DOI: 10.7860/JCDR/2025/80480.22596

Triangular Fibrocartilage Complex Injuries in Athletes: Management Strategies, Impact on Performance, and Return-to-Play Considerations – A Narrative Review

AKSHAT SINGH CHOUHAN[1]*, AMANDEEP SINGH[2], SHAILJA[3], ARPIT BANSAL[3], RICHA AGRAWAL[3], BIRINDER KAUR[1], HARNEET KAUR[1], AMANDEEP SINGH[1]

ABSTRACT

Introduction: The Triangular Fibrocartilage Complex (TFCC) supports Distal Radioulnar Joint (DRUJ) stability, dissipates axial loads, and integrates with radioulnar ligaments. Its limited vascular supply and complex structure make it prone to recurrent injuries, especially in athletes. Understanding TFCC tears is crucial, as 3% to 9% of athletic injuries involve the hand and wrist, with a growing focus on pediatric and adolescent management and recovery.

Aim: This article compares conservative management to surgical procedures for treating TFCC injuries in athletes. It examines the impact on wrist function, athletic performance, and return-to-play outcomes.

Materials and Methods: A comprehensive search was conducted using PubMed and Google Scholar for studies from 2000 to 2024. Keywords included "TFCC injury," "athletes," "conservative management," "surgical control," "wrist function," and "return to play."

Results: Both conservative and surgical treatments offer similar long-term benefits in pain relief and improved grip strength. However, TFCC injuries significantly affect athletic performance. Inadequately managed injuries can lead to persistent instability and faster osteoarthritis development. Conservative management allows for a quicker return to play (6-12 weeks), while surgery often requires 3-6 months. Athletes undergoing surgery typically have higher chances of returning to pre-injury performance levels. Effective rehabilitation and gradual return-to-play are crucial for optimal outcomes.

Conclusion: The choice between conservative and surgical management should consider injury severity, sport-specific needs, and individual athlete characteristics. While conservative management may enable a faster return to activity, surgery might offer better long-term outcomes for complex injuries. Proper treatment and rehabilitation are essential for a successful return to play and maintaining performance.

Keywords: Conservative management, Grip strength, Surgical management, Wrist function

PARTICULARS OF CONTRIBUTORS:

1. Research Assistant, Department of Physiotherapy, Chitkara School of Health Sciences, Chandigarh-Patiala National Highway (NH- 64 Village Jansla, Rajpura, Punjab 140401, India.
2. Professor, Department of Physiotherapy, Chitkara School of Health Sciences, Chandigarh-Patiala National Highway (NH- 64 Village Jansla, Rajpura, Punjab 140401, India.
3. Assistant Professor, Department of Physiotherapy, Chitkara School of Health Sciences Chandigarh-Patiala National Highway (NH- 64 Village Jansla, Rajpura, Punjab 140401, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

*Akshat Singh Chouhan
Department of Physiotherapy, Chitkara School of Health Sciences, Chandigarh-Patiala.
E-mail: akshatsingh.chauhan@chitkara.edu.in