextualize the data for our members to apply in their daily practice.

The SN&CC also advocates for neurosurgeons to make sure we continue to be key players in political decisions which impact (or impede) our ability to deliver the highest quality of care to our patients.

Finally, I learned a long time ago that the best way to treat brain and spine injuries is to prevent them. It is as true in 2014 as it was then. Your SN&CC has been a key sponsor of ThinkFirst Injury Prevention Foundation, the premier injury prevention organization, founded by neurosurgeons. We thank you for your current support and ask for your continued membership in the SN&CC so we can support these worthy endeavors.

Leading by Example: Doctor Walks Six Miles in Snowstorm to Conduct Emergency Brain Surgery

By Dr. Mark Thoma, MD with comment from Martina Stippler, MD, FAANS

Earlier this winter, Birmingham, Ala. was hit by a severe snowstorm paired with extremely icy conditions. Unprepared for this, traffic was incredibly snarled. Much of the news focused on the disaster in Atlanta, but it was really across the entire South.

Some people sat for hours, unable to go anywhere. Communications systems were overwhelmed, cell phones faded in and out, and emergency numbers were swamped. It was a nightmare for those who were stuck in the unfamiliar conditions.

At about 10 a.m., the Trinity Medical Center got a patient into its emergency room who had suffered a traumatic brain injury. The ER doctors realized that the young man would surely die without emergency brain surgery. The problem: their only neurological surgeon was at a neighboring hospital about six miles away and traffic had grown to a standstill because of the freak winter storm.

They called the Brookwood Medical Center and managed to reach their neurosurgeon, Zenko Hrynkiw, MD, FAANS, who agreed to leave immediately. He began the drive but realized that the traffic was incredibly jammed. He called Trinity and said, "I'm not getting anywhere in this. I'm walking." He abandoned his car and began walking along the snow-covered roads in the 20-degree weather.

Dr. Hrynkiw said that he knew that the patient would die without the emergency surgery, and that wasn't going to happen on his watch. Trinity tried to contact local police and paramedics to see if they could give Dr. Hrynkiw a ride. Because of traffic and communications problems, they couldn't reach Brookside.

Shortly after, Trinity was unable to reach the doctor on his cell phone. Trinity again contacted the police who attempted to search the area hoping to find the aging doctor trudging to Trinity. They were unsuccessful.

Dr. Hrynkiw then managed to contact the medical center and requested Trinity send him the patient's CT scan, which he received and reviewed while on his trek.

After about a two-hour walk, the phone in the neuro-intensive care unit rang. Dr. Hrynkiw said to the charge nurse, "I'm walking in the door. Where's the patient?"

The neurosurgeon spoke with the family and took the patient to the OR. Steve Davis, the charge nurse at the neurointensive care unit, said to Dr. Hrynkiw, "You're a good man." The neurosurgeon said that he was just doing his job. Later, during a press conference, Dr. Hrynkiw added, "It really wasn't that big of a deal."

The patient survived the surgery and was in stable condition, recovering post-op.

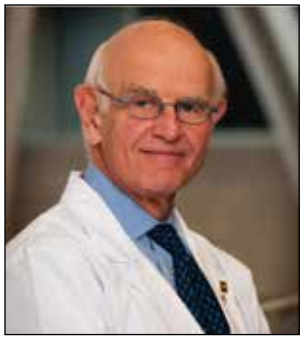
Davis says that Dr. Hrynkiw is on call at the hospital about 330 days per year. He is apparently a dedicated and low-profile man. Several news agencies tried to contact him for follow up interviews but were told that he was in surgery.

Comment: This news story received broad national attention in early February on TV, news outlets and several blogs. The comments in response to the story were particularly interesting to me. They ranged from "He is only doing his job" to "He is a saint". We all know that emergency-call is not equally carried by the neurosurgery community. This leaves many areas —many not as rural as you might think — without neurosurgery coverage and leaves TBI patients far away from a trauma center. I agree with Dr. Hrynkiw and the many responses to the story. He did his job.

This is what we signed up for when we went to medical school and decided to become neurosurgeons. We take care of patients, whatever it takes. As it is now, the reimbursement system does not honor doctors taking emergency-call. Moreover, I worry if our education system prepares our trainees for what is to come. There are no work-week restrictions once you are done with residency. It is your patient — and your choice — of going the extra mile for the patient or not.

Let's hope that our profession continues to live up to the highest standards of care for all patients even in the changing and challenging health care environment.

Dr. Charles Tator Lecture



The American Association of Neurological Surgeons (AANS)/Congress of Neurosurgeons (CNS) Joint Section on Neurotrauma and Critical Care is excited to start the Charles Tator Lecture Series at the upcoming AANS Annual Scientific Meeting in San Francisco. Dr. Tator will give the inaugural lecture on Tuesday, April 8, 2014, at 2 p.m.

Born: August 24, 1936
Education: M.D. University of Toronto 1961; Ph.D. Neuropathology, University of Toronto 1965

Since the early 1970s, Charles Tator, MD, PhD, FAANS(L), has had a resounding impact on spinal cord injury research, prevention and treatment and on training our next generation of leading surgical scientists. An eminent scientist, neurosurgeon, professor and administrator, his laboratory was the first in Canada to study acute spinal cord injury from a basic science perspective.

Dr. Tator's research transformed our world's understanding of spinal cord injury. He developed one of the first experimental models of spinal cord injury in small laboratory animals in 1978. He showed that post-traumatic ischemia is a major secondary injury mechanism. He invented the inclined plane technique of functional assessment. Dr. Tator was one of the first to recognize the proliferation of endogenous stem cells in the injured adult mammalian spinal cord, and to assess the therapeutic value of transplantation of adult spinal cord derived stem cells after injury. He developed the first acute spinal cord injury unit in Canada, and he is known for the introduction of halo vests for treatment.

The breadth of Dr. Tator's influence is perhaps best manifested by his work in prevention, particularly related to sports and recreation. His advocacy efforts resulted in the adoption of new legislation and guidelines to prevent spinal cord injury in hockey. In 1992, he founded ThinkFirst Canada, an organization that educates young people about safety.

A dedicated, kind and skillful surgeon, Dr. Tator's loyalty to his patients is legendary. As chair of the division of neurosurgery at the University of Toronto (1989-1999), Dr. Tator fostered the growth of Canada's surgical scientist training program, believing that aspiring academic surgeons should train in science at the highest level. His program gained national prominence and was admired by neurosurgical departments across Canada.

Dr. Tator played a key role in developing the Canadian Brain and Nerve Health Coalition (2002) which brought Canadian organizations together to promote increased research and public awareness of neurological conditions. Among many awards, Dr. Tator was appointed a Member of the Order of Canada (2000) and inducted into the Terry Fox Hall of Fame (2003).

AANS Annual Scientific Meeting

San Francisco, April 5-9, 2014

Saturday, April 5

8 a.m.-5 p.m.	*Practical Clinic:* Hands on Critical-Care: Procedures for the Neurosurgical Advanced Practice Provider (Moscone Center South, 308-310)
1-5 p.m.	Neurotrauma Critical Care review and Update for the Practicing Neurosurgeon (Moscone Center South, 206-210)

Sunday, April 6

7:30 a.m.-4:30 p.m.	*Practical Clinic:* Head Trauma: Current Treatments and Controversies with Hands on Practical Session in Brain Monitoring (Moscone Center South, 309)
7:30 a.m.-4:30 p.m.	Disaster Management and Emergency Preparedness CANCELLED
12:30-4:30 p.m.	Neurosurgeons Role in Addressing Concussion and Sports Injury (Moscone Center South, 206-210)
12:30-4:30 p.m.	NEW Boot Camp for the Neurosurgical Advanced Practice Provider (Moscone Center South, 305)

Monday, April 7

7-9: a.m.	Breakfast Seminar: NEW Definition and Diagnosis of Brain Death

Tuesday, April 8

7-9: a.m.	Breakfast Seminar: Controversies in the Management of Intracerebral Hematomas
7-9: a.m.	Breakfast Seminar: Cavernous Malformation: Current Controversies in Management
2:00-2:30 p.m.	Inaugural Charles Tator Lecture (Moscone Center South, 306)

Wednesday, April 9

7-9: a.m.	Breakfast Seminar: Return to Play After Sports Injury: Concussion
7-9: a.m.	Breakfast Seminar: Cerebral Trauma State-of-the-Art Treatment

Neurosurgeon In The Spotlight

Jason H. Huang, MD, FAANS

Chairman, Department of Neurosurgery

The Plummer Family Endowed Professor in Neurosciences Director of Neuroscience Institute Professor, Texas A&M University College of Medicine Baylor Scott & White Health System, Temple Region MS-01-E549

1. Why did you decide to be active in neurotrauma?

It was a natural extension of my basic science research interest in traumatic brain injury and peripheral nerve injury when I was doing my residency training at the University of Pennsylvania. My research has been continuously funded by extramural sources including NIH R01 grant. I would like to contribute my knowledge to the current practices of neurotrauma.

2. What change do you hope to accomplish?

I would like to continue my current basic sciences research in neurotrauma and contribute to evidence-based practice in neurotrauma, which will ultimately benefit our patients. I also hope to train the next generation of neurosurgeons who will continue to be interested in being actively involved in neurotrauma.

3. What advice do you have for fellow neurosurgeons?

Playing golf has a very low chance of sustaining a traumatic brain injury.

4. What do you think will be challenges for neurosurgery in the near future and how do you think we will overcome them?

The Affordable Care Act, the changing reimbursement environment and the merger of many health-care organizations. We need to stay actively involved politically and continue to provide the best care to our patients.

5. What do you see in the future for neurotrauma care?

A significant number of neurosurgeons nowadays are mostly interested in elective surgeries such as spinal surgery and it is not uncommon for them to give up neurotrauma calls. One or two decades from now, the number of spinal surgeries for degenerative conditions will likely diminish but neurosurgeons can still make a major contribution to society by staying actively involved in neurotrauma.

6. Who has been the biggest influence in your life?

Eric Zager, MD, FAANS, who taught me many valuable skills in the operating room; and Sean Grady, MD, who showed me that an academic neurosurgeon can be successful in running a busy practice, a neurosurgery department and running an NIH-funded research lab.

7. What book are you currently reading?

The Second World War: A Complete History.

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