

AAN Calls for Concussion Experts in Youth Sports

BY MICHELE G. SULLIVAN

Athletes who might have sustained a concussion during a sporting event should be immediately pulled from play and not return until they have been properly evaluated by a trained health care provider – preferably a neurologist, according to a position statement by the American Academy of Neurology.

The academy issued the new set of recommendations in light of the still-unknown long-term effects of concussion on a young person's developing brain, and because of the risk of sometimes-fatal second-impact syndrome, Dr. Jeffrey Kutcher said in an interview.

The recommendations ideally apply to athletes in any age group but may be of greatest benefit to athletes aged 15-24 years. In this age group, sports are now second only to motor vehicle accidents as

the leading cause of traumatic brain injury, according to the statement.

"We need a more individualized, hands-on approach to return-to-play decisions, so we can prevent longer symptoms, and more common symptoms," said Dr. Kutcher, lead author of the paper and director and chief of inpatient neurologic services at the University of Michigan's NeuroSport Program in Ann Arbor. "If you get hit and stay in the game, and get another hit, you'll have more symptoms, longer symptoms, be out of school longer, and have more interruption of your daily life."

Although football is the sport that springs to mind as potentially the most dangerous, Dr. Kutcher said others hold risk as well, including ice hockey, water polo, field hockey, and diving.

The position paper also calls for a certified athletic trainer to be present at all events that pose a risk for concussion, including practices. The idea that certified trainers and physicians should be more consistently involved in contact sports might be a difficult one for some programs to swallow, Dr. Kutcher admitted – especially small, rural areas that may already be short on money and resources.

However, he said, "if we are going to allow our children to be exposed to this kind of risk, shouldn't we at least require a certified athletic trainer who is able to identify possible concussions [to be] at each practice and game? If not, then maybe we should be readjusting our thinking about having contact sports until the right people are around to protect our children."

The paper represents an interim update of the academy's 1997 guideline "The Management of Concussion in

Sports," including how repeat concussion plays into second-impact syndrome, cognitive impairment, and even the possibility of a concussion-related dementia, which may develop years after the traumatic brain injury of repeat concussions. Recent long-term studies have found an association between repeat concussions and the onset of "chronic traumatic encephalopathy," Dr. Kutcher said. "This term has been used to describe pathologic changes seen in the brain at autopsy," which include tau deposition similar to that of Alzheimer's disease although not in the typical Alzheimer's brain regions. The pathologic changes are visible on microscopy, but we really don't know what these changes might mean clinically," he said. "That is still under investigation."

Recently Dr. Kutcher and other members of the practice update committee held conference calls with several national organizations that oversee youth sports, including the American Association of Health Educators.

"We need these groups to partner with the American Academy of Neurology to get this message out – as well as other messages that convey the benefits of fitness [to] brain development and health," he said. "We hope these are some very positive steps in increasing education about this important issue on a larger scale."

Dr. Kutcher testified about the issue earlier this year before a congressional Judiciary Committee hearing in Detroit. During that hearing, he made the case for an individualized approach to managing concussion during contact sports.

"Because the brain is a highly complex, individualized, and dynamic organ, concussion management does not lend itself well to the use of protocols. It is, rather, an injury that is best managed by people with neurological expertise and experience treating athletes," he indicated in his written testimony (<http://judiciary.house.gov/hearings/pdf/Kutcher100104.pdf>).

"Unfortunately, the vast majority of athletes who sustain a concussion do not have access to concussion experts. Add to this the fact that approximately half of all high school athletes in this country do not have access to certified athletic trainers or any other medical specialist on site, and the problem deepens. Because of these shortages, sports concussion is a public health issue that could use protocols that can be followed by our country's network of primary care providers, as well as more simple guidelines that can be followed by parents, coaches, friends, and teammates." ■

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PSA Screening Tied to Lower Metastatic Prostate Cancer Rate

BY MICHELE G. SULLIVAN

FROM A PRESS BRIEFING SPONSORED BY THE AMERICAN SOCIETY FOR RADIATION ONCOLOGY

Routine screening for prostate cancer resulted in fewer cases of metastatic disease over the past 10 years even after controlling for disease severity, a new retrospective study suggests.

Men who developed prostate cancer before prostate specific antigen (PSA) testing became routine were 3.5 times more likely to progress to metastatic disease than were men diagnosed after PSA testing became the standard of care, Chandana Reddy, M.S., reported at the press briefing.

"Our study showed that routine screening not only improves the patient's quality of life by stopping metastatic disease but also decreases the burden of care for this advanced disease that must be provided by the health care system," Ms. Reddy said.

"This demonstrates that the prostate specific antigen [PSA] test is extremely valuable in catching the disease earlier and allowing men to live more productive lives after treatment," she added.

The impact of routine prostate cancer screening has been widely debated for years, Ms. Reddy said.

"Because prostate cancer is generally a slow-growing disease, often diagnosed in older men with other medical conditions, the question has been [whether] they [should] be treated, since the treatment itself can have complications," she said.

Routine screening using the PSA was first implemented in 1992, and, she said, "Skeptics have argued that it has not resulted in any meaningful increase in survival. In fact, two recent trials showed no benefit."

She cautioned that trial design could have skewed those results. "Those trials looked at overall survival as the primary end point, and since many of these men had other medical conditions, any prostate cancer-specific survival could have been masked by the likelihood of death from other illness."

Ms. Reddy, a senior biostatistician at the Cleveland Clinic, Ohio, and her colleagues reported a retrospective study of 1,721 men with prostate cancer who were treated at the facility from 1986-1996. All men underwent radical prostatectomy or radiotherapy.

The investigators divided the group into two eras: a prescreening era (1986-1992; 575 patients) and a post-screening era (1993-1996; 1,146 patients). The median follow-up time for both groups was 10 years.

At baseline, according to the National Comprehensive Cancer Network risk

classification, 44% of the prescreening era group were high risk, 21% were intermediate risk, and 28% low risk; no classification data were available for the remaining patients. For the postscreening era group, 36% were considered high risk, 27% intermediate risk, and 37% low risk. These differences between screening groups were statistically significant.

Within the 10-year post-treatment follow-up period, 13% (224) of all study patients developed metastatic disease.

VITALS

Major Finding: Routine PSA screening was linked to significantly lower rates of metastatic prostate cancer progression regardless of disease severity.

Data Source: A retrospective study of 1,721 men who were treated before and after the introduction of routine PSA screening.

Disclosures: Neither Ms. Reddy nor any of her coauthors had any relevant financial disclosures.

Significant differences (P less than .0001) in the rate of metastasis-free survival emerged when each risk level was compared between the prescreening and post-screening era groups: high risk (58% vs. 82%), intermediate risk (79% vs. 93%), and low risk (90% vs. 98%).

In a univariate analysis, screening era, age, T stage, pretreatment PSA value, and Gleason score on biopsy were significantly associated with the development of metastatic disease (P less than .05).

In the multivariate analysis, screening era, T stage, and biopsy Gleason score remained statistically significant predictors of metastatic disease. ■

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