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Efficacy of low level laser therapy on painful diabetic peripheral neuropathy.

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Abstract

BACKGROUND & AIMS: Diabetic peripheral neuropathy (DPN) accounts for most common complications of T2DM. Painful DPN is associated with functional limitation & poor quality of life. Therefore, objective of the study is to find the effect of low level laser therapy on painful diabetic peripheral neuropathy (DPN) in type 2 diabetes mellitus (T2DM) Materials & methods: The study design is pre-post observational design. **After** obtaining ethical clearance and informed consent, 19 T2DM subjects were screened and confirmed for peripheral neuropathy in an outpatient setting with biochemical parameter, pain scale and Michigan Neuropathy Screening Instrument (MNSI). Low Level Laser therapy was irradiated through scanning mode with dosage of 3.1J/cm(2) on the plantar and dorsum of the foot and 3.4j/cm(2) with contact method for 10days and all subjects were reassessed at the end of the 10 day. Descriptive statistics and paired' test was used to analyze the pre-post finding within the group. Level of significance was set at $p<0.05$ RESULTS: The result analysis showed significant reduction in Pain using VAS scale (6.47 ± 0.84 to 1.21 ± 0.78 ($p<0.001$), MNSI (5.52 ± 1.26 to 2.71 ± 0.97 (reduction in Vibration perception threshold (32.68 ± 6.08 to 24.84 ± 4.29 (<0.001) and a significant increase in the temperature from baseline to post intervention (30.01 ± 2.11 to 31.75 ± 1.03 ($p<0. 001$).

CONCLUSION: In the present study, Low level laser therapy was found to be effective in type 2 DM with peripheral neuropathy.

KEYWORDS: Low Level Laser Therapy; Pain; Peripheral Neuropathy; Type 2 diabetes mellitus

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