Title

Effect of Mechanical Traction and Therapeutic Exercises in Treatment of Primary Knee Osteoarthritis.

Authors

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Abstract

Background. Knee osteoarthritis is a degenerative disorder causing pain and disability. It is distinguishable by cartilage degeneration and joint space loss. Therapeutic exercises are an established treatment option for knee osteoarthritis. Mechanical knee traction is a novel method that allows for transient unloading of the knee joint. Purpose. To compare between the effect of therapeutic exercises and therapeutic exercises preceded by mechanical traction in treatment of primary knee osteoarthritis. Patients and methods. Forty patients were randomly distributed into two equal experimental groups. The exercise group received selected stretching and strengthening exercises. The traction and exercise group received mechanical knee joint traction followed by the same exercise program. Patients received this treatment for 12 sessions (3 sessions/week) for 4 weeks. They were assessed before and after treatment for knee pain severity, functional disability, isometric quadriceps and hamstring muscle strength, walking time and stairs ascending and descending time. Results. Within groups comparison showed a significant improvement in all the measured variables in both groups (p 0.05). Conclusions. Therapeutic exercises preceded by mechanical traction are more significantly effective than therapeutic exercises alone in treatment of primary knee osteoarthritis. Study registration. This study was registered at ClinicalTrials.gov on March 2021 (NCT/04830748). KEY WORDS Knee pain; mechanical traction; primary knee osteoarthritis; quadriceps strength; therapeutic exercises.

Subjects

KNEE osteoarthritis; EXERCISE physiology; KNEE pain; EXERCISE therapy; STATISTICAL sampling; ISOMETRIC exercise; HAMSTRING muscle; DESCRIPTIVE statistics; RANDOMIZED controlled trials; FUNCTIONAL status; WALKING; ORTHOPEDIC traction; COMPARATIVE studies; QUADRICEPS muscle; STAIR climbing

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