ABSTRACT

Objectives: This study aims to investigate and compare the effectiveness of clobetasol 0,05% phonophoresis (Clobetasol), diclofenac sodium 1% phonophoresis (Na diclofenac), and conventional therapeutic ultrasound (Control) in female patients with knee osteoarthritis (OA).

Design: randomized pre test – post test control group design.

Setting: Physical Medicine and Rehabilitation Outpatient clinic.

Participants: Twenty-four patients participans (8 patient each group, mean age 57.5 years; range 40 to 65 years)

Interventions: Intervention with ultrasound waves of 1 MHz frequency and 1 watts/cm^2 were applied to the target knee with either of two topical pharmacological agent gels as a coupling medium. Acoustic gel without any active pharmacological agent was applied in the Control group. Five treatment sessions were performed in all patients in the three groups.

Main Outcome Measures: Physical Function outcome evaluation with Laquesne Index of Severity for OA of the Knee (ISOA Knee) scores, 15-meter walking time and clinical sign outcome evaluation with pain (VAS), knee range of motion (ROM) and circumference mid tibial plateau (MTP) were evaluated before, after twice treatment and after complete treatment.

Results: The outcome measures improved significantly in the three groups post-treatment ($p<0.05$). However, patients in the Clobetasol group had more improvement in clinical sign outcome variables compared with the other two groups ($p<0.05$) but significantly improvement just only in twice intervention. No significant differences in physical function outcome between Clobetasol, Na diclofenac and Control groups ($p>0.05$). No significant differences were observed in the mean changes in any of the outcome variables between Na diclofenac and Control groups ($p>0.05$).

Conclusion: Significant improvements clinical sign and physical function were attained in all the three groups post-intervention. However, Clobetasol was found to be more effective compared with the other two groups. Na diclofenac was not superior to Control. The effectivity Clobetasol only seen in twice intervention treatment.

Key words: clobetasol; diclofenac sodium; knee joint osteoarthritis; phonophoresis; therapeutic ultrasound.