



ROLE OF PHYSIOTHERAPY ASSESMENT & MANAGEMENT OF KNEE & ANKLE INJURIES IN FOOTBALLERS

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ABSTRACT

Physiotherapy plays an essential role in the assessment and management of knee and ankle injuries in footballers. Physiotherapists assess the injury, develop a plan of treatment, and provide advice on injury prevention. They also help to manage the pain, improve range of motion, and restore strength, balance, and coordination. Furthermore, they can provide advice on exercises and lifestyle modifications to reduce the risk of recurrence and further injury. Ultimately, physiotherapy can help footballers to return to their sport quickly and safely. Physiotherapy plays an important role in the assessment and management of knee and ankle injuries in footballers. This involves a thorough examination of the injured area, followed by treatment strategies such as massage, mobilization, stretching, and strengthening exercises. Additionally, rehabilitation programs focusing on injury prevention, agility, and balance can be prescribed to help athletes return to their pre-injury levels of performance. Education on proper technique, equipment, and warm-up/cool-down exercises are also important components of the overall management plan.

Keywords:

Ankle Joint Mobilisation, Gait Analysis, Strength Training, Range of Motion Exercises, Balance Training, Proprioceptive Exercises, Soft Tissue Massage, Joint Manipulation, Knee Bracing, Injury Prevention Strategies.

1. INTRODUCTION

Sports injury refers to the kind of injury that occurs during sports or exercise. It is possible to injure any part of the body when playing sports.

Sports injuries is commonly used to denote injuries that are mostly related to musculoskeletal system.

Acute injuries usually occurs suddenly while participating in sports or exercise that may result in sudden and severe pain, inability that bear weight on limb or inability to move the affected part of the body out of which knee and ankle injuries are the commonest.

The common games involving injuries of these joints are football.

The study and diagnosis and management of sports injuries have evolved into multidisciplinary field involving physician , therapist and other health care professionals who have interest in the area of sports injury prevention and care.

The game involve both contact and noncontact injuries. Some examples are:-

- Ligament Injuries
- Meniscal injuries
- Fractures
- Ankle sprain/strain
- Contusion

1.1 Principles of Management

There are principles of management according to which management of the injury or even early prevention gives a positive and a successful outcome and feedback.

The principles are :-

- ❖ Team approach
- ❖ Advanced preparation
- ❖ Rapid assessment
- ❖ Regular assessment
- ❖ Timely life & limb saving intervention
- ❖ Early transportation to an appropriate level medical facility

1.2 Scope of Topic

More sports related injuries logically follow the ever increasing trends towards concerns regarding fitness as well as tremendous sports participation in organized and recreations sporting activities at all ages.

Sports physiotherapy is specialized branch of physiotherapy which deals with injuries and issues related to sports people.

Sports injuries do differ to everyday injuries and are specific to each sports practiced.

Each football physiotherapist usually has specific knowledge that addresses prevalent acute and overuse injuries in different age category.

3. OBJECTIVE OF THE RESEARCH

1. To assess the severity of knee and ankle injuries and their functional implications in footballers.
2. To develop individualized physiotherapeutic interventions for the prevention, management and rehabilitation of knee and ankle injuries in footballers.
3. To educate footballers about the importance of safe warm-up and cool-down practices, stretching and strengthening exercises to reduce the risk of knee and ankle injuries.
4. To identify risk factors and biomechanical deficits that can potentially lead to knee and ankle injuries in footballers.
5. To design and implement rehabilitation programmes to help footballers return to their pre-injury level of performance.
6. To provide advice and guidance to footballers and their coaches to ensure safe and effective training and match preparation.

3. PHYSIOTHERAPY ASSESSMENT AND EVALUATION

3.1 The Lower Extremity Overuse Injuries

Repetitive jumping, pivoting, and combination of rapid acceleration and deceleration predisposes its players to overuse injuries. The most common overuse injuries seen in players are patellar tendonitis (jumper's knee), Achilles tendonitis, posterior tibial

tendonitis (medial shin splints), and peroneal tendonitis. Many of these injuries occur early in the season secondary to poor conditioning. A key to effective treatment of these problems is primary prevention

with sport-specific training, which is discussed later. Jumper's knee refers to tendonitis of the knee extensor mechanism. It is often associated with patella. High eccentric loads are placed across the knee on landing from the jump. The Achilles tendon experiences tensile loads eight times the body weight with running and much higher loads with activities such as basketball, soccer, and ice hockey. The Achilles tendon is prone to mucoid degeneration at the watershed area 4 cm proximal to the calcaneal insertion. Overuse is associated with anatomic malalignment, caves feet, and tight gastrocnemius, soleus, and hamstrings.

4. ANATOMY OF KNEE JOINT

The knee joint is the largest and more complex joint of the body. The complexity is the result of function of fusion of the joint in one.



Figure 1: Anatomy of Knee Joint

4.1 FIBULA

The long and thin fibula is located lateral and parallel to the tibia. The fibular head can be palpated just lateral to the lateral condyle of the tibia.

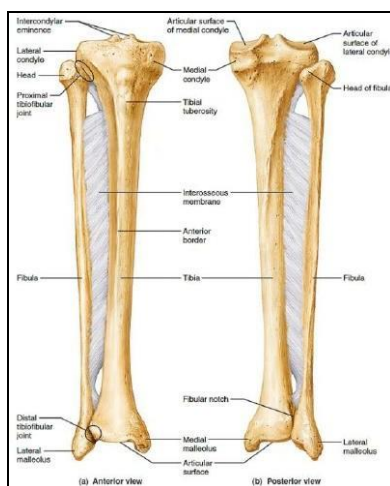


Figure 2: Fibula and Tibia

4.2 Navicular

The navicular is for its resemblance to a ship. Its proximal surface accepts the head of the talus at the talonavicular joint. The distal surface of the navicular bone contains three relatively flat facets that articulate with the three cuneiform bones.

1. Medial cuneiforms
2. Intermediate cuneiforms
3. Lateral cuneiforms

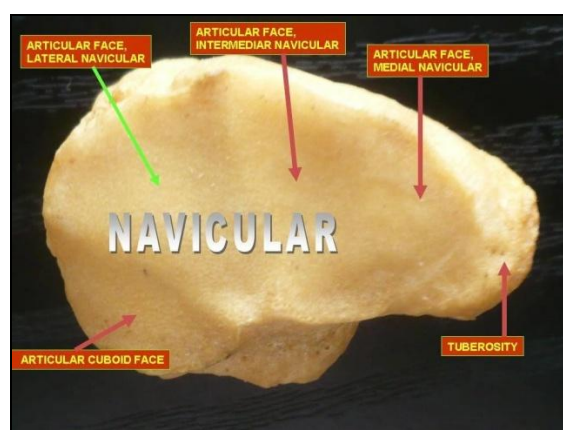


Figure 3: Navicular

4.3 Cuboid

As its name indicates the cuboid has six surface three of which articulates with adjacent tarsal bone. The distal surface articulates with the bases of both the fourth and fifth metatarsal.

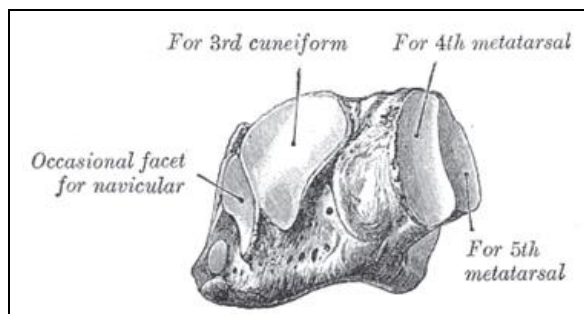


Figure 4: Cuboid anteromedial view

5. MECHANISM OF INJURY

5.1 The Lower Extremity Overuse Injuries

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6. SECONDARY PREVENTION TO INJURIES

An important role for the sports medicine practitioner is to minimize activity-related injury, that is, to improve the benefit : risk ratio associated with physical activity and sport. There have been many advances in the field of sports injury prevention in the past decade. Sports injury prevention can be characterized as being 'Primary', 'Secondary' or 'Tertiary'

Principles of injury prevention		
Principles of injury prevention	Warm-up	Stretching
Taping and bracing	Protective equipment	Suitable equipment
Appropriate surfaces	Appropriate training	Adequate recovery
Psychology	Nutrition.	

7. CONCLUSION

An effective care plan for the severely ill or injured athlete requires advanced planning and preparation, education of personnel, team rehearsal and quick decision making. The physiotherapist must be aware of the mechanism of injury, the index of suspicion, aggressive resuscitation, vigilance and continuous reassessment. Early access to any surgical intervention is also necessary, if required. Knee and ankle injuries are the most common on-field sports injuries, and if not properly managed and rehabilitated, they can result in debilitating deformities and end the life career of an athlete. Therefore, it is critical for a physical therapist to pay attention to the smallest details of every individual athlete, and to ensure that the athlete has proper biomechanical posture and complete rehabilitation.

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