

Management of concussion in disability sport: a different ball game?

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Concussion management in sport is a serious medical issue. Frequent high-profile incidents coupled with ongoing debate and research surrounding the definition, diagnosis and management of concussion mean that it is likely to remain a hot topic.¹ Internationally, concussion has become a key focus for many sporting governing bodies, with a range of educational campaigns aimed at improving recognition and management.²

CONCUSSION IN SPECIAL POPULATIONS

Football is the world's most popular global sport, and appropriately many disability football leagues have been developed to provide competitive opportunities for those individuals with disability wishing to compete outside 'mainstream' football. Adapted versions of football for athletes with major disabilities including learning disability; visual impairment; cerebral palsy/acquired brain injury; hearing impairment and amputation are all in existence. There has been a suggestion of an increased risk of musculoskeletal injury and head injury from participation, including concussion.³

However, at present the rates of and best-practice assessment and management for concussion in these formats of football are unknown.⁴

CONCUSSION ASSESSMENT AND MANAGEMENT

Building on the previous versions of the Sports Concussion Assessment Tool (SCAT), the SCAT3 has helped sports medicine professionals to diagnose and manage concussion, providing guidelines on which an individual management protocol can be based. The 2012 Zurich

Consensus Meeting generated the Child SCAT3 for use in athletes aged 5–12 years to help address the controversial issue of diagnosis and management of paediatric concussion. Makdissi and colleagues⁵ proposed that children and non-elite individuals with limited resources should be managed more conservatively than elite-level athletes, in line with modifications made to the SCAT3.

Given these adaptations for the paediatric population, it is reasonable to suggest that specific guidelines for athletes with disability should also be generated. Ahmed and colleagues highlighted the limited evidence base underpinning sports medicine in disability football,⁶ and the paucity of evidence for assessing and managing concussion in disabled athletes warrants further investigation.

CP WORLD CUP EXPERIENCE

The most recent Cerebral Palsy (CP) Football World Championships were held at St. Georges Park, England, in June 2015. As with all disability sport, athletes must pass a strict neurological condition criteria test before they are eligible for CP football. During this event, informal discussions with the head of medical services of the 15 competing countries revealed their current approaches to dealing with concussion in elite CP football.

The majority of clinicians (eight physiotherapists, and six doctors, with an average of 4 years experience in the role) reported receiving some form of education regarding concussion and stated they had experienced managing a CP footballer with a suspected concussion. However, several clinicians indicated that they relied on simply 'knowing the players' and assessing them subjectively, with a surprisingly high reliance on imaging despite the limited supporting evidence base.⁷ The use of SCAT3 (or any similar validated concussion assessment tool) was not widespread, and the reasons for this need further exploration.

When the management of concussion was discussed, a number of clinicians reported a faster return to play than advocated by the 2012 Zurich consensus statement.⁷ Misconceptions relating to concussion prevention, coupled with many clinicians being

unaware of the existence of concussion guidelines, imply that educational interventions are indicated for this population. The majority of medical staff preferred this education to be provided through courses or online resources.⁸

CALL TO ACTION

The lack of cohesion evident in the variability of concussion management approaches means it is unsurprising that clinicians expressed a desire for a consensus on concussion specific to guide disability sport. While the Zurich consensus statement⁷ has been widely supported and adopted by many international sporting organisations, there is a clear need for more specific clinical guidance, as well as further research and education regarding the diagnosis of concussion in disability sports.⁹ This research should look to produce more normative data in disability sports, so that this clinical guidance is more specific. This work is imperative for those currently working and participating at the elite and recreational levels of disability sports, to ensure the welfare of current and future athletes. With the recent Paralympic Games being broadcast to a global audience, the profile of disability sports is higher than ever. Undertaking the process of improving concussion care in the disability sporting community will provide an opportunity to demonstrate best-practice management to those who are likely to be inspired by disability sports.

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