Concussion baseline important for accurate future assessment in at-risk youth athletes

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Creating a baseline for each youth athlete is a critical part of accurate future concussion assessment, according to researchers presenting their study at the American Orthopaedic Society for Sports Medicine's Annual Meeting in San Diego. Differences in how females and males scored on a standardized concussion assessment tool were also investigated.

"Our research analyzed whether the new Sport Concussion Assessment Tool-2 (SCAT2) has any variability in data for youth athletes and whether gender makes a difference on the scores," said presenting researcher, Anikar Chhabra, MD, MS of The Orthopaedic Clinic Association in Phoenix, AZ. "Our results showed that otherwise healthy adolescent athletes do display some variability in results so establishing each player's own baseline before the season starts and then comparing it to test results following a concussion leads to more accurate diagnosis and treatment."

Chhabra and his colleagues from A.T. Still University tested 1,134 athletes who were participating on interscholastic athletic teams at 15 different high schools in the Phoenix area, as part of a funded research project by the National Operating Committee on Standards for Athletic Equipment (NOCSAE). There were 872 males and 262 females in the study with an average age of 15. The predominant male and female sports were football and volleyball, accordingly. A brief questionnaire regarding concussion history and the SCAT2 test was given to all participants.

Females scored significantly higher on the SCAT2 total score compared to the males. Athletes with a prior history of concussion also scored significantly lower on the SCAT2.

"This data provides the first insight into how the SCAT2 scores can be used and interpreted as a sideline concussion tool and as an initial baseline analysis. With concussions accounting for approximately nine percent of all high school athletic injuries, accurately utilizing assessments like these to quickly determine an athlete's return-to-play probability is critical to long term athletic and educational performance," said Chhabra.

Provided by American Orthopaedic Society for Sports Medicine