

Case series demonstrating the performance and safety of a novel superabsorbing dressing* in high exuding chronic wounds – first results

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Introduction

Superabsorbent polymers based on polyacrylates have been used with great success in baby diapers and ladies' hygiene products ever since the mid-1980s. They are also ideal for absorbing and retaining large amounts of liquids in wound dressings. The design of the marketed superabsorbent dressing was changed for a better ergonomic behavior, better application and due to another SAP core a higher absorption rate. The use of the new product on patients should be investigated during a case series.

Method

A case series was planned in 5 centers in Germany. The patients were treated according to the instruction for use up to three weeks with the superabsorbent dressing. The basis for the evaluation was the wound documentation of each center. The products only were provided by Lohmann & Rauscher. Documentation were done every week including the evaluation of the ergonomic behavior, performance and tolerability.

Results

Up to now 5 patients had been successfully treated (3 leg ulcer, 2 diabetic foot syndrome).

The first patient suffered from diabetic foot syndrome since 05/2013 with high exudation level. The patient was treated with a primary dressing (collagen based) once a week and the superabsorbent dressing as secondary dressing for three weeks. The dressing was changed once a week.

Tissue	Day 0	Visit 1	Visit 2	Visit 3	Day 21
Fibrinous	70	50	30	10	10
Granulated	30	40	60	80	80
Epithelisation	0	10	10	10	10

The wound shift was significant (start: 70% of fibrinous tissue and 30% of granulation tissue; after three weeks: 10% fibrinous tissue, 80% granulation tissue and 10% epithelization) indicating wound healing. After the second dressing change the exudation level decreased from severe to mild to moderate. No adverse events were observed confirming the tolerability of the dressing.

Also the wound surrounding skin showed improvement. The patient assessed that the wound dressing was easy to apply, was comfortable, showed no pressure marks, and had a good absorption capacity.

The user found that the dressing could be removed without damage of the wound ground. Exudation degree slightly decreased, no odour could be noticed and the dressing was easy to apply without causing folds.



Day 0



Day 21



The second patient with diabetic foot syndrome showed also improvement but did not show significant results due to lack of cooperation (did not wear off-loading shoes) after 3 weeks. The compliance was poor.

Three patients suffering from leg ulcer with severe exudation were treated with the superabsorbent dressing as secondary dressing, a hydrofibre** as primary dressing and a cohesive fixation bandage*** for fixation. In addition compression bandage**** was applied. All wounds showed reduced wound size and intact wound surrounding skin (also in one patient with atrophic skin) after three weeks of treatment. Dressing changes were performed once a day up three times a week.

Patient 1:



Day 0



Day 21

Patient 3:



Day 0



Day 7

Summary

The new designed superabsorbent dressing showed a good absorption capacity in high exuding wounds as leg ulcer and diabetic foot syndrome. In all cases the wound healing could be supported which could be confirmed by wound shift and reduced wound area. The patients found the dressing easy to apply, comfortable and had no complaints confirming the tolerability.