



THE INTRODUCTION OF TEMPORARY CONCUSSION SUBSTITUTIONS IN DISABILITY FOOTBALL: ARE WE 'HEADED' IN THE RIGHT DIRECTION?

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A need for action in Cerebral Palsy football

Cerebral Palsy (CP) football is one of many adapted formats of football which permit individuals with a wide range of disabilities to participate (FIFA Medical Network, 2019), including athletes with CP or an acquired brain injury. Although several commentary pieces related to concussion in disability sport have been published (Kissick & Webborn 2018, West et al. 2017), at present there are limited data-driven studies on concussion in disability football. The study of Weiler et al. (2018) demonstrated that footballers with a disability (including CP footballers) have baseline concussion values that are significantly different to their mainstream peers and recommended that extra consideration needs to be given when interpreting post-concussion assessments with disability footballers. In addition, the work of Griffin et al. (2017) highlighted that clinicians working within CP football

expressed some difficulty in performing cognitive assessments within this population.

In December 2019, the International Federation of Cerebral Palsy Football (IFCPF) announced the introduction of a "Temporary Concussion Substitution" rule change (IFCPF, 2019a). This followed a consultation process, with input from a CP footballer representative (Harry Baker) and a professional referee with experience of CP Football (Keith Stroud). In doing so, this made CP Football the first format of football to introduce such changes. Despite other contact sports (most notably rugby) permitting teams to substitute players who are suspected of having sustained a concussion for more detailed assessment, football has yet to introduce such a temporary concussion substitution rule. Recent news releases however suggest that 2020 may be the year when temporary

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concussion substitutions are introduced in mainstream football (IFABa, 2019).

Whilst the introduction of temporary concussion substitutions is potentially valuable at all levels of football, it is arguably essential in CP football. This format of 7-a-side football is played to the International Football Association Board (IFAB) laws of the game with slight modifications (e.g. no offsides). Individuals are only eligible to participate in CP Football if they have a pre-existing brain injury- either from congenital CP, or from a Traumatic Brain Injury, or Stroke (IFCPF, 2019b). Assessing a head injury sustained by an individual who has a pre-existing head injury is a complex task with many unknown elements. Given these significant challenges, it is important to support the clinician evaluators who are charged with maintaining the safety of their players following a head injury.

How will Temporary Concussion Substitutions work?

From 2020, all IFCPF-sanctioned competitions will adhere to the Temporary Concussion Substitution (TCS) policy (IFCPF, 2019c). Any player who is suspected of sustaining a head injury should be removed from the field of play by the team medical personnel for a concussion assessment. At this point a TCS will occur, whereby a substitute will enter the field of play to replace the injured player. In keeping

with the timescales in rugby and also the timeframe recommended by the Concussion in Sport Consensus Group (McCrorry et al. 2017), this TCS will be permitted to play for 10 minutes whilst the injured player is being evaluated. If the injured player is deemed fit to continue within this 10-minute window then the TCS will be removed and the initial player returned to action. If the player is not fit to continue then the TCS will remain on the field of play, and if the 10-minute period expires without the injured player being passed fit to return then the TCS remains on pitch as a recorded substitution. Further information regarding the details relating to the TCS in CP football is available online (IFCPF, 2019d).

An additional consideration in CP Football are the “classifications” given to each player to ensure parity and fairness in the sport. Players are allocated to one of three classes based on their impairment status and functional ability (IFCPF, 2019b), with these classes being termed “FT1”, “FT2”, and “FT3”. FT1 players are the most impaired, with FT3 being the least impaired. During competitive matches, each team must have one FT1 player on the field at all times and is not permitted to have more than one FT3 player on the field. When a TCS is undertaken, the player which is the TCS must be of the same classification (or lower) as the player they are replacing (i.e. an FT2 player could be substituted by either an FT2 or an FT1 but not by an FT3). These

factors relating to classification have not been a barrier to the introduction of the TCS, despite adding an additional layer of complexity which is not present in mainstream football.

The next steps for Temporary Concussion Substitutions

The implementation of the TCS policy will be analysed at upcoming IFCPF tournaments by evaluating how the process is used by teams. The example of the Head Injury Assessment in rugby and the subsequent analysis by Fuller and colleagues (2016) provides an example for how this evaluation could occur. In this preliminary year of implementing the TCS, there may be issues arising which result in the modification of the TCS in future years. Given that the IFCPF TCS policy is in its infancy, adjustments and alterations to its current state are anticipated. To understand more about the thoughts of key stakeholders (players, medical staff, coaches, and referees) towards the TCS, qualitative studies are planned to obtain input from all parties.

It is hoped that the TCS may also lead to additional research in this area. At present, footballers with a disability are subject to the same return to play (RTP) timescales as their non-disabled peers. The 5th International Consensus Concussion Guidelines (McCrorry et al., 2017) made specific reference to the management concussion in

youth athletes-however to date there has been no mention of the best practice management of concussion in athletes with a disability. An increased understanding of the management of concussion in athletes with a disability will enable RTP guidelines to be created which will be specific to their needs. In time this may even lead to a "DisabilitySCAT" (or equivalent), in order to best inform the management of concussion in this population. There would be many difficulties to the creation of such a tool however, given the myriad of physical and medical complexities associated with disability athletics.

The future of concussion management in football

The concept of introducing temporary concussion substitutions in all formats of football is likely to be a topic of much discussion in the coming year, and there is strong public interest in the coverage of concussions in the mainstream news and media (Ahmed & Hall, 2017). Regardless of any decisions made by IFAB at their AGM in February 2020 (IFAB, 2019b), pressure is building on many national football federations to introduce temporary concussion substitutions (The Australian, 2020). The 6th International Consensus Conference on Concussion in Sport will also take place in 2020, which is likely to provide clinicians with updated guidance in the management of concussion. The temporary concussion substitution rule was introduced to

enable clinicians working in football to have more time to assess head injuries more effectively without the pressure of gameplay interfering with their decision. In the international discussion surrounding concussions in football, it should be considered that all formats of football could benefit from this rule change to optimize the evaluation and safety of our athletes.

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