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An Analysis of Cricket-Related Foot and Ankle Injuries

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ABSTRACT:
Background: In India, cricket is without a doubt the most popular sport. It is a well-known international sport that is performed in more than 60 nations. Cricket injuries are extremely prevalent, despite the fact that it is a non-contact sport. Despite its widespread use, only five major cricket-playing nations—England, South Africa, Australia, New Zealand, and the West Indies—have gathered information on cricket-related injuries. Very little information is accessible from the subcontinent, which is now the center of all cricket-related activities.In the medical literature, there haven't been many articles about cricket injuries, and even fewer have concentrated on foot and ankle injuries. Before Orchard et al established standards for what would constitute a cricket injury, injury definitions were not clearly spelled out. This article reviews the research on cricket-related foot and ankle injuries.

Keywords: Cricket, Ankle injury, Sport

1. INTRODUCTION

The most popular sport in India without a question is cricket. More than 60 nations participate in this important international sport. In 1844, the United States and Canada played in the first international match, which Canada won, at St. George's Park in New York.Australia and England squared up against one another in the first test at the Melbourne Cricket Ground in 1877.Test cricket, which was played over five days, was regarded as a casual sport with little player contact and little risk of injury. But the game has significantly changed over the years, moving from the tediousness of Test Cricket to the frenetic struggle between two teams over 40 overs, and now to the abrupt burst of tremendous physical activity that is Twenty20 cricket.
Despite being supposedly popular throughout much of the world, there is little published information and little research on the subject of science and medicine in cricket, as

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demonstrated by a recent editorial explaining the game of cricket in the Journal of Science and Medicine in Sport [1] (the same issue also contained two articles related to cricket).
This article reviews the research on cricket-related foot and ankle injuries. The dearth of information on foot injuries could be a result of less foot injuries occurring (which is inaccurate), or it could be a reflection of how well players can deal with or recover from foot injuries, or it could be an indication that players and medical personnel are undervaluing these symptoms.

Cricket injury epidemiology of the foot and ankle

Despite its widespread popularity, a study of the literature on cricket injuries reveals that just five major cricket-playing nations—England, South Africa, Australia, New Zealand, and the West Indies—have gathered information on cricket-related injuries. The sub-continent, which is now the center of all cricket-related activities, has limited data available.
In the British study [2], injury data for 54 cricketers who had competed for the same county team in England between 1985 and 1995 were collected retrospectively from the records of the team physiotherapist. In this study, "injury" was defined as the development of discomfort or disability brought on by cricket training or play that led the player to seek medical care.A total of 990 injuries were reported, with a 17,247-day injury exposure and a 57.4-injury incidence rate per 1,000 days of play. The lower limbs (44.9%) suffered the majority of injuries, with the calf and thigh (24.6%), knee (9.9%), and foot and ankle (8.1%) being the most common sites.The most common foot and ankle injuries were sprained ligaments and joints (29%), followed by contusions and hemorrhages (41%).
The report by Orchard et al on the frequency and occurrence of cricket-related injuries among Australian state and national teams over a 10-season period was published [9]. This study was distinctive in that it used the new injury classifications and provided elite cricketers with long-term data [3, 4].45% of the injuries occurred while bowling, 21% while hitting, 23% while fielding, and 2% while holding wicket. Injuries to the lower limbs made up 49.1% of all injuries.
Injury frequency was also significant for the shin/foot/ankle area, which continuously placed among the top three most often injured anatomical areas with a 17% injury incidence (range 10.9%–23.8%).
Walker et al. recently published a report on cricket-related injuries in New Zealand [5, 6,7], which is in a unique situation because, while they may not have the financial resources to support more elite-level surveillance, amateur players there enjoy the best infrastructure worldwide thanks to the Accident Compensation Corporation and National Minimum Data Set of public and private hospital discharges and day patients [8, 9, 11, 12].Their criteria of injuries included those that required a minimum of one night in the hospital. They noted that upper (36%) and lower (31%) limbs suffered the most damage.
Although it's rare, it happens frequently when the ball strikes the foot directly. Following a fielding mishap during a T20 international match at the MCG versus India, fast bowler Brett Lee had his foot shattered, according to the diagnosis. "Brett Lee suffered a fracture of his right foot after he was struck by a ball in the final over of his spell during the KFC T20 match against India at the MCG on Friday night," stated Cricket Australia team doctor Trefor James.
In recent sports, overuse and stress are frequent concerns. Cricket players have been reported to suffer stress fractures of the foot [10, 13], but there is currently no significant series of data

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to comment on the true occurrence of this issue in cricket players. In 5 out of 6 West Indian fast bowlers, Mansingh[14] observed posterior ankle impingement caused by a large ostrigonum; for the relief of their symptoms, 4 of these required surgical excision.For high-demand bowlers who presented with this lesion brought on by excessive stress at the rear of the ankle, the author advised excision as the best course of action. This prompted the development of numerous ideas on the underlying causes, and numerous topics were examined to find ways to lessen the stress behind the ankle in these high-demand bowlers.
The player's suffering was reduced after receiving a local infusion of 2% Xylocaine. Additionally, adding a moulded silicon metatarsal pad to shoes has helped to sustain pain relief. Sadly, the discomfort remained, and the player eventually quit cricket because he did not want any further treatment. At the time of the follow-up, the pain was completely gone. 4th World Congress of Science and Medicine in Cricket, 2011, India (Prabhakar et al., case presented)

Footwear and ground hardness play a role

Recent studies have attempted to determine the impact of various types and alterations of footwear for bowlers. Increased midsole flexibility in a cricket bowling shoe has been shown to improve player perception and plantar loading, according to McAlpine and Kersting[15-16]. The advantages of a heel lift in fast bowlers who bowl with an extended knee (>170°) at front foot contact were documented by Shorter et al [17].
According to Bishop et al's investigation into the biomechanical modifications caused by custom-made shoes, there is now more lateral shear stress and knee external rotation moment at the front leg [18]. So far, all reports on the potential impact of shoes on biomechanics, injury prevention, and injury causation have been brief.As a result, this field of footwear study is still largely unknown and may be one where future research should concentrate.
The cricket pitch itself was also examined in two Australian studies as a potential source of foot and ankle injuries. Ground hardness was identified by Twomey et al. [19] as a risk factor for injuries. All other ground assessments were graded as having "high/normal" hardness, while 31 out of 38 (82%) were classified as having "unacceptably high" hardness. However, they emphasized that more extensive research is required in the future to prove this as a risk factor.According to Swan et al. [20], sports governing bodies had a more direct hand in evaluating fields utilized for higher level play than fields for community or junior sport. It was generally assumed that any risks would be fixed by neighborhood groups or councils before anyone played on community fields, although this was rarely observed.Therefore, if sports governing organizations did not formally monitor the execution of their ground safety policies and standards, they incurred the risk of failing in their duty of care to sports participants. Swan et al. went on to say that there was still room for sports organizations to collaborate closely with insurers to create criteria for ground safety evaluation.

2. CONCLUSION

Despite being such a common sport, it is clear from the analysis of the literature that foot and ankle injuries are not adequately recorded. They are fairly common in professional sports, and they may be more so in casual games where the proper paperwork is lacking. Data that can be used to help develop intervention or preventative methods are extremely scarce. It is

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impossible to overstate the need of ongoing, diligent injury surveillance in such a situation, as well as research efforts in the area of footwear design.

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