

Dermatology

DERMATOLOGY, although a small specialty, has made great leaps forward in prevention, diagnosis and treatment in the past five years.

Prevention. Skin cancer is the number one malignancy in Australia, and we lead the world in skin cancer control programs, which have now been running for over two decades. However, it is only within the past five years that we have been able to record a turnaround — not only in melanoma deaths but also in the incidence of both melanoma and basal cell carcinoma — in Australians young enough to have been influenced by these programs.

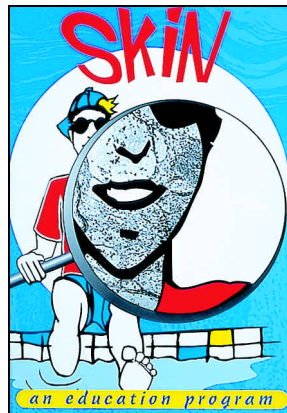
Intervention. Major changes are coming in the treatment of some non-melanoma skin cancers.

Topical imiquimod cream is the first of a new generation of immune modulators, which results in local cutaneous induction of interferon α and interleukin 12. Cure rates of almost 90% for superficial basal cell carcinomas have been recorded after six weeks of daily application.¹ This topical treatment applied by the patient also shows promise for nodular basal cell carcinoma, solar keratosis and Bowen's disease (squamous cell carcinoma in situ).

Research into the biology of ultraviolet (UV) radiation causing skin cancer has enhanced our awareness of its potential in treatment of skin disease. New techniques, such as photodynamic therapy, are being developed to treat many epithelial tumours, including those of the skin. The cosmetic results can be equal to or better than other treatment modalities.² The role of photodynamic therapy in the treatment of solar keratoses, basal cell carcinoma, in-situ and invasive squamous cell carcinoma, cutaneous T cell lymphoma, and Kaposi's sarcoma is being delineated.

Narrowband UVB therapy has largely superseded PUVA and broadband UVB in the management of psoriasis and atopic dermatitis. Narrowband UVB has the advantage of being safe in pregnancy and childhood, and is thought to have a lower risk of inducing the development of cutaneous malignancies. It has also been used in the prophylactic management of photosensitive conditions such as polymorphic light eruption, actinic prurigo, solar urticaria and cutaneous porphyria.

The horizons of laser therapy continue to expand. Vascular lasers are being used to treat lesions ranging from spider telangiectases through poikiloderma of Civatte (the common sunlight-related pigmentation on the neck in women) to port wine stains. Short-pulse lasers are now the preferred method of treatment for tattoo removal. Disorders of cutaneous pigmentation, such as naevus of Ota, solar lentigines, café au lait macules, freckles, melasma and postinflammatory pigmentation, have been successfully treated with Q-switched ruby, Nd:YAG and alexandrite lasers. Laser-assisted epilation is not considered a permanent method of hair removal, but some patients achieve a long term reduction in hair density after a single treatment.



Immunomodulatory drugs are increasingly used in dermatology for life-threatening diseases such as pemphigus vulgaris (100% mortality without treatment), pyoderma gangrenosum and vasculitis, as well as for patients with severe and intractable inflammatory diseases with an immunological component, such as psoriasis and atopic dermatitis. Mycophenolate mofetil and tacrolimus are now well established in the treatment of refractory immunobullous diseases, and newer agents such as rapamycin, infliximab and leflunomide all show promise, with enhanced efficacy and side effect profiles compared with conventional systemic therapies such as prednisolone, azathioprine and cyclosporin.³

Diagnosis. Genetic identification of dermatological diseases inherited as single-gene disorders has led to greater understanding of their mechanism, improved diagnosis (including antenatal testing) and classification, as well as genetic counselling.⁴ Some examples include porphyria, epidermolysis bullosa, Darier's and Hailey-Hailey diseases, xeroderma pigmentosum, and a variety of familial multiple tumour syndromes, such as neurofibromatosis and Gardner's, Gorlin's (multiple basal cell naevus) and Cowden's (multiple haematomas) syndromes.

As our understanding of virology has increased, we have been finding more cutaneous diseases that appear to be caused by a viral infection. Examples include pityriasis rosea, a common disease in young people, and also Kaposi's sarcoma, both now being attributed to infection with human herpesviruses 7 and 8, respectively.

Educating future generations. An atlas of common skin diseases has been published which is based on epidemiology studies looking at the frequency, morbidity and treatment in Australia of conditions such as acne, eczema, tinea, warts, and nappy rash.⁵ No other country has been able to map out in detail the frequency and morbidity of these conditions. As a result, education programs similar to those used for skin cancer control are being developed in Victoria and introduced into all schools (Figure) and the Maternal and Child Health network. This is another world first for public health in Australia, a country which has an international reputation for this approach to disease control.

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