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South Valley University, Egypt

**Introduction:** post burn scar is a chronic, debilitating problem that is frequently has negative effect on the patient function and psychology.

**Objective aim:** this study was conducted to investigate the effect vacuum therapy on the post burn scar.

**Methods:** 48 adult patients suffered from lower limb post-burn hypertrophic scar with age between 20-40 years were recruited by from the Out-Patient Clinic of burn and surgery in the South Valley University Hospitals between December 2016 and July 2017. Patients were randomly assigned into either control or study group, using block randomization, with blocks of four and six stratified by sex. Control group received 20 minutes session of friction massage on the scar area for 10 minutes and stretching of the lower limb muscles for 10 minutes. Study group received vacuum treatment on the scar in a session of 10 minutes. Sessions in both groups repeated 3 times per week for 4 weeks. The main outcome measure was the ultrasonographic assessment of scar thickness.

**Results:** results of scar thickness for 48 patients were analyzed (study group N= 24 and control group N=24) with follow up measure after 4 weeks showed significant within groups improvement with 19.1% and 34.9 % percentage of improvement in control and study group respectively with no significant difference between both groups. Also, there is no considerable adverse effects are noted during or after treatment.