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Evaluation of Phonophoresis with Dexamethasone in Treatment of Hypertrophic Burn Scar

Authors : Alireza Pishgahi, Mohammad Rahbar, Javad Shokri, Shahla Dareshiri, Yaghoub Salekzamani, Fariba Eslamian

Abstract : Background and Objectives: Hypertrophic scars are one of the complications following a burn injury. Intralesional corticosteroid injection is an invasive method for treatment of this complication. We had design a single blinded randomized control trial to deliver dexamethasone by phonophoresis and evaluate its efficacy on hypertrophic burn scars characteristics. Material and Methods: 56 cases of hypertrophic burn scar due to burn injury allocated randomly to dexamethasone and control group. Individuals in case group received 10 sessions of dexamethasone 0.4% phonophoresis. Patients in control group had placebo phonophoresis (ultrasound with normal routine aquatic gel without any dexamethasone) with the same protocol. At the beginning of study and one week after last session, hypertrophic scar characteristics and pruritus were measured by 'Vancouver Scar Scale', and '5-D Pruritus Scale' respectively in both groups. Results: Despite mild improvement in Vancouver Scar Scale score one week after intervention in dexamethasone phonophoresis group in comparison to control subjects, but this difference was not significant (p=0.08). Pruritus score perceived subjectively were significantly lower one week after intervention in dexamethasone groups in comparison to control subjects (p=0.00). Conclusion: Dexamethasone phonophoresis is a safe and effective treatment method for burn hypertrophic scar pruritus, but its efficacy for scar characteristics improvement needs to be evaluated by larger studies with long-term follow-up period.

Keywords : dexamethasone, hypertrophic scar, phonophoresis, pruritus
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