PROVIDENCE – When Brown alumnus Dr. Richard G. Ellenbogen, MD’83, was a second-year medical student, he found himself bored and proffered his resignation letter to then-Dean Stanley M. Aronson, MD. At this year’s Brown commencement weekend, Dr. Ellenbogen, who delivered the Charles O. Cooke, MD, Distinguished Visiting Lectureship, recalled the incident.

“The Silver Fox put the letter aside without opening it, listened to me, and said: ‘I want you to perform to the best of your ability. That’s all I ask of any medical student at Brown – to live up to the ability that brought you here,’ and he summarily dismissed me.”

Alpert Medical School Dean Edward Wing, MD, welcomed Dr. Ellenbogen and noted the Cooke lecture spotlights branches of medicine which “hold promise of significant and lasting benefit to medical education at Brown and in the community.”

Dr. Ellenbogen, chairman of the Department of Neurological Surgery at the University of Washington School of Medicine, spoke on “Concussion: A Perfect Storm – A Call for Education and Advocacy.” The perfect storm refers to the coalescence of attention on traumatic brain injuries (TBIs) in veterans returning from Iraq and Afghanistan, the longterm injuries seen in professional athletes, and the incidence of concussions in youth sports.

Dr. Ellenbogen, who served in the military and was awarded the Bronze Star during his service in Operation Desert Storm, said the wars in Iraq and Afghanistan have exacted their toll on soldiers’ brains and mental health. “Sixty-eight percent of the wounded have TBI or PTSD.”

Since March 2010, Dr. Ellenbogen has been co-chair of the NFL Head, Neck and Spine Committee, an unpaid position. “But with all due respect, this is much more than an NFL issue,” he said. He has been a fierce advocate for the passage of youth sports concussion laws, now enacted in 47 states and the District of Columbia. The first law was passed in Washington in 2009 as a result of a devastating injury on a middle-school football field. Dr. Ellenbogen treated the youth involved, Zackery Lystedt, who in 2006 suffered a brain injury following his return to the game after sustaining a concussion. The boy collapsed after the game and almost died.

“In the OR, both sides of his skull were taken out,” Dr. Ellenbogen said. The case “changed my life.”
Youth concussion laws
The Lystedt law contains three core elements: education, removal, and proper clearance.
- Athletes, parents and coaches must be educated about the dangers of concussions each year.
- If a young athlete is suspected of having a concussion, he/she must be removed from a game or practice and not be permitted to return to play. The maxim, Dr. Ellenbogen repeated throughout his talk: “When in doubt, sit them out.”
- A licensed health care professional must clear the young athlete to return to play in the subsequent days or weeks.

Today, Zackery is a high school graduate and is taking a college class. He is able to take about 10 steps, and speaks in halting speech, Dr. Ellenbogen said. But he has become an advocate for preventing concussions as well.

Dr. Charles O. Cooke: Brown hockey hero (1898)
Cooke scored hat trick in first intercollegiate hockey game – Brown vs. Harvard

The Charles O. Cooke, MD, Distinguished Visiting Lectureship Cooke lectureship was endowed through a bequest from Ruth Cooke Peterson ’14 in memory of her brother, class of 1899.

The late Dr. Cooke, a prominent surgeon and member of the Rhode Island Medical Society (RIMS) who frequently contributed to the Rhode Island Medical Journal in the first half of the 20th century, scored a hat trick in the first intercollegiate hockey game held in this country.

Held on January 19, 1898, on Franklin Field in Boston, the game was played in two 20-minute periods. According to collegehockeynews.com: “The players wore only crude leg pads and goalie pads were no different than the skaters’ pads. They played in uniforms consisting simply of baseball trousers and turtlenecks, with leather or woolen gloves and six-dollar clamp-on skates. Hockey sticks were rounded, and despite costing only 60 cents to a dollar each, could take the punishment of many games.”

The inaugural game was a rout. Reported the Boston Herald the following day: “The first goal came at 7 minutes on a pretty pass by Cooke to Day ... Day and Cooke came in for their share of glory: the latter snapped three goals in the second period.”

As the headline proclaimed: “Brown plays brilliantly.” The final score: Brown buries Harvard, 6–0.

The rivalry continues to this day.
Signs and Symptoms of TBI/Concussions

Dr. Ellenbogen defined concussion in lay terms as “a violent shaking of the brain inside the skull. When I was in medical school, concussion meant you were knocked out. That’s no longer the case. In 90 percent of the concussions, the person is not knocked out.”

He said the severity of a TBI may range from “mild,” i.e., a brief change in mental status or consciousness to “severe,” i.e., an extended period of unconsciousness or amnesia after the injury. The majority of TBIs that occur each year are concussions or other forms of mild TBI.

He said TBI/concussions are a big public health issue, not confined to professional sports. He offered the following statistics:

- The World Health Organization predicts that by 2020 TBI will be the 3rd leading cause of death and morbidity in the world.
- Among those from sports injuries, the No. 1 cause is falls from bicycles and boards, such as skateboards.
- TBI is not gender-biased. A study of nine sports showed that severe concussions, when youth athletes are out of school for 21 days, were highest in boy’s soccer and girl’s volleyball. He noted that while 3 million kids play football, 300 million play soccer.
- In all NCAA sports, the highest rate of concussions is in women’s hockey. “Why do women athletes do worse than men?” Dr. Ellenbogen asked. “Girls report better, my daughter says.”

Tools to assess concussions

Heads Up to Clinicians: Addressing Concussion in Sports among Kids and Teens

Free Online Training for Health Care Professionals
http://www.cdc.gov/concussion/headsup/clinicians.html

During his lecture, Dr. Ellenbogen recommended the following CDC course for clinicians, noting it is a fast and free 20-minute online course. “Heads Up to Clinicians: Addressing Concussion in Sports among Kids and Teens”:

- Examines current research on the brain after a concussion
- Shows why young people are at increased risk
- Explores acute concussion assessment and individualized management of young athletes to help prepare for diagnosing and managing concussions on the sidelines, in the office, training room, or in the emergency department
- Educates about the 5-Step Return to Play progression
- Focuses on prevention and preparedness to help keep athletes safe

SCAt3: Tool to evaluate for concussion
http://bjsm.bmj.com/content/47/5/259.full.pdf

The SCAt3 is a standardized tool for evaluating injured athletes for concussion and can be used in athletes 13 years and older. For younger persons, ages 12 and under, use the Child SCAt3. The SCAt3 is designed for use by medical professionals.
fine, moving the kickoff line 5 yards, which has dropped the concussion rate 40 percent; and limiting to 14 the number of padded practices during the year, thus decreasing repeated concussions in a season. He is hoping that the trickle-down effect reaches Pop Warner football.

In addition, the NFL, in a new initiative with GE, will focus on developing specializing imaging equipment to detect head trauma and improving equipment.

Dr. Ellenbogen noted the research of J.J. “Trey” Crisco, director of the Bioengineering lab for Orthopaedic Research at Rhode Island Hospital, whose team developed helmets with embedded sensors to measure head acceleration during impact, including frequency, direction and severity, in order to better understand the mechanism of injury.

He also mentioned the research out of Boston University which reported that chronic traumatic encephalopathy, a degenerative disease affecting athletes, soldiers and others who have sustained repeated blows to the head and concussions, has been diagnosed in all 12 former college and NFL players it had tested.

‘Heads-Up’ tool
Dr. Ellenbogen also urged the medical professionals in the lecture audience to take the CDC online course, “Heads-Up” online concussion training and become familiar with a concussion-assessment tool SCAt3 [See sidebars.]

He told them: “On the field, don’t ask kids if they are concussed. They don’t know. One example I use is when my son, a 6-foot 5-inch high school football player, collided with another player and went down. I ran to the sidelines and said, ‘Zach, that’s it, it’s your second concussion of the season, you’re out.’

He looks at me and says: ‘What do you know about concussions? Get mom, she’s a nurse, she’ll know what to do.’ I was stunned for a second and realized

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