

ORIGINAL ARTICLE

PATTERN OF WRIST AND HAND INJURIES AMONGST CRICKET PLAYERS IN PESHAWAR; A CROSS-SECTIONAL SURVEY

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ABSTRACT

Introduction: Cricket is the most commonly played game in Pakistan. Among all the sports hand and wrist injuries are higher in cricket players. Little is known about its prevalence. This study was conducted in order to determine the prevalence of hand and wrist injuries in cricketers at Islamia Cricket Academy (ICA) Peshawar.

Material & Methods: This cross-sectional study was conducted at Islamia Cricket Academy (ICA) Peshawar. A total of 200 players, who were willing to participate in the study and were members of the Islamia cricket academy were recruited in the study. After taking consent a self-modified questionnaire was handed over to 200 cricket players, selected through convenience sampling. Data were analyzed through SPSS version 20.

Results: A total of 108 (54%) players reported hand injuries, out of these 96 (48%) players reported soft tissue injuries, 8(4%) reported fracture, while 4 (2%) players reported dislocation. In the hand injuries 69 (34.5%) players had got injuries on their right hand, while 39(19.5%) players had got injuries on their left hand. Twenty-three players (11.5%) reported wrist injuries, in which 18 (9%) players reported soft tissue injuries, 4 players (2%) had dislocation, while 1 player (0.5%) had got fracture. In the wrist injuries 17 players (8.5%) got wrist injuries on their right hand, while 6 players (3%) had got wrist injuries on their left hand.

Conclusion: The prevalence of hand injuries were more than the wrist injuries and were more common on right side. Most injuries occurred to players during fielding. The ring and little finger were mostly injured in hand. Strategies focused on the little and ring fingers during fielding activities could be used to decrease the load of injuries.

Key Words: cricketers hand injury, soft tissue injuries, wrist injury

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INTRODUCTION

Physical activities and sports have the potential to maintain and improve health and fitness.¹ However, games are one of the major causes of the injury.² Cases of injuries are associated with participation level, type of sports, the psychological pressure of getting selected for the team, and intense training. Sports injuries

are a combination of all types of damages that occur in relation to sports activities.³ According to the National Athletic Injury Registration system of the United States, sports injuries limit the participation of an athlete in sports activities for at least a day after the day of occurrence.⁴ Cricket is the second most well-structured

game throughout the world, which is played by millions of people throughout the world especially in the subcontinent countries.⁴ In novice cricketers, most of hand injuries occur when players try to catch the ball, which most often hits fingers causing dislocations of the joints and severe injuries to the bones and soft tissues.⁶ The prevalence of hand and wrist injuries in sports are less, however, cricket has relatively high number of hand and wrist injuries and its prevalence rate varies from 11% to 13% in cricket players.⁷

The hand and wrist injuries have been maximized due to changes in game format, increasing number of matches being played, and decreased time for rest between matches. Studies have been conducted around the globe but there were limited studies available in Pakistan about hand and wrist injuries in cricketers. This study was conducted to explore hand and wrist injuries in cricketers, including batsmen, bowlers, and fielders of Islamia cricket academy.

MATERIAL AND METHODS

A descriptive cross-sectional study was conducted to find out the prevalence of wrist and hand injuries among cricketers. The sample size of the study was 200. Convenient sampling technique was used for data collection from the Islamia Cricket Academy, Peshawar. Those who were willing to participate were included in the study and those who were injured other than during playing games and during training sessions, or had other diseases were excluded. A consent form and questionnaires were distributed among the willing participants. The questionnaire was explained to the players prior to data collection. SPSS 20 was used for the data analysis. Using descriptive statistical analysis, continuous variables were presented as mean \pm SD and that of categorical variables were presented in number. Figures and tables were used for data presentation.

RESULTS

A total of 200 cricket players participated in this study. The minimum age was 11 years and the maximum age was 26 years. The mean age of the cricket players was (16.58 ± 2.7) years. Out of a total of 200 cricket players, wrist injuries occurred to 23 (11.5%) players while 177 (88.5%) players have no wrist injuries and 54% have injured their hands while 46% players have not experienced injuries (figure-I).

Regarding injuries to wrist region, the most commonly structure injured was soft tissue injuries (18.5%) followed by dislocation (2%), and fracture (0.5%). Ten players (5%) have got wrist injuries while fielding, 3% during bowling, 2.5% got wrist injuries during batting, and 1% injured their wrist during wicket-keeping. In injuries of the hand, 39% injuries occurred during fielding, (6%) during wicket-keeping, (5%) injured during bowling and 4% injured their hand during batting. Of these hand injuries, 48% were soft tissue injuries, 4% reported as fractures and 2% reported dislocations (table-I).

Regarding side involved, 8.5% of players have injured the wrist of their right hand, and 3% have injured the wrist of their left hand. Seventeen players (8.5%) have injured the wrist of their right hand, while 6 players (3%) have injured the wrist of their left hand. Among these 108 injuries of hand, 69 players (34.5%) got injuries to their right hand and 39 (19.5%) players have injuries on their left hand. The little finger was injured in most hand injuries 41 players (20.5%) followed by the ring finger in 38 (19%) players (table-II).

DISCUSSION

This study has shown that injuries occurred in the hand predominantly, with 54% hand, and 11% wrist injuries. Maximum players reported wrist and hand injuries during fielding. The most commonly occurring injuries in both wrist and hand were soft tissue injuries followed by other injuries. The right wrist and hand were injured more compared to the left wrist and hand. The little finger was injured in most hand injuries (20.5%) followed by ring finger (19%). Our study observations are similar to previous study conducted at Gloucestershire County Cricket Club from 2008–2013. The hand was injured mostly (86%) followed by wrist injuries (14%). In 36 (56%) cases right hand was injured, and in (44%) cases the left hand was injured. Majority of injuries (52%) were reported during fielding activities followed by bowling (8%), wicket-keeping (14%), and batting 12 (19%). Most injuries occurred as a result of a direct collision, principally with the ball. Injuries were treated predominantly with conservative measures. The most commonly injured finger was the little, followed by the ring.⁸

Result of the current study showed low frequency of hand injury (54%) in cricketers compared to previous study (86%) this can be due small sample size. A total of 31 players in previous study were present while our study was carried out on 200 cricket players. The previous study was done for six season (2008-2013) and the duration of current study was 6 months this might be another possible reason for this. Another study conducted in India reported a total of 16 upper limb injuries. The majority of injuries 10/16 injuries occurred in fielding⁹ which is consistent with data of current study as most of the injuries reported in both wrist and hand occurred during fielding. Another study conducted in South Africa on 436 cricketers reported 812 injuries. Most of the injuries occurred in bowling (41.3%) followed by fielding and wicket-keeping (28.6%), and batting (17.1%) which contrary to the data of current study where injuries were more common in fielding (39%) than bowling (4%).¹⁰ Current data is quite different because this study included more fast bowlers and injuries are more common in fast bowlers. Apart from this, their ground conditions are much better than the ground conditions in Pakistan that is why fielding injuries are less compared to bowling and batting.

On the basis of gender, we could not access the injuries as there were no female players in the study. Islamia cricket academy did not have any record of injured players, nor athletes have any investigative medical reports, imaging studies, or certificates monitoring their injuries. This study cannot be generalized as the data is collected in Peshawar. The time period in this study was very short.

CONCLUSION

Hand injuries were more common than the wrist injuries. Most of the injuries of wrist and hand occurred during fielding. The common injuries were soft tissue injuries followed by other structures. Right wrist and hand were injured more compared to left wrist and hand.

In hand the little finger was injured mostly followed by ring finger. Strategies focused on the little and ring fingers during fielding activities could be used to decrease the load of injuries.

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Table1: table showing mechanism and type of injuries

Mechanism of Injury	Wrist N (%)	Hands N (%)
Batting	5(2.5%)	8(4%)
Bowling	6(3.0%)	10(5%)
Fielding	10(5.0%)	78(39%)
Wicket-keeping	2(1.0%)	12(6%)
Injury did not occur	177(88.5%)	92(46%)
Types of Injury		
Fracture	1(.5%)	8(4%)
Dislocation	4(2%)	10(5%)
Soft tissue	18(9%)	78(39%)
Total System	23(11.5%)	12(6%)
Injury did not occur	177(88.5%)	92(46%)

Table II: table showing side of injuries

Variables	N (%)
Wrist Injuries	
Right	17(8.5%)
Left	6(3%)
Not injured	177(88.5%)
Hand Injuries	
Right	69(34.5%)
Left	39(19.5%)
Not Injured	92(46%)
Ring Finger	
Yes	38(19%)
No	162(81%)
Little Finger	
Yes	41(20.5%)
No	159(79.5%)

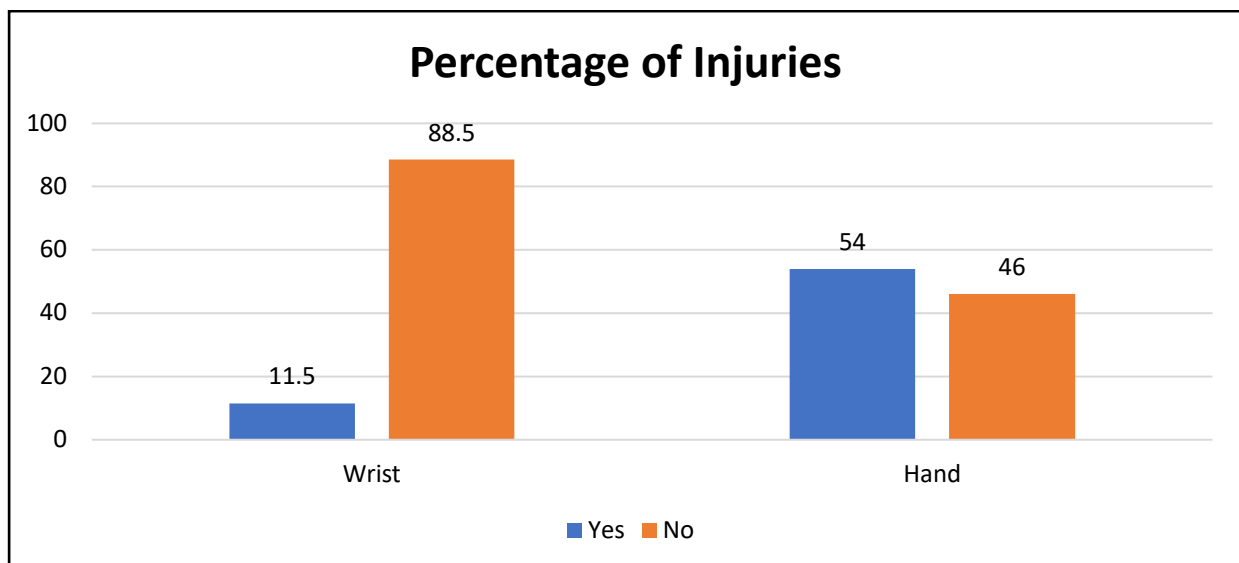


Fig I: Figure showing percentage of injuries in hand and wrist