

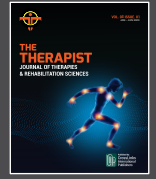


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Original Article

Prevalence of Musculoskeletal Sports Injuries of Head, Neck and Upper Limb Among Cricket Players

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ABSTRACT

Sports injuries have been reported with growing rate in a quest to identify patterns by which they can be predicted and prevented. Injury investigation in cricket has been started for almost twenty years. **Objective:** To determine the prevalence of musculoskeletal sports injuries of head, neck and upper limb among cricket players. **Methods:** It was a Cross-sectional study. Data were taken from 180 selected cricket players from different cricket academies, clubs of Lahore Pakistan. The data were analyzed by SPSS version 21 and with a self-generated questionnaire. **Results:** This study showed very low prevalence of head and neck injuries which is 5.6 % and very high prevalence of shoulder injuries are seen in this study which is 77.78 %. Elbow injuries are seen 19.4 % while there is a significant association between type of cricketers and shoulder pain. **Conclusions:** The prevalence of musculoskeletal sports injuries found very high in shoulder joint, then in elbow joint and then in head and neck which has affected their performance. Study also showed a significant correlation between the type of players and shoulder pain.

INTRODUCTION

Cricket was founded by English men at the beginning of 16th century. British rule over subcontinent for almost 100 years and they introduced cricket to them. About 30% population of world are very fond of this sport. Public of common wealth countries also love this game. In South Asian countries cricket is one of the favorite sports [1-3]. Cricket is a game in which a hard ball is thrown by a baller towards batsman [4]. A ball weight 156 grams is thrown from a distance of 22 yards towards a batsman [5]. This needs good eye to hand co-ordination, upper limb power, hand grip strength and the coordinated movements of shoulder, arms and wrists [6]. Now a days cricketers playing at all

levels are exposed to long and demanding seasons, practicing and playing cricket than previously, this has led to an increase in the number of injuries [7]. These injuries have very common incidence, sports physiotherapy is improving very rapidly, physiotherapist help cricketers to prevent, minimize risk and fast recovery from injuries. Although it is contact less sport but can injure a player with different ways. A direct body contact with ball when bowler throws towards batsman can become a reason of fracture or other musculoskeletal injuries while fielder slips on grass or two fielders strike each other while taking a catch. But now players use kits and helmet to protect their bodies.

The most common injuries, are overuse injuries associated with fast bowler [8]. The combine effect of different factors such as poor warm up, bad technique, no rest and overuse injuries, fast bowlers have more risk of injuries [9]. Injuries with overuse are due to constant micro trauma where the acting number of forces, each is lower than the end limit of the special tissue, added to generate a fatigue effect with time [10]. According to McGrath *et al.*, some countries have studied about cricket injuries, but in Pakistan very less research conducted so far, that is why our players shows poor performance and get more injuries. As commonwealth have limited countries so little international data were found on epidemiology of injuries [11]. With increased number of sports injuries, it is important to conduct more researches to avoid these injuries from happening. Investigations of injuries in this sport has been started almost 10 to 15 years ago. Limited researches have been done on cricket injuries in Australia and south Africa, although other countries have started to setup injury databases and some countries like England have produced many reports [12]. In Australia it was described that in adults (>15) cricket injuries are accounted for 7.3% of all sporting injury cases reported in emergency department. In sports-related emergency cricket injuries are counted as fifth greatest source. Injured cases which were involved at the time of injury, formal sporting activity involved 94.6% of injured cases where as organized competition was 82.8% in informal cricket it was accounted for 7.1% and 4.1% were remain unspecified. Others 5.4% cricket injuries which are presented in emergency department happened during leisure cricket activities [13]. In the current study the aim was to find out one year prevalence rate of musculoskeletal injuries, also frequency of head, neck and upper limb specific injuries in cricket players. In this study cricketers and sports injuries were also found associated.

METHODS

A cross-sectional study was conducted in which convenient sampling were used and collect data from Professional players of Lahore, with help of Self-administered questionnaire. Online software Epi Tools were used to calculate sample size which was total of 180 (epitool.ausvet.com) [14]. Study includes players range from under 14 to national level. They participated voluntarily after taking permission from their coaches. Players who were on illegal drugs excluded from this study. Also, who were not playing with hard ball were not included. Data analysis was done using SPSS 21.0 version. For qualitative data results were presented in the form of mean ± standard deviation and frequencies and proportions were used to present the qualitative data. p-value was

considered significant at P<0.05.to check the association between type of cricketer and shoulder injuries Pearson chi square-test was applied.

RESULTS

To determine the prevalence of musculoskeletal sports injuries of head, neck and upper limb among cricket players total 180 players were selected in which 60 cricketers were batsman, 60 were bowlers whereas total count of all-rounders was 50, while wicket keepers were 10 with the mean age of 21.56 years. Among 180 individuals only 5(2.8%) showed Head injury while the same number shows neck pain(Table 1).

Variables	Frequency (%)
head injury	5 (2.8%)
Neck pain	5 (2.8%)
No injury	170 (94.4%)
Total	180 (100%)

Table 1: Frequency distribution of head and neck injuries
Out of 180 (13.9%) 25 complain elbow pain, while (5.6%) 10 suffer from tennis elbow. 145(80.6%)had no injury (Table 2).

Elbow Injuries	Frequency (%)
Elbow pain	25 (13.9%)
Tennis elbow	10 (5.6%)
No injury	145 (80.6%)
Total	180 (100%)

Table 2: Frequency distribution of elbow injuries
120 (66.67%) players developed shoulder pain, 10 (5.58%) players showed rotator cuff injury, 5 (2.78%) players shoulder were dislocated, and 5 (2.78%) players had tendinitis(Figure 1).

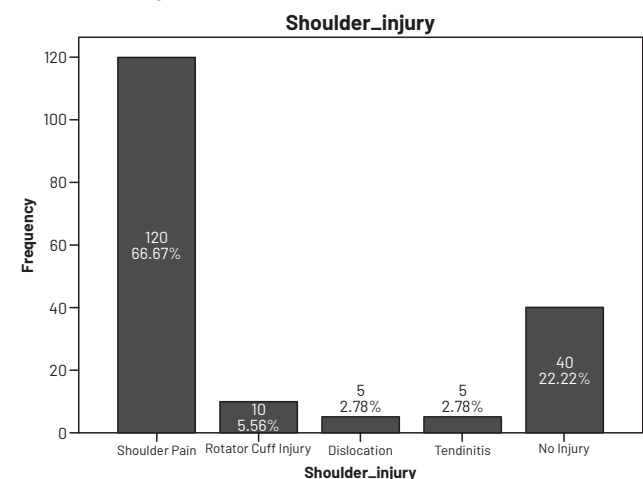


Figure 1: Frequency distribution of shoulder injuries
35 out of 60 batsmen complained shoulder pain, 5 were diagnosed with rotator cuff injury, 5 had tendinitis and 5 had shoulder dislocations.60 out of 60 bowlers had shoulder pain. 10 wicket keepers, 5 were diagnosed with rotator cuff injury. Out of 50 all-rounders 25 had reported

shoulder pain, out of 10 wicket keepers 5 had rotator cuff injury. There was a major association ($p=0.00$) found among type of cricketers and shoulder injuries (Figure 2).

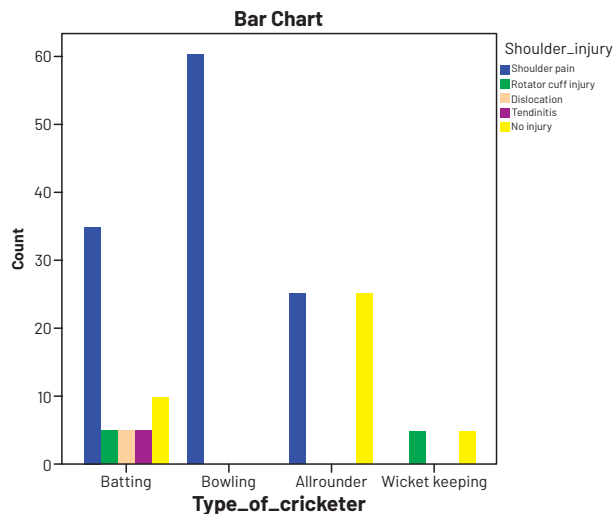


Figure 2: Association between type of cricketer and shoulder injuries

DISCUSSION

To find the prevalence of musculoskeletal sports injuries of head, neck (5.6%) and upper limb including shoulder injuries (77.78%), elbow injuries between cricket players self-administrated questionnaire were used. This study concludes very less frequency of head and neck injuries. Shoulder injuries (77.78%) were high in number while elbow injuries were less. Substantial association was also seen between the shoulder injuries and type of cricketer. In difference to this study of Stretch *et al.*, found that 20% prevalence of injuries related to head and neck whereas 5.6% were found in this study. In their study they found very low prevalence of upper limb injuries but if we consider this study, it was found that upper limb injuries are relatively had high prevalence [15]. In another study done by Zaman, shoulder injuries were found 22.58%, while head and neck injuries were 3.22%. Similarly, in the present study shoulder injuries had high frequency which is (77.78%) and in head and neck injuries the prevalence is 5.6% almost equal to above study. Similarly, the mean of age were 19 years where as in this study the sample age is 21 [16]. Dube *et al.*, conducted a study with 240 high school cricketers, among which 81.25% had pain and cricket related injuries in last season. Shoulder, lower back and knee were the most common sites of injuries. Bowler and batsman had high injury rate which is (36%) and (32%) respectively. Same as this study found shoulder pain are common in cricketers which is (66.7%). Similarly, wicket keepers are less suffered than bowlers in this study [17]. Stretch *et al.*, conducted another study on elite cricket players over two seasons, in which the collective percentage of Head and Neck injury is

5.0%, while upper limb injuries are 20.4% while this study shows head and neck injuries (5.6%) which is quite closer to these results [7]. Another study was conducted by Arshad *et al.*, there were 56.9% batsmen, 26.7% bowlers, 12.1% all-rounder and 4.3% wicketkeepers. The mean age of respondents was 23.11. Most common region involve was lower back followed by shoulder region [18]. In contrast to this, in study done by Houque *et al.*, bats man (38.9%) and all-rounder (57.1%) suffered the most sustained upper limb injury. Where as in this study bowler complained more for the upper limb injury [19]. A study conducted by Noorbhai *et al.*, (17%) players suffered from shoulder injuries while in this study very high prevalence of shoulder injuries is seen which is 77.78% [20]. In another study of Stretch, 92 players participated who played 1st class cricket during the season of 1987/88. Nineteen of these players had played cricket at international level while 73 played at provincial level. They had mean age of 27 years. 20% injuries were related to head and neck while current study shows very low prevalence of head and neck injuries which is 5.6% [21]. Physiotherapists and early rehabilitation can always minimize the risk of injuries as cricket players shows high number of injuries.

CONCLUSIONS

To talk about results this study show low prevalence of head and neck which is (5.6%), a little bit higher of elbow injuries (19.5%) and very high shoulder injuries which is (77.78%). Different kind of cricketers and shoulder injuries also had association among them.

Conflicts of Interest

The authors declare no conflict of interest.

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