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


Lasers in Medical Sciences

Abstract

This study aimed to compare the effects of (HNLT) 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 (HNLT) 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 HNLT group more than ILT group, but this difference was statistically non-significant between the two groups (p > 0.05). The present study demonstrates that HNLT and ILT 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