Transdermal CO2 Application in Chronic Wounds

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Abstract

Chronic wounds are a challenge to treatment. In this retrospective study, the effect of transdermal CO2 application on wound healing in chronic ulcers was investigated and compared to the effect of CO2 on acute surgical wounds.Eightysix patients (52 females and 34 males) with chronic wounds of different origin except arterial occlusive disease were included. In addition, 17 patients (5 females, 12 males) with wide excision wounds after surgical therapy of acne inversa were considered. The indication for CO2 application was a wound at risk for infection. Treatment was performed with a Carboflow® device once daily for 30 to 60minutes. Therewas clinical evidence of improvement of granulation and reductionof discharge and malodor within 1 week of treatment in both chronic and acute wounds. Only 9 patients, all diabetics, needed an additional systemic antibiosis. The treatment was well tolerated. No adverse effects have been noted. Transdermal CO2 application is a useful method to reduce the risk of infection and improve wound healing in both chronic and certain acute wounds. Systematic prospective trials are needed.