Easy to administer vision test may help diagnose concussions quickly

By ACSH Staff — April 2, 2015

Concussions are a major and growing concern among athletes, especially among children and adolescents. According to the CDC, about 65 percent of concussion cases seen in the emergency room are in children ages five to 18 years. This is especially worrisome given that in the youth leagues, there may not be doctors or athletic trainers on the sidelines to identify concussions and ensure that athletes get proper care, according to Dr. Steven Galetta, a researcher at New York University Langone Concussion Center.

Dr. Galetta and colleagues conducted a study to evaluate using a speed reading test, the King-Devick test, to diagnose concussions. In this test, a child has to read numbers on a card as quickly as possible. The numbers are arranged in such a way that following a concussion, a child would have a harder time reading them. Researchers monitored responses from 243 hockey players, ages five to seventeen and 89 college-aged athletes. Following concussions, twelve athletes were administered this test, with reading times, on average, about 5.2 seconds slower than when previously tested. However, following a game, the reading times of fourteen athletes who had not had concussions actually decreased.

The researchers also looked at the effect of concussions on sight and found that concussions often result in damage to the brain’s vision circuits.

Although Dr. Robert Dimeff, director of primary care sports medicine at the University of Texas Southwestern Medical Center in Dallas says that this test does have its advantages, mainly that it is easy to administer with relatively little training, he goes on to say that you worry with a test like this that there will be some athletes who might go deliberately slower at baseline if they know it will be used against them to be pulled out of a game later.

ACSH’s Ariel Savransky had this to say: Although this is a very small study, it is clear that more effective, simple tests are needed to diagnose concussions so that athletes do not continue playing following a concussion. It has become clear that the sequelae of even minor concussions are additive, and can lead to serious impairment of cognition later on. This study also illustrates another concerning point, which is that young athletes are often encouraged to play through the
pain, which can be very detrimental. As I ve said before [4], more must be done to educate parents, coaches and players about the symptoms of concussions and the actions that should be taken in the case of suspected concussion. Players should not be put back in the game if they are exhibiting any symptoms of a concussion. Furthermore, it is imperative to require that medical professionals be in attendance at youth sports events as coaches and players themselves cannot be counted upon to take appropriate action in the event of a concussion, as competing interest the desire to win a game may take precedence over the well-being of the player at that time.

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