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Dr. Aterah Tahoor
Assistance Professor, Department of Sports Physiotherapy, VSPMs College of Physiotherapy, Nagpur, Maharashtra, India

Dr. Kevin Agrawal
Assistance Professor, Department of Sports Physiotherapy, VSPMs College of Physiotherapy, Nagpur, Maharashtra, India

Dr. Shyam Chaudhari
Assistance Professor, Department of Cardio Vascular and Respiratory Physiotherapy, VSPMs College of Physiotherapy, Nagpur, Maharashtra, India

Corresponding Author:
Dr. Shyam Chaudhari
Assistance Professor, Department of Cardio Vascular and Respiratory Physiotherapy, VSPMs College of Physiotherapy, Nagpur, Maharashtra, India

Cryokinetic therapy for grade 2 lateral meniscal tear with un-displaced medial tibial condyle fracture: A case report

Aterah Tahoor, Kevin Agrawal and Shyam Chaudhari

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Abstract
Introduction: Meniscal injuries combined with tibial fractures can significantly impair knee function and delay recovery, which integrates cold application with controlled exercise, is an emerging approach to manage pain, reduce inflammation, and restore mobility. This case report presents the rehabilitation of a patient with a Grade 2 lateral meniscal tear and an undisplaced medial tibial condyle fracture using cryokinetic therapy.
Case report: Cryokinetic Therapy for 19 years old student for Grade 2 Lateral Meniscal Tear with Undisplaced Medial Tibial Condyle Fracture.
Conclusion: Our case highlights the fact that Cryokinetic Therapy used to reduce swelling and pain and also increase the knee range of motion. The range was increased by 20 degrees and pain was also reduced.

Keywords: Cryokinetic therapy, McMurray's test, Ege's test, lateral meniscus

Introduction

Subjective Examination

A 19 years old student reported to the VSPM's OPD with complaints of pain in the left knee, which was throbbing in nature with sometimes clicking sensation in the knee rating it as 7/10 on Numeric Pain Rating Scale during activity. Aggravating factors include standing or walking for long durations. He complaints of pain on the lateral aspect of knee with swelling present. The patient sustained injury while playing football a month ago before coming to physiotherapy OPD.

Physical Examination

The patient presents with restricted flexion till 100 degrees and presence of swelling was evident along with grade 2 tenderness. McMurray's Test was positive with sharp shooting pain on lateral side also indicating pain in Ege's Test indicating injury to Lateral Meniscus. The MMT for hip and knee flexors & extensors were 4/5. The MRI investigation reports suggested to have fracture of medial condyle of tibia also having grade 2 lateral meniscal tear.

Management and Outcome

Physiotherapy

Based on the patient's goals, an individualized rehabilitation plan was made. The goal was initially to reduce the pain and achieve range for knee flexion later imparting strengthening exercises to the regime. For reduction of pain and achieving range for knee flexion Cryokinetic Therapy was introduced. In this method, the knee was wrapped in ice silicone gel pack compressively for a duration of 10 minutes later when the gel pack was removed the patient was instructed to actively flex and extend the knee in a pain free range for 10 repetitions in last two repetition a passive knee flexion was initiated to achieve outer range in a pain free manner. Followed by this isometric knee strengthening for hamstrings, quadriceps and gluteal muscles were imparted. This protocol was continued for 5 days.

The patient was re-examined for pain and knee flexion range. On assessment the pain was reduced to 1/10 on Numeric Pain Rating Scale on activity and the knee flexion was 120 degrees.

Protocol For Treatment

Application of ice compressively for 10 mins over the left knee followed by 5 repetition of slow knee flexion & extension movement. The cryo-kinesis (application of ice compressively) was carried out for 3 days until the knee range was achieved up to 120 degrees for the left side followed by that strengthening programme was started.

Treatment Progression

Since the major goal was to reduce pain and swelling also increase knee flexion range were achieved with cryokinetic therapy the next step of progression in strengthening programme were started earlier. Later, knee strengthening with resistance bands were started.

Conclusion

Cryokinetic Therapy was used to reduce swelling and pain and also increase the knee range of motion. The range was increased by 20 degrees and pain was also reduced.

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Author's Contribution

Not available.

Conflict of Interest

Not available.

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