

# Dr. Gary Sibbald Answers a Question on Creams and Ointments



R. Gary Sibbald

**Q What creams and ointments should I use on my patients with leg and foot ulcers?**

## **A Moisturizers**

There are two ways to moisturize the skin: lubrication and hydration. Lubrication adds an external covering of an oily substance to prevent insensible water loss. Lubricating agents should not have lanolin or perfumes, especially for our leg ulcer patients where we sensitize 50 to 70 per cent of the patients we treat. Hypoallergenic lubricating creams should be used instead. Humectants bind water, and the superficial layer of the skin (stratum corneum) requires a 10 per cent moisture content to stay intact.

## **Red Skin**

Topical steroid creams and ointments are the mainstay for treating stasis and contact dermatitis of the lower leg and foot. Creams contain preservatives to prevent bacterial contamination because of the continuous phase of cream water with a little oil added or suspended. Ointments have a greasy or petrolatum-like base, and they will not support bacterial growth, so a preservative is not required. Preservatives, particularly those containing or releasing formaldehyde can cause allergies. In my practice, I divide topical steroids into five groups depending on the degree of inflammation (redness) and the location that I am treating (for example, the bottom of the foot will require high-

er strength steroids to penetrate). Table 1 compares each of the classes to hydrocortisone, which is assigned an arbitrary concentration of 1x potency. Remember that a topical steroid has its potency determined by substitutions in the steroid ring, and the relative concentration is meaningful only for the steroid molecule in question. For example, Betamethasone 0.1% valerate is six times more potent than 1% hydrocortisone.

## **Ulcer Margins**

It is very important to protect peri-ulcer skin. There are four main considerations in my toolkit:

1. Use zinc oxide paste. This is simply zinc oxide powder in

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TABLE 1

### **Relative Topical Steroid Potencies**

|     |                                |   |
|-----|--------------------------------|---|
| x1  | 1% Hydrocortisone              | Mild red areas on legs – taper to moisturizer when erythema fades   |
| x3  | Betamethasone 0.05% valerate   | Moderate erythema on legs   |
| x6  | Betamethasone 0.1% valerate    | Severe erythema on the legs or mild changes on the plantar aspect of the foot   |
| x9  | Lidex or Halog (full strength) | Blisters on the legs or moderate erythema on the plantar aspect of the feet   |
| x12 | Dermovate, Ultravate           | Severe erythema on the plantar aspect of the feet or if systemic steroids are contemplated for a dermatitis elsewhere |

### **R. Gary Sibbald, BSc, MD, FRCPC (Med, Derm), MACP, DABD,**

is the Associate Professor of Medicine and Director of Continuing Medical Education, Department of Medicine, University of Toronto. He is a board-certified internal medicine and dermatology specialist in both Canada and the U.S. based at the University of Toronto and in private practice in Mississauga. He has had a special interest in wound-care education, research and patient care for the past 15 years. He is the clinical section editor for *Wounds*, an international advisor for the *Journal of Wound Care* and co-editor of the third edition of *Chronic Wound Care: A Clinical Sourcebook for Healthcare Professionals*.