CONCUSSION IN RUGBY

— IDENTIFICATION AND MANAGEMENT.

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Rugby injuries have increased in the last fifteen years[1], and judging from the latest statistics, this trend does not appear to be abating. Concussion is a common injury in contact sports, such as rugby. However, the degree of seriousness and the long term effects of such an injury, are not only dictated by the trauma but also by the coaches and referees. These key figures should have the knowledge and ability to detect a concussion, and remove the player from the field before any further damage can be done.

Concussion can be defined as a "clinical syndrome characterised by immediate and transient post-traumatic impairment of neural function such as alteration of consciousness, disturbance of vision and equilibrium"[2]. In any closed head injury, such as a concussion, the player is unable to process information clearly and also lacks the ability to retrieve information from his memory[3]. Clearly, it is therefore important to identify a concussion immediately, as it may be an indication of a secondary but more serious injury. No universal standard exists as to the subdivision of concussion but a useful guideline is to grade it according to both the duration of unconsciousness, and the amount of amnesia (loss of memory) that follows the traumatic incident[2]. This amnesia is referred to as post-traumatic amnesia or PTA.

GRADE 1 No loss of consciousness, PTA < 30 minutes
GRADE 2 Loss of consciousness < 5 min or PTA > 30 min
GRADE 3 Loss of consciousness > 5 min or PTA > 24 hrs

ASSESSMENT

One of the most important factors in the prevention of further trauma is the ability to identify when a player is concussed. A number of quick and reliable measures can be used in order to assess the degree of concussion.

Simple recall tests: These include a

number of short questions that under normal circumstances, the player would be able to answer without undue difficulty or delay. Examples of questions are: "What is the score?"
"What half is it, first or second?"
"What position do you play?" and,
"Which posts are you scoring under?"
It should also be borne in mind that it is not uncommon for players, especially forwards, not to be too sure of what the score is, and therefore another suitable question such as "What is the time" (showing the player your wristwatch), may be more appropriate.

Co-ordination tests: These involve asking the player to perform simple tasks such as, touching his nose with his index finger[4]. These easily executed tasks should be performed quickly and with the minimum of error.

It must always be remembered that even if a player "passes" these tests it does not necessarily indicate that he is able to continue playing, and the fieldside medical attendant should always be summoned if any doubt occurs in the referees mind.

INITIAL MANAGEMENT

Grade 1 This is not easy to recognize, as no loss of consciousness occurs. The player may appear confused or he may have impaired intellectual function ie. inability to answer, or answering the simple recall questions in an inappropriately long period of time, which may be an indication of mild concussion. If either occurs, the player should be removed from the field of play, and observed for a period of time (up to 15 minutes may be necessary). In rugby it is not always possible to remove the player from the field, as he is usually reluctant to stop playing. In these situations it is vital that the referee takes firm and immediate action, and basing his decision on the interests of the player, and not on the outcome of the game. If the player does not have a headache, or is not dizzy and he has regained full concentration and awareness, return to play may be considered. However, apart from these features that must be present, the player must be able to satisfy the referee that he is able to move with his prior dexterity. The referee and coach should also be aware of any abnormal characteristics in his play once he has returned to the playing field. In the event of his play becoming erratic, the player should be removed from the field.

Grade 2 and Grade 3 In both of these cases, the player should be removed from the field of play for the remainder of the game. All grade 2 and grade 3 concussions should be treated as a neck injury until proved otherwise. Potential spinal injuries are cause to overreact and overtreat[5] and first aid personnel should be summoned immediately

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GUIDELINES FOR RETURN TO PLAY

The following serve only as guidelines, and each case of concussion should be viewed and assessed separately

Grade 1: The player can return to sport after one week of rest, if he has been asymptomatic* for that week. If this is not the first concussion, then further rest is indicated. However, if the player has suffered his third concussion in the same season, then he should not be permitted to play for the duration of the season

* Symptoms include headache, dizziness, impaired concentration and memory and visual disturbance during rest and exertion

Grade 2: If this is the first concussion of the season, 2 to 3 weeks rest is indicated. The player can then return to play if asymptomatic for a complete week. However, if this is the second concussion, a minimum period of one month's rest is required. Once again, play should only be resumed when the player has been asymptomatic for one week. It must be emphasised that in some of these cases, the player should not return to activity for the remainder of the season. Once again, if a third grade 2 concussion occurs, play should be terminated for the rest of the season

Grade 3: A minimum of one months rest, including a week in which no symptoms occur, is indicated if a first concussion occurs. In the case of a second grade 3 concussion occurring in the same season, the player should not be allowed to return for the rest of the season

An important factor to consider is that, after a first concussion, the chances of incurring a second concussion are four times greater than in non-concussed players[5].

As can be seen, a number of simple steps can be undertaken in order to ensure that each player does not run the risk of being plagued by permanent neurological dysfunction. Every injury is stressful and requires a great deal of adaptation[6], none more so than a concussion injury. You wouldn't let your star player continue with a physical impediment, so don't let him continue with a neurological one.

References

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