Assessment of the antimicrobial effectiveness of a new silver alginate wound dressing: a RCT

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JOURNAL OF WOUND CARE VOL 19, NO 1, JANUARY 2010

Objective
To compare the efficacy and tolerability of a new ionic silver alginate matrix (Askina® Calgitrol® Ag) with that of a standard silver-free alginate dressing (Algosteril®).

Method
Patients with locally infected chronic wounds (pressure ulcers, venous or mixed etiology leg ulcers, diabetic foot ulcers) or acute wounds were eligible for this prospective, open-label, controlled and randomized trial. Patients were randomized to receive one of the two dressings for a two-week period. Criteria of efficacy were based on the evolution, from day 1 to day 15, of local signs of infection using a clinical score ranging from 0 to 18, and the evolution of the bacteriological status for each wound. The latter was determined by (blind) bacteriological examinations of results obtained from two biopsies performed at days 1 and 15. A three-point scale (deterioration, unchanged, improvement) was also used. Acceptability, usefulness and tolerance were also assessed.

Results
Forty-two patients (20 women and 22 men, 68.9 ± 18.8 and 66.5 ± 15.7 years old respectively) were randomly assigned to receive either Askina® Calgitrol® Ag (n = 20) or Algosteril® (n = 22). Most had chronic wounds such as pressure ulcers (57%) or venous or mixed etiology leg ulcers, diabetic foot ulcers (29%); few had acute wounds (14%). Clinical scores of infection were comparable in both groups at inclusion, 8.9 ± 2.4 and 8.6 ± 3.2 in the Askina® Calgitrol® Ag group and the Algosteril® group respectively (not significant), but decreased significantly in both groups at day 15, 3.8 ± 2.9 in the Askina® Calgitrol® Ag group and the Algosteril® group respectively (not significant), but decreased significantly in both groups at day 15, 3.8 ± 2.9 in the Askina® Calgitrol® Ag group (p = 0.001) and 3.8 ± 3.4 in the Algosteril® group (p = 0.007). There was no significant difference between the two groups at day 15. Although there was also no significant difference in bacteriological status between the treatment groups, a trend in favour of Askina® Calgitrol® Ag was found for the relative risk of improvement, especially in patients who were not treated with antibiotics either at the beginning of the study or during it. No differences between groups were observed regarding local tolerance, acceptability and usefulness of the dressings.

Conclusion
The regression of local signs of infection, local tolerance, acceptability and usefulness were similar for the two dressings. However, Askina® Calgitrol® Ag improved the bacteriological status of the wounds. Further trials are required to show that it has a positive impact on the healing process.

Askina® Calgitrol® Ag

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<th>Type</th>
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<th>Antimicrobial Activity</th>
<th>Tolerability and Cytotoxicity</th>
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