Topical Sucralfate for Erosive Irritant Diaper Dermatitis

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The Cutting Edge: Challenges in Medical and Surgical Therapeutics

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 al1 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 Behc¸et 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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Submissions

Clinicians, local and regional societies, residents, and fellows are invited to submit cases of challenges in management and therapeutics to this section. Cases should follow the established pattern. Submit 4 double-spaced copies of the manuscript with right margins nonjustified and 4 sets of the illustrations. Photomicrographs and illustrations must be clear and submitted as positive color transparencies (35-mm slides) or black-and-white prints. Do not submit color prints unless accompanied by original transparencies. Material should be accompanied by the required copyright transfer statement, as noted in “Instructions for Authors.” Material for this section should be submitted to George J. Hruza, MD, Laser and Dermatologic Surgery Center Inc, 14377 Woodlake Dr, Suite 111, St Louis, MO 63017. Reprints are not available.

News and Notes

The First World Congress of Dermoscopy will be held in Rome, Italy, February 23 to 25, 2001. Dermoscopy opens a new dimension of clinical morphology linking classical dermatology and dermatopathology. All issues related to dermoscopy, including the various algorithmic approaches, the many faces of dermoscopic-pathologic correlation, and newly defined criteria for diagnosis of pigmented skin lesions will be presented. In addition, the results of the Consensus Net Meeting 2000 will be discussed with internationally renowned experts. Moreover, special symposia will be dedicated to digital imaging, machine vision, and teledermscopy. Workshops and tutorials for a limited number of participants will be organized. For further information please contact H. Peter Soyer, MD, Congress Secretary, Department of Dermatology, University of Graz, Auenbruggerplatz 8, A-8036 Graz, Austria; telephone: +43-316-385-3235; fax: +43-316-385-4957; e-mail: peter.soyer@kfunigraz.ac.at.