

## **A randomized controlled trial comparing helium-neon laser therapy and infrared laser therapy in patients with diabetic foot ulcer**

### Abstract

This study aimed to compare the effects of (HNLТ) and (ILT) on diabetic foot ulcer. Sixty-five patients with diabetic foot ulcer (51 males and 14 females) aged 50-60 years. The participants were classified randomly to two groups, groups I and II. Group I received helium-neon laser therapy (HNLТ) and conventional therapy with and group II received infrared laser therapy (ILT) and conventional therapy with for 8 weeks. Ulcer surface area was assessed using a sheet of cellophane paper at the beginning of the study, after 4 weeks, and after 8 weeks at the end of the study. At the beginning of the study, baseline clinical characteristics showed non-significant differences between the two groups ( $p > 0.05$ ). After 4 weeks intervention, there were significant improvements in ulcer surface area in the two groups ( $p < 0.05$ ). At the end of the study, after 8 weeks intervention, there were higher reduction in ulcer area in HNLТ group more than ILТ group, but this difference was statistically non-significant between the two groups ( $p > 0.05$ ). The present study demonstrates that HNLТ and ILТ have similar effects to control diabetic foot ulcer in a short-term (up to 8 weeks). Eight weeks of laser therapy have beneficial impacts in diabetic foot ulcer.

### KEYWORDS:

Diabetic foot ulcer; Helium-neon laser therapy; Infrared laser therapy

Research area: Diabetic foot and Laser therapy

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