

T_x Marks the Spot!



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The greatest impact on dermatology in recent years has been the ever-increasing rate of ultraviolet (UV)-induced skin cancer. The increase has been due to the aging population, the delayed effects of sunbathing practised by baby boomers in their childhood and early adult years, and the accelerated carcinogenic effects of UV exposure in immunosuppressed patients (especially in long-surviving organ transplant patients). These factors have resulted in increasing numbers of basal, squamous cell carcinoma and melanoma. In recent years, a greater increase in squamous cell tumours relative to basal cell tumours has been seen, particularly in immunosuppressed patients. This is cause for concern because of the greater metastatic potential of squamous cell tumours compared to basal cell tumours. Family practitioners have an important role to play, not only in examining their patients for skin cancer, but in encouraging routine

effective sun protection in their patients to reduce the risks of skin cancer.

Can UV technology be a medical tool?

Despite its harmful effects, there has been an improvement in the therapeutic use of UV radiation in the form of narrow band UVB phototherapy. It has shown efficacy equivalent to that of psoralen UVA-range phototherapy for psoriasis, vitiligo, and other, less common conditions. Furthermore, UVB phototherapy does not require the use of systemic or topical psoralen, thus eliminating side-effects, such as generalized photosensitivity of the skin and eyes to sunlight for several hours following treatment, nausea, and the need to monitor liver function. UVB phototherapy must still be monitored carefully, and its use is limited to widespread cases because of the long-term risk of UV carcinogenesis.

What new treatments have been developed?

One of the most significant developments in dermatology has been the discovery of several non-steroidal, topical immune modulators, primarily tacrolimus ointment (0.03% or 0.1%) and pimecrolimus cream (1%) for the treatment of eczema, as well as imiquimod for the treatment of genital warts. Although none of these products are indicated as first-line therapy due to their costs (and in the case of imiquimod, due also to pronounced inflammation), the treatments will definitely influence the approach to disease management by general practitioners and dermatologists in the future.

Tacrolimus and pimecrolimus

While the overall effectiveness of these products is not greatly superior to that of conventional therapy, the introduction of tacrolimus and pimecrolimus marks the first effective alternative to topical corticosteroids for inflammatory skin disease since the discovery of corticosteroids about 50 years ago. Although only officially indicated for atopic eczema/dermatitis, tacrolimus has been shown to be

Table 1

Skin conditions for which tacrolimus can be used

- Dyshidrotic eczema
- Vitiligo
- Lichen planus
- Psoriasis
- Alopecia areata
- Pyoderma gangrenosum
- Subacute cutaneous lupus erythematosus
- Seborrheic dermatitis



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effective in a number of other skin diseases (Table 1). Since they do not produce the local, adverse side-effects of topical steroids (*i.e.*, atrophy, telangiectasias, striae), tacrolimus and pimecrolimus are becoming accepted as the treatments of choice for chronic inflammatory dermatoses of the face and flexures, particularly of the eyelids, where topical steroids may induce glaucoma and cataracts. However, due to their poor absorption, tacrolimus and pimecrolimus are not as effective in conditions other than atopic eczema on the limbs and trunk. These treatments do provide a welcome alternative in patients who are not responsive to topical corticosteroids, or in whom there is concern about local or systemic side-effects from repeated or long-term steroid use.

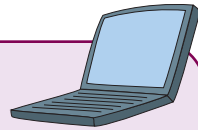
Imiquimod

Imiquimod cream (5%) is a novel immune response modifier developed for the treatment of perianal and genital warts. It functions by stimulation of innate and cell-mediated immune pathways. Unfortunately, due to limited absorption, imiquimod is not as effective for warts in non-genital/perianal sites, but is showing interesting promise as a topical antineoplastic agent for cutaneous malignancies, both human papillomavirus (HPV)-associated, and non-HPV-related. Some of these malignancies are actinic keratoses, Bowen's disease, superficial basal cell carcinoma, extramammary Paget's disease, and lentigo maligna.

Imiquimod has also shown preliminary evidence of effectiveness in cutaneous T cell lymphoma and melanoma. Early reports suggest

benefits for keloids and certain inflammatory conditions as well. However, for these, and various neoplastic conditions, studies are still underway to determine efficacy and long-term results, therefore, conventional treatments are still recommended as first-line therapy. **Dx**

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