



Effect of range of motion exercises and high voltage tiny impulses electrical stimulation on functional activity of the upper limb postmastectomy

**Mohamed Bahaa Eldeen Boghdady Alasar^{1*},
Zakaria Mowafy Emam Mowafy, Mohamed¹ Gamil Abd-El Monem²,
Walid Ahmed Ibrahim Abo El Naga²**

¹Physical therapy department for surgery, faculty of physical therapy, Cairo University, Egypt.

²National Cancer institute, Cairo University, Egypt.

Abstract : Purpose: to evaluate effect of range of motion exercises and high voltage tiny impulses electrical stimulation on functional activity of the upper limb postmastectomy. **Methods of evaluation:** Visual analogue scale (VAS) and functional assessment of the simple shoulder test (SST). Thirty female patients with postmastectomy shoulder pain were recruited from the National Cancer Institute and Beni-Sewaf University Hospitals. Their ages were ranged from 40 to 55 years old: Group (1) "Study group": Fifteen patients who received range of motion exercises and high voltage tiny impulses electrical stimulation of pain gone pen (PGP) in addition to the traditional medical treatment. Group (2) "Control group": Fifteen patients who received only the traditional medical treatment. PGP stimulation was applied in the form of 10 clicks on the shoulder tip and another 10 clicks on the centre of deltoid muscle, three sessions per week, every other day, for three months, while the shoulder wheel range of motion exercises (15 minutes for three times weekly for 3 months). **Results:** results showed that range of motion exercises and high voltage electrical stimulation were effective in decreasing pain and improving the functional activity of the upper limb postmastectomy as evidenced by the highly significant decreases in visual analogue scale and the highly significant increases in functional assessment of the simple shoulder test. **Key words:** (Shoulder wheel exercises, Functional activity, Functional assessment of the simple shoulder test, High voltage tiny impulses electrical stimulation and Visual analogue scale)