Topical Sucralfate for Erosive Irritant Diaper Dermatitis

Trevor Markham, MB, MRCPI; Fionnuala Kennedy, BSc, PharmBA; Paul Collins, MD, MRCPI, DCH; St Vincent’s University Hospital, Dublin, Ireland

**REPORT OF A CASE**

We present the case of a 42-year-old woman with spina bifida and paraplegia who was referred to us because of chronic discomfort related to erosions and ulcerations of her perineal area, buttocks, and upper posterior thighs (Figure 1).

Twenty years previously she had an ileal diversion and urostomy resulting in chronic urethral discharge and diarrhea for 5 years. She required a diaper constantly and developed erosive dermatitis. Her discomfort had persisted for 5 years and failed to respond to 1% clotrimazole (Canesten; Bayer AG, Leverkusen, Germany) and a zinc oxide preparation (Sudocrem; Tosara Products Ltd, Dublin, Ireland).

**THERAPEUTIC CHALLENGE**

This case was complicated by chronic immobility as well as fecal and urinary incontinence. The wet and weeping surface coupled with long-term diaper use prevented the adherence and effectiveness of traditional barrier creams.

**SOLUTION**

The patient had daily emulsifying ointment baths with liquid paraffin, white soft paraffin, and emulsifying wax (Emulsifying ointment British Pharmacopoeia; Ovelle Pharmaceuticals Ltd, Dundalk, Ireland). Four 1-g sucralfate tablets (Antepsin; Wyeth Research Ltd, Berkshire, England) were crushed and diluted to 4% in an aqueous cream consisting of emulsifying ointment British Pharmacopoeia (30% wt/wt), purified water, and phenoxyethanol. This cream was applied 4 times daily and reapplied after washing. The erosions and ulceration healed and the dermatitis resolved within 2 months (Figure 2). No adverse effects were reported. The patient stopped using the topical sucralfate cream and returned 6 months later with a relapse of similar severity as on her presentation. She was treated with the same regimen of topical sucralfate cream. Six weeks later her erosions, ulceration, and dermatitis had again resolved. Her remission has been maintained with ongoing applications of topical sucralfate cream 4 times daily.

**Figure 1.** Erythema, erosions, and ulceration of buttocks, perineum, and upper thigh.

**Figure 2.** Marked improvement in the erythema; the erosions and the ulceration have healed.
Sucralfate, a common antiulcer medication, is a basic aluminum salt of sucrose octasulfate. It has been shown to act as a mechanical barrier because of a strong electrostatic interaction of the drug with proteins at an ulcer site. However, Danesh et al.1 showed that the protective effect of sucralfate does not require an acidic environment.

Sucralfate has also been shown to have antibacterial activity.2 More recently, reports have shown that sucralfate, structurally similar to heparin, has angiogenic properties.3 All 3 of these actions would account for its healing action in erosive dermatitis.

Vaginal ulceration has previously been treated successfully with vaginal douches of 10% sucralfate suspension twice daily.4 Sucralfate, prepared as either a powder or an emollient and applied every 4 to 6 hours, has been used to manage resistant peristomal and perineal excoriation.5

Sucralfate ointment applied twice daily for 8 weeks has also been shown to be effective in the treatment of chronic venous stasis ulcers.6 Sucralfate tablets softened with an aluminum hydroxide gel have been used successfully to treat decubitus ulcers.7 A 10% aqueous solution of sucralfate, given as a rectal enema or vaginal douche, was also used successfully to treat radiation-induced rectal and vaginal ulcers. More recently, a sucralfate suspension was used successfully in the treatment of oral and genital ulceration of Behcet disease.8

Topical 4% sucralfate in aqueous cream was effective in treating a patient with chronic irritant dermatitis when traditional barrier methods had failed.

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Corresponding author: Trevor Markham, MB, MRCPI, Department of Dermatology, Hume St Hospital, Dublin 2, Ireland (e-mail: humest@oceanfree.com).