Managing wound exudate using a super-absorbent polymer dressing – a 53 patient clinical evaluation.

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Wound dressings are applied for a variety of reasons including; the management of wound exudate, avoidance of maceration, and to contribute to preparation of the wound bed. Dressing performance is crucial when efficient management of exudate is a decisive endpoint not just in terms of the volume absorbed but also the dressing's ability to retain the exudate even when external pressure is applied. There is a stark difference in dressing performance and ultimately in wound progress between simple liquid uptake and active management of the exudate together with its components. Sorbion sachet S has been specifically designed to efficiently manage moderate to high levels of exudate in a variety of wound types by exploiting the properties of its protease modulating, and moisture managing inner layer. This inner core is a configuration of polymers and cellulose in precise proportions that provide a cohesive and stable structure that is contained within an outer covering of polypropylene. The polypropylene is hypoallergenic. The dressing is ultrasonically sealed with no adhesives, glues or additives used in the manufacturing process.

Methodology

A prospective, open label, multi-centre clinical outcomes evaluation has been completed in 12 UK centres using a convenience sample of 53 patients. The number and types of wounds are recorded in Table 1. Endpoints reported here include:

- level of exudate,
- condition of the peri-wound skin,
- wound bed tissue type and
- mean surface area over 5 weeks.

Wound duration	Dehisced abdominal wounds	Diabetic foot ulcers	Leg ulcers	Pressure ulcers	Vein graft donor site	total
Total	2	3	37	10	1	53

Table 1: Number and type of wounds.

On admission to the evaluation program 42 wounds were recorded as producing high levels of exudate and 11 with a moderate level

Wound duration	Wounds with high level of exudate on enrolment (n = 42)					
	Dehisced abdominal wounds	Diabetic foot wounds	Leg ulcers	Pressure ulcers	Vein graft donor site	Total
0–6 wks	1	–	2	2	–	5
6–12 wks	–	–	–	1	–	1
12+wks	–	2	28	5	1	36
Total	1	2	30	8	1	42

Table 2: Over 80% of the wounds (43) had a duration of ≥12 weeks indicating unresolved recalcitrance.

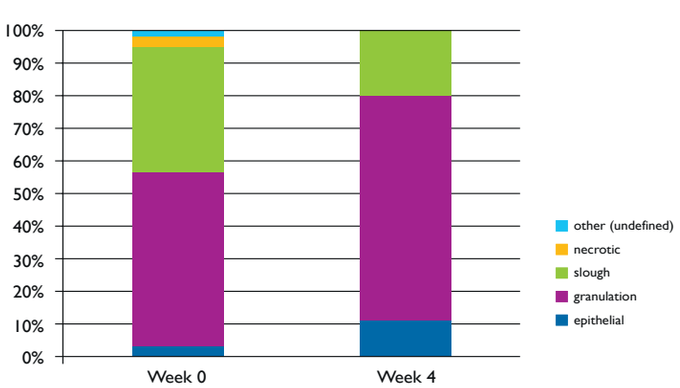
Results

On enrolment 42 wounds found to have a high level of exudate. The peri-wound skin of 25 wounds (60%) was macerated.

8 wounds (19%) assessed as dry/eczematous and 9 wounds (21%) were healthy/normal. At the end of the 4-week evaluation no maceration was recorded in 30 of these 42 wounds (71.5%), minimal maceration in 11 wounds (26%), and one wound (2.5%) was found to be severely macerated (mitigating circumstances recognized).

On enrolment 11 wounds found to have a moderate level of exudate. The peri-wound skin of 5 of these 11 wounds (45.5%) was macerated, 4 wounds (36.5%) were dry/eczematous and 2 (18%) were 'normal'. At the end of the 4 week no maceration was recorded in 8 wounds (73%) and minimal maceration was found in 3 wounds (27%). 3 wounds were found to have minimal maceration but were none the less evaluated as demonstrating an improvement in the condition of the peri-wound skin.

The dressing appears to support wound bed preparation and promote autolytic debridement by reducing the relative proportions of slough/necrosis and by actively managing excessive exudate. Figure 1 shows the changes (improvement) in tissue at the wound bed, week 0–week 4.



Conclusions

The evaluated dressing appears to provide protection from the excoriating effect of proteolytic enzymes, even those wounds that were found to be macerated on admission to the evaluation program recorded an improvement in peri-wound skin condition. Modern wound dressings should provide protection not only from the external environment but should respond positively to the prevailing wound conditions – dynamic state of hydration. This will promote optimal conditions for healing, reduce patient morbidity and provide a cost effective outcome. The dressing used in this evaluation significantly improved the quality of the peri-wound skin, reduced the mean wound surface area and decreased the frequency of dressing change, delivering a considerable overall cost improvement. A very high level of patient and clinician satisfaction with sorbion sachet S performance was found during this evaluation.