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Cell Proliferation Marker Response to Estrogen Iontophoresis in Treatment of Chronic Lower Limb Ulceration

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Abstract : Purpose: evaluate the efficacy of estrogen iontophoresis as physical therapy modality in the treatment of diabetic foot ulcers. **Methods:** Forty patients who had diabetic foot ulcers for longer than three months. Their ages were ranged from 40-50 years with mean value 53.95±2.846 years. The patients were selected from Deraya University Physical Therapy Center in the period between Feb 2015 and Jul 2016. Patients who met the selection criteria were divided randomly into two equal groups, Group (A) received estradiol iontophoresis (-ve) electrode by intensity 1-5 mA for 10 min, 3 sessions per week for 6 weeks and medical treatment. Group (B) received medical care only 6 weeks. **Measurements:** Wound surface area (WSA) was assessed by Digital Camera and **ImageJ 1.49. v** computer software, wound volume and Ki-67% were assessed before treatment and after 6 weeks of treatment. **Results:** The findings of this study indicated significant decrease in WSA and wound volume with significant increase in the Ki-67% after treatment in both groups A and B ($P<0.0001$). There was significant difference between both groups after treatment in WSA ($P<0.0001$), wound volume ($P=0.004$) and Ki-67% ($P<0.0001$) with favored results in group A. **Conclusion:** results showed that estrogen iontophoresis for 6 weeks is an effective adjuvant therapy in treatment of diabetic foot ulcers through accelerating wound healing, reducing WSA, wound volume, and improving the cells proliferation rate.
Key words: (Estrogen iontophoresis, diabetic foot ulcers).

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