Early Postconcussion Return to Play Discouraged

BY DOUG BRUNK

SAN DIEGO — No junior high or high school athlete who sustains a concussion in contact sports should be allowed to return to play that same day, because on average, simple concussions have recognizable deficits 8 days after the injury, according to Dr. Suraj Achar.

Concussion "is a serious brain injury that has been underrecognized and undertreated," Dr. Achar said at a meeting sponsored by Rady Children's Hospital and the American Academy of Pediatrics. "Parents, coaches, trainers, and doctors should resist the temptation to let the kids go back on the field."

In 2008, the National Football League mandated that team physicians forbid players to resume the game on the day of a concussive injury, and Dr. Achar believes a similar standard of care is appropriate for young athletes.

In football, an estimated 10% of college players and 20% of high school players in the United States sustain concussive injuries each season (JAMA 1999;282:958-63), yet about 80% of cases are never reported, either because they are missed by nonmedically trained observers or because the athlete resists being pulled onto the sidelines and may not recognize the seriousness of what happened, explained Dr. Achar of the department of sports medicine at the University of California, San Diego.

He noted that younger children are more susceptible to concussions, compared with their older counterparts, for reasons that remain unclear. Yet maybe one in four concussions have long-term manifestations. Single concussions may lead to changes in mental and physical functioning for 30-plus years, Dr. Achar said.

A widely used diagnostic instrument is the standardized assessment of concussion (SAC) system, which tabulates a summary of total scores in orientation, immediate memory, concentration, delayed recall, strength and coordination, and exertional maneuvers. An athlete who scores even 1 point less than the optimal 30 points is considered to have suffered a concussion.

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A study of male college and high school athletes found that the SAC had sensitivity of 94% and a specificity of 76% (J. Intl. Neuropsychol. Soc. 2001;7:693-702). Neuroimaging tests usually are not ordered after a concussion because the results tend to be normal. Deficits generally are functional, not structural, said Dr. Achar, who practices family and sports medicine in La Jolla, Calif.

A consensus paper on concussion in sport, classified concussions as either simple—meaning that symptoms resolve in 7-10 days with no obvious sequelae, no intervention is required, and neurologic testing is negative—or complex, meaning that symptoms persist after 7 days and worsen with exertion, prolonged loss of consciousness and cognitive impairment occur, and the patient has a history of multiple concussive injuries (Br. J. Sports Med. 2005;39:196-204). "You need a multidisciplinary team to care for these patients," said Dr. Achar, who had no potential conflicts of interest to disclose.

In minors, "concussive symptoms can last up to 3 weeks. With sophisticated computer testing, neurologic deficits rarely resolve before 8 days after the injury. We want to completely rest them."

The path for return to play begins with light aerobic exercise, followed gradually by sport-specific exercises such as skating in hockey or running in soccer, with progressive addition of resistance training. Finally, noncontact training drills and full-contact training drills may be resumed, and the athlete may return to play after medical clearance.

If any postconcussive symptoms occur, the consensus guidelines recommend that the patient drop back to the previous asymptomatic level and try to progress again after 24 hours. ■