

Comparison of physical modality and knee isometric exercise training on symptom of knee osteoarthritis

Ahadi T (MD)¹, Saleki M (MD)*², Razi M (MD)³, Raeisi Gh (MD)¹, Forough B (MD)⁴

¹Assistant Professor, Department of Physical Medicine and Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran. ²Resident in Sport Medicine, Department of Sport Medicine, Tehran University of Medical Sciences, Tehran, Iran. ³Assistant Professor, Department of Orthopedic Surgery, Tehran University of Medical Sciences, Tehran, Iran. ⁴Associate Professor, Department of Physical Medicine and Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran.

Abstract

Background and Objective: Osteoarthritis is the most common joint disease and associated with degeneration of the joint cartilage. Its high prevalence, particularly in the elderly, and the high rate of disability related to disease make it a leading cause of disability. The symptoms of osteoarthritis are pain, morning stiffness and joint limited motion. This study was carried out to compare the effects of physical modalities and home based exercise training on symptoms and function of knee osteoarthritis.

Materials and Methods: In this randomized clinical trial study, forty patients with knee osteoarthritis according to the American college of rheumatology (ACR) criteria randomly divided into two treatment groups. The physical modality group (A) received TENS, US and Hot pack at pain areas. The exercise group (B) received isometric exercise of the knee. Each group received 3 treatment sessions per week for 4 weeks. Evaluating measuring tools were pain intensity (based on Visual Analogue Scale: VAS) and function was measured with koos questionnaire.

Results: Improvement in pain, quality of life, symptoms, sports and reduction, in pain intensity on VAS in the physical modality group after treatment were seen ($P < 0.05$). Also significant improvement in symptoms and quality of life observed in the exercise group. Improvement in activity of daily life found in the physical modality group in comparison with exercise group ($P < 0.05$).

Conclusion: This study showed that physical modality and exercise training reduce pain and improve quality of life, activity of daily life and sport in patients with the same rate. While activity of daily life improve more in physical modality method.

Keywords: Knee osteoarthritis, Physical modality, Isometric exercise, quality of life, Pain intensity

* Corresponding Author: Saleki M (MD), E-mail: drsaleki@yahoo.com

Received 13 Apr 2010

Revised 23 Aug 2010

Accepted 31 Aug 2010