A STUDY OF CONCUSSION ASSESSMENTS AND RETURN-TO-PLAY STANDARDS IN INTERCOLLEGIATE FOOTBALL: IMPLICATIONS FOR ATHLETIC ADMINISTRATORS

John J. Miller, Ph.D.
Troy University
John T. Wendt, J.D.
University of St. Thomas (MN)
Nick Potter, ATC
Kansas City Chiefs

Contact Information
John Miller
Email: johnm@troy.edu
Phone: 334-808-6468
FAX: 334-670-3743

Research Problem

The purpose of this study was to determine how medical personnel at selected universities managed the risk of concussions in intercollegiate football. This research contains timely information that reveals that no dominant guidelines for assessing a concussion or return-to-play in Division I intercollegiate football were revealed. The implications may result in potential litigation against the university and team medical personnel.

Issue(s)

Although there had been an increasing trend of concussions in intercollegiate football, recent reports have indicated that concussion rates have decreased in intercollegiate sports since 2005. Yet, gaining accurate accounts of the total number of concussions incurred by athletes every year is difficult due to a dearth of effective reporting. A reason for the inconsistency may be due to the primary method for determining the presence of a concussion has been simply to ask the athlete if they had a headache. As a result, concussive symptoms may not always be accurately reported to team medical personnel due to either the athlete’s reluctance to share their true feelings or their misunderstanding of what the symptoms represent. A previous study indicated that 58% of athletes do not possess adequate knowledge of sport-related concussion and less than 50% of athletes comprehend the issues that could occur due to sustaining a concussion. A previous report indicated that 42% of coaches perceived that athletes sustained sport-related concussions only when they lose consciousness and 25% of the coaches would permit an athlete to return to competition even though the athlete would exhibit the symptoms of a concussion. Of special significance to athletic trainers and team physicians is that many athletes do not recognized their symptoms as being the result of a concussion nor do they believe that sustaining a concussion is a potentially grave problem. Thus, the diagnosis and management of sports-related concussions have often relied a great deal on an athlete’s self-report of symptoms which may increase their exposure to harm.

The lack of understanding about concussions by athletes and coaches is complicated by the number of sports concussion management guidelines that are available to give guidance to intercollegiate football athletic trainers and physicians. It has been reported that 19 distinct series of guidelines have attempted to standardize the
treatment of sports-related concussions. As a result, the administration, implementation and management of these guidelines have been less than consistent in intercollegiate football. It should be noted that according to a previous report assessment, protocols and return-to-play decisions have been based on poorly validated guidelines and clinical judgment. Unfortunately, none are evidence based, and their suggestions are highly varied. While the grading guidelines have advanced the use of uniform terminology and increased awareness of concussion signs and symptoms, the lack of scientific method in creating the concussion management guidelines called their effectiveness into question.

Summary

However, nearly 70% of the respondents indicating that up to eight football players on their respective teams incurred a concussion during the 2009 season. More of the respondents did not believe that standard concussion guidelines should be followed by all intercollegiate football teams nor did they believe that the same guidelines should be used for an initial concussion assessments or subsequent concussions. More than half indicated that they had been pressured by a football coach (not necessarily the head coach) to return a concussed player to play earlier than their guideline permitted. Finally, although the head football team physician often consulted with the head football athletic trainer to decide on concussion diagnosis and return-to-play, the head football team physician almost always made the ultimate decision. This article would likely be useful to intercollegiate athletics department personnel and football team medical personnel. Other sport managers at other levels of sport who are involved with football may also find this article useful.

Although a majority of athletic trainers indicated that at least eight of the players on the team during the season this study took place suffered a concussion, that number may be under-reported. Very often athletes and coaches do not have a very good idea of the symptoms, signs, or consequences of incurring one or more concussions. As a result, the team physician is put in the position to diagnose a concussion. This study supported such a notion as well as identifying the team physician as being the final word in concussion assessment. However, appears in the study that no dominant methods for assessing or managing a concussion or determining a player’s return-to-play status existed. In fact the majority of athletic trainers indicated that they did not believe that standard concussion guidelines should be followed by all intercollegiate football teams nor did they believe that the same guidelines should be used for an initial concussion assessments or subsequent concussions. A potential reason for abandoning concussion guidelines may be that they have been shown to be ineffective as well as not valid. However, it is recommended that intercollegiate football team personnel continue to strive to reach agreement on appropriate risk management parameters for treating concussions that could be substantiated in a court of law.

While the expertise of the team physician is paramount and appears to be more than adequately prepared to diagnosis a concussion, it is equally important in a legal sense, for them to communicate the aspects of an effective concussion risk management plan. Additionally, although team physicians and medical staff may be knowledgeable about the symptoms and consequences of concussion, athletes and coaches often do not possess sufficient understanding. Thus, it is important that sports educational interventions be developed that are more positive rather than punitive.

Analysis

Concussions in football occur in a relatively frequent fashion, although the number in intercollegiate football appears to be declining. A number of issues complicate the potential consequences of football players sustaining a concussion including the players and coaches’ lack of knowledge as well as conflicting concussion assessment and return-to-play guidelines. Confusion involving these issues may lead to unfortunate decisions about when to return an athlete to competition after concussion. In assessing the awareness of a risk from participation in a sport, a higher degree of awareness will be charged to an individual with greater understanding, most often team physicians and trainers. If the return is too hasty and the athlete sustains another concussion, litigation may occur against the university as well as the team physician. To guard against such an occurrence, a formalized approach serves as a “road map” or as evidence of the presence of a risk management plan should be developed. A risk management assessment plan can be individualized to each athlete since recovery time is a variable because each student-athlete
with a concussion is unique. This may be vital as no two people are diagnosed in exactly the same way in a general practitioner’s office, neither should it be expected that any two concussed athletes would be diagnosed and assessed in exactly the same way. Additionally, the terms guidelines and standards seem to relay the connotation of strict adherence that provides little latitude for physician discretion and judgment.

**Discussions/Implications**

Due to the increased notoriety of concussions in sport, the frequency of sports-related concussion litigation may swell if effective risk measures are not employed. Although, it was apparent that head football athletic trainers and team physicians are cognizant of concussions, the culture of sports praises athletes who persevere through injury and personal hardship adds to the difficulty of diagnosing concussions as well as providing a return-to-play guideline. Thus, this article could be well-used by any sport participant, team medical personnel, athletic coaches and administrators.

It is important to remember that the practice of medicine, at all levels and in all forms, is an art. As no two people are diagnosed in exactly the same way in a general practitioner’s office, neither should it be expected that any two concussed athletes would be diagnosed and assessed in exactly the same way. Since there are many options with various possible outcomes, no “one-size-fits-all” treatment plan guaranteed to work for every concussed athlete in every case. As such, experts developing guidelines may want to address them more as protocols so they will have a better chance in establishing more definitive standard of care to the athletes. For guidelines to be deemed as standards of care legally, they must be specifically composed so treatment decisions do not rely solely at the discretion of individual physicians. However, it is imperative that university’s and their football team medical personnel understand their duties to provide all athletes a reasonable standard of care. To do so they must continue to strive to reach agreement on appropriate risk management guidelines or parameters for treating concussions that could be substantiated in a court of law.

While the expertise of the team physician is paramount and appears to be more than adequately prepared to diagnosis a concussion, it is equally important in a legal sense, for them to communicate the aspects of an effective concussion risk management plan. Additionally, although team physicians and medical staff may be knowledgeable about the symptoms and consequences of concussion, athletes and coaches often do not possess sufficient understanding. Thus, it is important that sports educational interventions be developed that are more positive rather than punitive. A recent example of a punitive reaction was from a football coach at a well-known university punishing a medically-certified concussed player by sending him into a dark room with no supervision for two days in a row. Additionally, educational sessions could teach student-athletes the skills to withstand the social pressures to play too soon after a head injury. Thus, the education of athletes and coaches, at all levels of competition, may result in more reporting thereby increasing the likelihood of appropriate concussion management. No student-athlete should suffer such an injury with the potential ramifications of a concussion due to a misdiagnosis or misunderstanding of the consequences. After all, it is important to remember that there is no such thing as a minor head injury.