A novel method of comparing the healing properties of two hydrogels in chronic leg ulcers.

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Abstract:

Skin ulcers on the legs have a chronic, relapsing course and are often a significant management challenge. Novel methods of measuring and comparing the effects of different treatments can be of assistance in addressing this situation. A clinical pilot study using original methods was undertaken to compare the healing properties of the alginate gel Flaminal® (test) and the hydrocolloid gel Intrasite® (control) on chronic leg ulcers. The study was performed over a period of 28 days with two parallel groups of 10 patients. Both the surface (acetate tracing and planimetry) and the volume (Jeltrate® mould impression and weighting) of each wound were measured at baseline and after 7, 14 and 28 days of treatment. On both parameters results were superior with the test product compared to the control, with volume reduction being the first parameter to change. Between groups, difference in wound volume reduction was detected as early as day 7 whereas difference in surface reduction was clearly apparent only at day 28. Correlation between wound surface and volume reductions was also better in the test group ($r =0.843$ vs. $0.421$) than in the control. In conclusion, this pilot study suggests that combining wound surface and volume evaluations allows a more precise analysis of the healing process in venous leg ulcers and that this method is able to detect very early differences in treatments even with limited sample size.