

PREVALENCE OF SPORTS INJURIES IN COLLEGE VOLLEYBALL PLAYERS

MOHAMMED ANFAL N.¹ AND DR. DHINU M.R.²

¹ PhD Scholar, Karpagam University, Coimbatore

² Assistant Director and Head, Department of Physical Education, Sree Sankaracharya University, Kalady, Ernakulam, Kerala

ABSTRACT

The concern of this study was to assess the injuries of college volleyball players under Calicut university and to determine the nature, areas, reasons and outcomes of injuries and the possible risk factors involved. The injury data was collected through a questionnaire from the players of 10 college teams who participated in Calicut university inter collegiate volleyball championship held in St. Mary's college, Sulthanbathery, Wayanad in November 2013. The age of the players was between 18-23years. The players were asked to recollect their injuries over the past two years. A Total of 65 out of 93 players had sustained injuries. Lower limb injuries were found to be predominant, the ankle and knee being the commonly injured body locations. Most injuries were related to the soft tissue and muscles and tendons. The most common chances for a rise in injuries were spiking (35.7), diving (19.2), blocking (24.5), and setting (13.2), and other (7.4). There is a common observation that volleyball, contact directly in attack or defence were found to be more harmed by injury. The muscle injuries were noticed to be of the most frequent type. Spiking was the most common reason for the injuries. This research study shows that and provides a very helping insight into the natures, occurrence or incidence and areas of injuries in college volleyball players.

Key Words: Injury incidence, Inter collegiate, Volleyball players, Treatment, Rehabilitation.

INTRODUCTION

Volleyball is wonderful game; it can also be a relaxing and highly enjoyable recreation. It is a game that can be played at all ages and by both the sexes inside the walls and outside. It can be highly competitive requiring a high level fitness, agility and co-ordination. The players of the game require concentration, quick thinking and a great

deal of movement. In addition, the speed of the game requires the players to take quick decisions because of the sudden changing situations of attack and defence.

Playing volleyball largely involves stretching, twisting, jumping , turning ,spiking movements that place the players at a high risk of sustaining injuries .A study of sports injury statistics may show that injury occurs in training or matches, interrupt a hampered play.

Volleyball occupies a small place in the area of sports medicine and rehabilitation. It is a low risk game but dominating by the overuse injuries , so the rehabilitation period from injuries is relatively longer, but only a short period are lost by the volleyball players to back the court, thus leading to abuse of the injured sites. In volleyball injuries are traditionally divided in to contact and non contact mechanism in which case contact player with player. The non contract injuries from the playing area to the injured sites.

The researchers have conducted an investigation to find the possible risk factors involved in playing volleyball as there is a paucity of information on sports injuries in general and these related to volleyball playing in particular.

METHODS

Data was collected on volleyball injuries from 10 college teams, which participated in Calicut University inter collegiate tournament in November, 2013 at Sulthanbathery, Waynad, Kerala.

A questionnaire prepared by the investigator with the help of the supervisor for studying the incidences of sports injuries in general was given to the participants. The players were asked to recollect their injuries over the preceding one year period. The investigation was conducted on 93 players. Mean scores, standard deviation and percentage were calculated and utilised to identify the nature, location and reason for the injury.

The scholar directly contacted the officials of the 10 teams and referred objectives of the study to them. He also gave detailed instructions to the players for filling in the questionnaire. A total of 105 questionnaires were administered and 93 were returned by the volleyball players after completion, thus registering an overall response rate of 88.57 %.

RESULTS AND DISCUSSION

Mean, age, weight and height of the volleyball players were 22.33 (SD± 2.66) years, 63.01 (SD± 9.12) kg and 179.54(SD± 12.77) cm. respectively. Average training duration was 2.08 (SD±.89) hours. A total of 65 out of 93 volleyball players reported of having sustained injure.

The results with respect to their injury details are presented in figures 1 to 4.

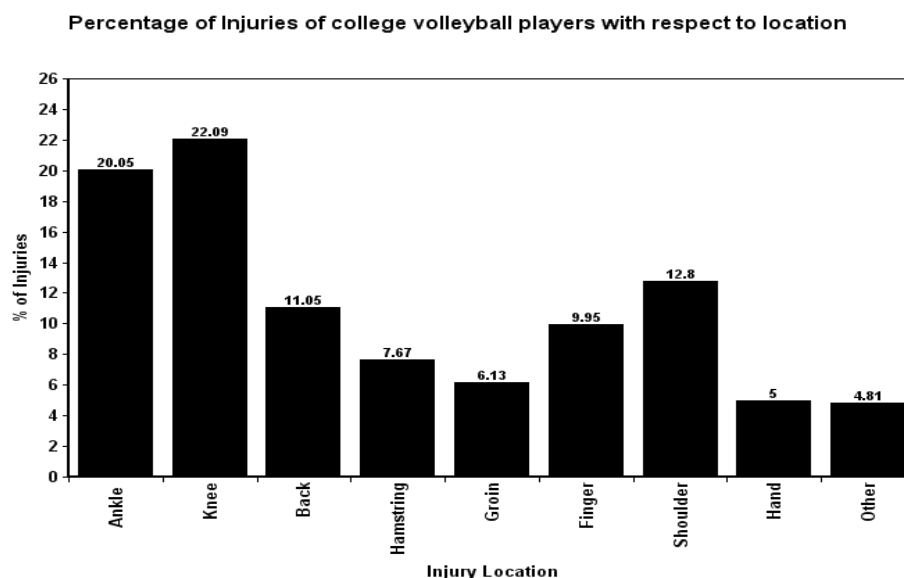


Figure – 1 illustrates the most commonly injured anatomical in volleyball players. The maximum injured site in the volleyball players was found to be the region of Ankle (20.05%) followed by Knee (22.09%), Shoulder (12.8%), Back (11.5%) Hamstring (7.67%), Groin (6.13%), Finger (9.95%), Hand (5 %) and others (4.81%). It can be understand that the ankle, knee and shoulder were the most involved sites of injury in this volleyball player.

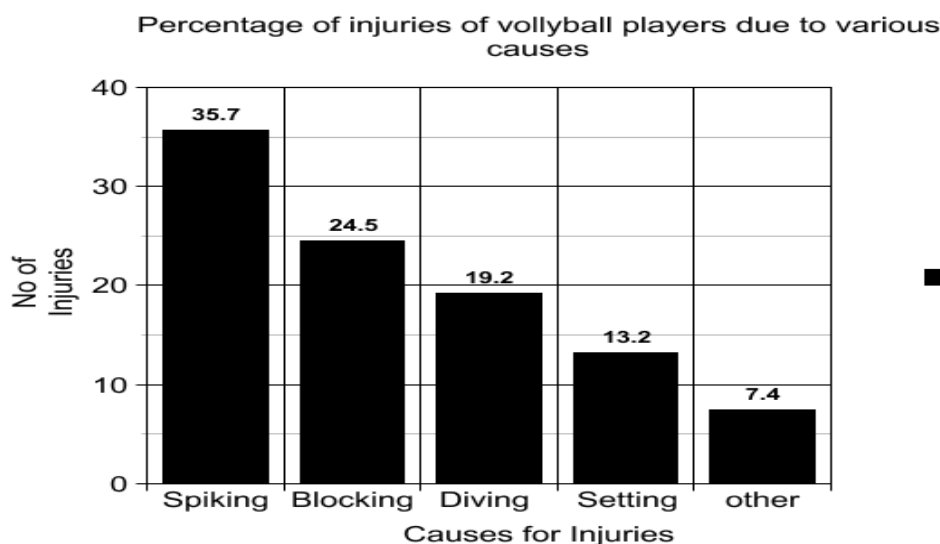


Figure – 2 depicts the common causes of injury in volleyball players. It can be observed that the most common causes were Spiking (35.7%), Blocking (24.5%), Diving (19.2%), Setting (13.2%) and others (7.04%).



Figure – 3 demonstrate the nature of injuries sustained by volleyball players. The maximum incidence of injuries reported by the volleyball players relate to the muscles (35.8%) followed by ligaments(28.91%), tendon (15.5%), fracture(3.3%), bruises (8.91%), and others(7.58%) of them, muscle and ligament injuries were the most frequently occurring ones.

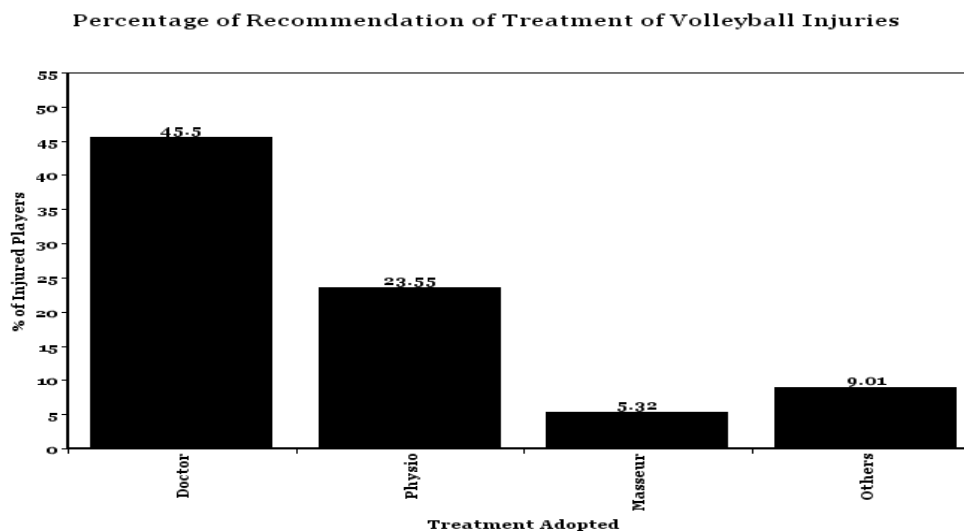


Figure – 4 compares the methods of treatment received by the volleyball players for their injuries. It is observed that 45.5 % of volleyball players got their injuries treated by a doctor, followed by 23.55%, 5.33% of volleyball players treated by a physiotherapist and a sports masseur. It is observed that doctor treated more number of volleyball players than physiotherapists and sports masseur.

DISCUSSION

The statistics of this minor investigation shows that 63.35 % injuries occurred during the championships while 36.65 % happened during the training. The high incidence of injuries during competition was probably due to poor technique, less fitness, high amount of over training and competitive attitude of the players.

In the competition or practice session the players who are directly involved in attack or defense are most likely to be injured. There is a truth in the perception that most injuries were sustained by the players due to spiking and blocking.

This study also shows that most injuries were acquired at the lower limbs of them were which 20.05 % connected to ankles and 22.09 % to knees. A significant proportion of injuries occurred in the upper limb region of which shoulder injuries predominated (12.8 %). The relatively high incidence of shoulder injuries is due to the fact that the shoulder charge is allowed while spiking in the volleyball game situation.

The ligament and muscle injuries were the frequent types of injuries in the game. It happened due to the poor techniques and lack of fitness standards of the players.

The rare injuries were of the most serious types which included fractures (3.03%). About (83.38%) of injuries required treatment by a medical doctor who treated (45.5 %) of these injuries. In final it can be said that injuries are a very serious issue for the college volleyball players.

CONCLUSION

The most common injuries sustained by the player are in lower limbs; ankle as well as knee injuries are the very commonly occurring injuries among the college volleyball players.

THE STUDY SUGGESTS THAT

- A. Most of all injuries are sustained by the blockers and spikers.
- B. Most number of injuries occurs during competition.
- C. The shoulder and finger regions are more vulnerable among the upper limbs of the body.
- D. According the nature of injuries, muscle and ligament injuries are the most frequently recorded ones in volleyball.
- E. The treatment section of injuries shows the doctor is the major consulted person who treated the largest number of injuries.

This investigation has established a platform for further enquiry in the fields of Sports Science and Physical Education as well as Sports Medicine and Rehabilitation.

REFERENCE

1. Aagaard H, Jorgensen U. Injuries in elite volleyball. Scand J Med Sci Sports 1996; 6: 228–232. Bahr R, Bahr IA. Incidence of acute volleyball injuries: a prospective cohort study of injury mechanisms and risk factors. Scand J Med Sci Sports 1997;7: 166–171.
2. Ekstrand J, Gillquist J. Soccer injuries and their mechanisms: a prospective study. Med Sci Sports Exerc 1983; 15: 267–270.
3. Ferretti A, Cerullo G, Russo G. Suprascapular neuropathy in volleyball players. J Bone Jt Surg 1987; 69A: 260–263.
4. Sinku, S K 2006a Injury prevalence in competitive swimmers, ind. J. Sport Study, 6:40-44.
5. Bahr R, Bahr IA. Incidence of acute volleyball injuries: a prospective cohort study of injury mechanisms and risk factors. Scand J Med Sci Sports. 1997 Jun; 7(3):166-71.
6. Bahr R, Reeser JC; Fédération International e de Volleyball. Injuries among world-class professional beach volleyball players. The Fédération International e de Volleyball beach volleyball injury study. Am J Sports Med. 2003 Jan-Feb; 31(1):119-25.
7. Ferretti A. Epidemiology of jumper's knee. Sports Med. 1986 Jul-Aug; 3(4):289-95. Kugler A, Krüger-Franke M, Reininger S, Trouillier HH, Rosemeyer B. Muscular imbalance and shoulder pain in volleyball attackers. Br J Sports Med. 1996 Sep; 30(3):256-9.
8. Reeser JC, Verhagen E, Briner WW, Askeland TI, Bahr R. Strategies for the prevention of volleyball related injuries. Br J Sports Med. 2006 Jul; 40(7):594-600.
9. Verhagen EA, Van der Beek AJ, Bouter LM, Bahr RM, Van Mechelen W. A one season prospective cohort study of volleyball injuries. Br J Sports Med. 2004 Aug; 38(4):477-81.
10. Wang HK, Cochrane T. Mobility impairment, muscle imbalance, muscle weakness, scapular asymmetry and shoulder injury in elite volleyball athletes. J Sports Med Phys Fitness. 2001 Sep; 41(3):403-10.