

Case series using an advanced silicone-based polymer skin protectant for the clinical management of patients with moisture-associated skin damage (MASD).

Karen Laforet MCISc, RN; Jade Dias MCISc RN, Sukaina Muhammad MCISc RN

Mississauga, Ontario

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Introduction

Moisture associated skin damage (MASD) results in inflammation and erosion of the skin caused by prolonged exposure to wound exudate, fistula drainage, urine, stool or perspiration¹. The primary principle of treatment is to remove the moisture and protect the skin from further injury. The challenge is finding a product that mimics skin's natural function without causing undo harm through application and removal. The community nursing clinics were asked to assess the effectiveness of an advanced breathable silicone-based polymer skin protectant to assess efficacy in treating and preventing MASD.

Methods

Seven patients with different MASD etiologies were chosen in place of other skin barrier products. Four patients suffering with periwound moisture-associated dermatitis. All four patients had long-standing wounds that were highly exudative with chronic dermatological issues as a result. One patient had cellulitis secondary to incontinence-associated dermatitis (IAD). Blistering, edema and excoriation resulted. Two patients with peristomal moisture-associated dermatitis were selected due to the chronicity of the problem. The advanced silicone-based polymer skin protectant (AS-BPSP) was applied following manufacturer's instructions for six weeks (or less) dependent on clinical need.

The affected skin area was cleansed using 0.9% NaCl solution or warm tap water, patted dry with woven gauze and the skin protectant applied as per manufacturer's directions. Patients were assessed twice weekly for pain level, maceration, erythema, inflammation, irritation or skin breakdown. Product was re-applied weekly and as needed. Four examples are presented here.

Case 1. 53 yr. old male with diabetes admitted for management of neuropathic foot ulcer. Recurring skin breakdown on heel and posterior foot was caused by excessive wound exudate (Fig 1). AS-BPSP was applied twice weekly at each dressing change for a total of 18 applications over six weeks. By end of week four, maceration and inflammation was resolved (Fig 2)

Case 2. 76 yr. old male with long-standing G-tube in situ developed peristomal skin breakdown (Fig 3). Previous skin barriers were ineffective. The AS-BPSP was applied weekly during the six-week trial period. Erythema & excoriation were noticeably improved (Fig 4).

Case 3. 79 yr. old male with long-standing mixed arterial-venous leg ulcers. Maceration has been an ongoing problem causing periwound damage and breakdown (Fig 5). AS-BPSP was started in the hopes of reducing maceration. Peri-wound skin improvement noted after four weeks of applying the AS-BSP. Maceration reduction resulting in changing dressing changes to twice weekly dressing (Fig 6).

Case 4. 77 yr. old female with leg ulcers secondary to veno-lymphedema developed excoriation and blisters to right side from hip to toes following urinary incontinence. Cellulitis was present in the groin, mid-lateral thigh to knee then from mid-calf to the toes. The right lateral thigh had multiple blisters and the lower leg and foot were excoriated, edematous & highly exudative (Fig 7 & 9). AS-BPSP was applied once in the first week to all affected areas, peri-wound, between toes and into groin. At day 5, erythema, edema, and exudate were significantly reduced. (Fig 8 & 10)



Fig 1



Fig 2



Fig 3



Fig 4



Fig 5



Fig 6



Fig 7



Fig 8



Fig 9



Fig 10

Results & Analysis

The skin product attached quickly and easily to wet and denuded skin (Fig 7). Application was atraumatic even on painful wounds (Fig 9). Patients noted a reduction in pain soon after application. The MASD signs and symptoms improved for all case-series patients. Peri-wound maceration and associated erythema and irritation was resolved for patients with wounds and one patient's dressing frequency was reduced once the denuded skin seepage stopped. The patient with IAD and severe excoriation showed the quickest response and benefit (Fig 8 & 10). Patients with drains, while a small sample size (N = 2), did not notice any discoloration caused by wearing clothes or activities, nor flaking of the skin with product in situ.

Conclusion

MASD is a common problem for many patients with different etiologies. The introduction of an advanced silicone-based polymer skin protectant that is breathable, waterproof and flexible when attached to the skin has shown positive results in this small case series. Ongoing use for selected patients has continued to show similar benefits.

References

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