

عنوان مقاله:

An Open-Label Study of Low-Level Laser Therapy Followed by Autologous Fibroblast Transplantation for Healing Grade ۳ Burn Wounds in Diabetic Patients

محل انتشار:

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**Abstract Objective:** This case series describes successful management grade ۳ burn ulcers in ۱۰ diabetic patients using Autologous Fibroblast Transplantation along with Low-Level Laser Therapy. **Background:** Low Level Laser Therapy (LLLT) has been used as an effective therapeutic modality since the mid sixties. Although there are several clinical studies using LLLT in wound healing especially diabetic, pressure and venous ulcers, but there are rare reports of using this technique in burn ulcers. In this study for the first time we used LLLT along with antilogous fibroblast skin transplantation to treat grade ۳ burn ulcers in diabetic patients. **Materials and Methods:** Ten diabetic patients with grade ۳ burn ulcer, candidate for skin graft surgery entered the study. ۱ Cm<sup>۲</sup> was biopsied using punch. Fibroblasts were extracted and cultured in-vitro. Patients were treated using LLLT in ۳-۴ weeks that took time that fibroblast cultures become ready to use. Laser irradiation was done using red red light, ۶۵۰ nm, ۱۵۰ mW, ۱ J/ cm<sup>۲</sup> for the bed of the ulcer and infra red light ۸۰۸ nm, ۲۰۰ mW, ۶ J/ cm<sup>۲</sup> for the margins every other day for ۱۰ sessions. Then a thin layer of fibroblast suspension was applied to the base of ulcer using sterile sampler and its surface was covered by Vaseline gauze. **Result:** All patients healed completely in ۱۰-۱۲ weeks. No adverse effects were reported. **Conclusion:** We conclude that this method can be used as an effective method for treating large wounds especially in complicated patients including diabetics. **Keywords:** Low level laser Therapy Autologous Fibroblast Transplantation Regenerative Medicine

کلمات کلیدی:

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