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Role of physiotherapist in the management on field-sport injuries: A review of literature

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Abstract
Background and Introduction: On ground sports injuries have become a challenging task for physiotherapists around the world and lack of literature data makes it more difficult. In India it is still in growing phase. These are the case study which provides the basic base line data regarding potential areas of injury, their types, treatments and outcome of the treatment on subjects and on game results.
Objectives: The aim of this study is to cognize the role of physiotherapist in the management on field sport injuries.
Methodology
A. **Data Source and Literature Source:** relevant articles were identified by searching from: PUBMED, cohrane literacy, Google scholar.
B. **Data Selection:** Articles of role of physiotherapist in the management on field sports injuries, systemic review with meta-analysis belongs to 16 Indian women field hockey players participated in 15th Asian games held at Doha from 1st Dec to 15 Dec, 2006 where they played total 7 matches, each of 70 minutes.
Results: More than 10 articles are on sports injuries in which 05 articles are matched with role of physiotherapist in the management on field sport injuries.
Conclusion: The studies have recommends players should undergo at least a pre-season fitness screening for general strength, flexibility and endurance. After rehabilitation, injured player scored significantly ($p<0.01$) more goals (68%) than the not injured (32%) shows physiotherapy enhanced the game performance. The basic baseline data of these studies may be beneficial in future or further study.

Keywords: sports, field hockey, injury, physiotherapy, rehabilitation

Introduction

- The consequence of the preamble of physical activity in disease prevention and health promotion is available in much literature. Bodily activity and workout no longer most effective maintain health, additionally they improve intellectual health.
- Physiotherapist assesses, treats and manages a wide variety of injuries including ailments from the fields of neurology, orthopedics, thoracic, respiratory, cardio-vascular, obstetrics, sports medicine, geriatrics, pediatrics, general rehabilitation and intensive care units.
- Physiotherapist treat different types of sports injuries, which include tendon injuries, ligament and muscle injuries, backache, muscle spasm, muscle fascia abnormalities, fractures and headache after medically stable.
- A sports physiotherapist is a recognized professional who demonstrates advanced competencies in the promotion of safe physical activity participation, provision of advice, and adaptation of rehabilitation and training intervention, for the purposes of preventing injury, restoring optimal function, and contributing to the enhancement of sports performance, in athletes of all ages and abilities, while ensuring a high standard of professional and ethical practice.
- Sports physiotherapy is a combination of manual techniques and other therapies including manipulation and mobilization, electrotherapy, massage, hydrotherapy, exercise programmes. The purpose of physiotherapy is to decrease body dysfunctions, reduce pain caused either by trauma, surgery, inflammation and degeneration.

Definition

According to the WCPT, on physiotherapy in sport, this is set of methods, techniques and performances which through the use and application of physical agents prevent, recover and readjust a person with sport or exercise injuries at different levels.

- Sports injuries are caused by overuse, direct impact, or the application of force that is greater than body part can structurally withstand. Common injuries include sprains, bruises, strains,nose bleeds and joint injuries. Remedy relies upon on the kind and severity of the injury.

- Chronic injuries are caused by overusing the same muscle groups or joints. Terrible method and structural abnormalities can also make contributions to the improvement of chronic accidents.

Common Types of Sports Injuries

- **Ankle Sprain:** symptoms include pain, swelling and stiffness.
- **Cuts and abrasions:** are usually caused by falls. The knees and hands are particularly susceptible.
- **Concussion:** mild reversible brain injury from a blow to the head, which may be associated with loss of consciousness. Signs consist of headache, dizziness and short time period reminiscence loss.
- **Bruises:** a blow can cause small bleeds in to the skin.
- **Dehydration:** losing too much fluid can lead to heat exhaustion and heat stroke.
- **Hamstring strain:** symptoms include pain, swelling and bruising.
- **Knee joint injuries:** symptoms include pain, swelling and stiffness. The ligaments, tendons or cartilage can be affected.
- **Stress fracture:** particularly in the lower limbs. The effect of repeated leaping or walking on hard surfaces in the end stresses and cracks the bone.

First Aid for Sprains, Strains and joint injuries

Immediate treatment for sprains, strains and joint injuries include:

1. Stop the activity
2. Rest the injured area
3. For the first 24 – 48 hours, apply ice packs for 15 minutes every two hours, i.e. Cryotherapy.
4. Bandage the injured region firmly, extending the wrapping above and underneath the injury.
5. Every time possible, elevate the injured area above the level of your heart.
6. Avoid warmness, alcohol or message, which could exacerbate the swelling.
7. Looking for medical advice.

Emergency situations

Call an ambulance if any of the following injuries are suspected:

- Prolonged loss of consciousness
- Neck or spine injuries
- Broken bones
- Injuries to the head or face
- Eye injuries
- Abdominal injuries

Treatment for Sports Injuries

Physiotherapy can help to rehabilitate the injured site and, depending on the injury, may include exercise to promote strength and flexibility. Returning to sport after injury depends on physiotherapist's assessment. Trying to play before the harm is properly healed will only cause further damage and delay recuperation. Inside the meantime, can preserve health through choosing styles of workout that don't involve harm, as an example, ride a stationary bicycle at the same time as sprained wrist is healing.

R.I.C.E Treatment

- Rest, Ice, Compression, Elevation
- First aid for strains, sprains, and uncomplicated fractures.

Rest

- Stop using injured part.
- Use crutches to keep away from bearing weight on accidents of the leg, knee, ankle, or foot.
- Use splint for injuries of the arm, elbow, wrist, or hand.

Ice

- Keep dry cloth between ice pack and skin.
- Do not apply ice for longer than 15-20 minutes at a time.
- Apply ice after 3 days as long as pain or inflammation persists.

Compression

- Use elasticized bandage, compression sleeve, or cloth.
- Wrap injured component firmly.
- Loosen the bandage if it gets too tight.

Elevation

- Elevate injured element above level of heart.
- Use objects and pillows for props.

- Some texts advocate PRICES (P=Protection, S=Support).

Prevention strategies
- Warm up thoroughly by gently going through the motions of sport and performing slow, sustained stretches.
- Wear appropriate footwear.
- Use the appropriate safety equipment, such as mouth guards, helmets and pads.
- Drink plenty of fluids before, during and after the game.
- Maintain a good level of overall fitness.
- Use good form and technique.
- Cool down after sport with gentle, sustained stretches.
- Have regular medical checkup.

The physiotherapist in sport has the following specific functions
1. Outreach in Sport
2. Prevention
3. Recovery
4. Rehabilitation
5. Teaching
6. Research

Role of sports physiotherapist in antidoping programmes
- To be knowledgeable of and comply with all antidoping policies.
- To cooperate with the athlete trying out program.
- To encourage athletes to uphold anti-doping values and anti-doping attitudes and to support compliance with anti-doping rules.
- Sports physiotherapist should aware of the fact that if an athlete is of substantial assistance in establishing anti-doping rule violation by athlete support personnel, the period of ineligibility of the athlete may be eliminated or reduced.
- Sports physiotherapist should be conscious of the fact that administration of doping could constitute an anti-doping violation on the athlete's part, even if the athlete was unaware of what was being administered.
- Sports physiotherapist must be aware of the fact that nutritional supplements can be contaminated as a result of which ingestion by an athlete could unintentionally lead to a positive test result.

Materials and Methods

Study Design
Narrative Study/Literature Review

Source of Data
PuBMed, Science Direct, EBSCO, SCOPUS, Web of Science, Shodhganga, Google Scholar.

Results and Discussion
- More than 10 articles are on sports injuries in which 05 articles are matched with role of physiotherapist in the management on field sport injuries.
- Lack of data availability.
- In this study should be comparative analysis in relation to height and age of players.
- Case research plays an important role in gathering evidence for more efficient practice, especially in relation to physiotherapy, where it is common to find interventions that are to context – dependent and multifaceted.
- Exercise therapy is generally prescribed to be a specialist clinical skill and the most complex and difficult part of physiotherapy.
- This literature review described about the rapid recovery of an athlete in case of ground injury and satisfaction with the outcome after physiotherapy intervention.
- Core aspects of physiotherapy management in ground injuries are to be reduction in pain improvement in function and prevention to further deterioration.
- The main goal of physiotherapist while rehabilitating the on ground injured sports person is "to make player fit for play within the shortest possible time".

Conclusion
The studies have recommends players should undergo at least a pre-season fitness screening for general strength, flexibility and endurance. After rehabilitation, injured player scored significantly ($p<0.01$) more goals (68%) than the not injured (32%) shows physiotherapy enhanced the game performance. The basic baseline data of these studies may be beneficial in future or further study.

The study has demonstrated throughout the tournament got three body parts affected by 7 different types of injuries and rehabilitated according to symptoms by using physical therapy which is cost effective.

The effect of treatment was 100%.

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