

## Dermatology: A Medical, Surgical and Aesthetic Profession

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Dermatology has changed dramatically in the last 25 years. This revolution occurred in both the diagnostic and therapeutic fields. Dermatology is no longer simply a "descriptive" and "cream-only" medical discipline but a profession that incorporates systemic biological treatments, surgery and cosmetic procedures, and utilizes many diagnostic tools from the fields of immunology, pathology and genetics. This issue of *IMAJ* is partly dedicated to Israeli dermatology to mark its 80th anniversary. Of special interest are two articles that deal with two difficult-to-treat dermatoses: pemphigus and atopic dermatitis. Goldberg et al. [1] discuss the role of drugs in the induction of pemphigus vulgaris, and Zoller and her colleagues [2] show that low dose methotrexate is beneficial in the treatment of atopic eczema. This issue contains a variety of articles covering several fields of dermatology – psoriasis [3], autoimmune diseases [1,4], dermal connective tissue disorders [5], fungal infections [6], drug eruption [7] and cutaneous manifestations of systemic diseases [8], as well as a brief history of dermatology in Israel [9].

The most common and perhaps the best-known skin disease is psoriasis. With a prevalence of 1–3% it is also the most well-known disease in dermatology. The pathogenesis of the disease is based on the immune system with the T cell as a major player. The proliferation of different types of white blood cells, which are responsible for cell-mediated immunity, results in epidermal proliferation and increased vascularity of the skin. In the last two decades treatments such as methotrexate, phototherapy, cyclosporins and retinoids constituted the main therapeutic line for this disease. Recently, biological treatments have begun to emerge [10]. Biological therapy is an immunomodulatory treatment that affects T cells through different pathways. Some inhibit migration and activation of T lymphocytes, some eliminate these lymphocytes, and some inhibit the action of several cytokines. The most frequently used biologics in psoriasis are infliximab, alefacept, etanercept, efalizumab and adalimumab. They act against either tumor necrosis factor-receptor or CD11. Still, the treatments that *are* available do not cure the disease; they result in a longer remission.

Acne is another well-known dermatological disease. The pathogenesis of this disease is well known and involves androgens, propionibacterium acne, and sebaceous secretion. Probably

the most important breakthrough in dermatological treatment is related to isotretinoin, a synthetic retinoid that almost completely cures severe acne [11].

A new and exciting treatment in non-melanoma skin cancers is imiquimod, an immune response modifier that activates T helper cells in the skin and cures superficial types of skin cancers. Photodynamic treatments are another promising therapy for non-melanoma skin cancers. The application of porphyrin cream to the skin followed by illumination of blue or red light activates the drug and inhibits cancer cells in the skin [12]. The use of oral retinoids in transplant patients reduces the number of new non-melanoma skin cancers in these patients.

The surgical and aesthetic branch of dermatology has also undergone a complete transformation. Mohs micrographic surgery is now a well-known and established modality for the treatment of various skin cancers including melanoma, and most if not all of the treatment is performed by dermatologists [13]. Rejuvenation of the skin by different modalities has been developed. The use of different types of fillers, Botulinum toxin and peels has changed the "look" of the patients and our profession [14]. The use of different laser treatments for either medical or cosmetic indications derives from dermatology. Lastly, the skin is a great reservoir for research and many scientific data that contribute to dermatology and other medical professions originate in dermatology.

What was once considered science fiction in the field of dermatology has become a reality, and researchers continue to develop new and exciting therapies for both the health and the aesthetics of our patients.

### References

1. Goldberg I, Shirazi I, Brenner S. In vitro interferon-gamma release test in patients with drug-induced pemphigus. *IMAJ* 2008;10:424–7.
2. Zoller L, Ramon M, Bergman R. Low dose methotrexate therapy is effective in late-onset atopic dermatitis and idiopathic eczema. *IMAJ* 2008;10:413–14.
3. Cohen AD, Van-Dijk D, Naggan L, Vardy DA. Factor analysis of the Beer Sheva Psoriasis Severity Score (BPSS). *IMAJ* 2008;10:419–23.
4. Pavlovsky L, Mimouni D, Halachmi S, Katzenelson V, David M.

- Pemphigus mimicking common skin diseases – atypical presentation delaying correct diagnosis: case series of five patients. *IMAJ* 2008;10:433–4.
5. Ben-Amitai D, Feinmesser M, Wielunsky E, Merlob P, Lapidoth M. Simultaneous occurrence of anetoderma in premature identical twins. *IMAJ* 2008;10:431–2.
  6. Shemer A, Trau H, Davidovici B, Amichai B, Grunwald MH. Onychomycosis: rationalization of topical treatment. *IMAJ* 2008;10:415–16.
  7. Davidovici BB, Dodiuk-Gad R, Rozenman D, Halevy S. for the Israeli RegiSCAR Network. The profile of acute generalized exanthematous pustulosis in Israel during 2002-2005: results of the RegiSCAR study. *IMAJ* 2008;10:410–12.
  8. Kerner M, Ziv M, Abu-Raya F, Horowitz E, Rozenman D. Subcutaneous sarcoidosis with neurological involvement: an unusual combination. *IMAJ* 2008;10:428–30.
  9. Ingber A. History of dermatology and venereology medicine in Israel: the “Founding Fathers.” *IMAJ* 2008;10:406–9.
  10. Langley RG, Gupta AK, Cherman AM, Inniss KA. Biologic therapeutics in the treatment of psoriasis. *J Cuta Med Surg* 2007;1:99–122.
  11. Strauss JS, Krowchuk DP, Leyden JJ, et al. Guidelines of care for acne vulgaris management. *J Am Acad Dermatol* 2007;56:651–63.
  12. Katrin K, Hans M, Hasan M. Photodynamic therapy in dermatology. *J Am Acad Dermatol* 2000;42:389–416.
  13. Campbell RM, Perlis CS, Malik MK, Dufresne RG Jr. Characteristics of Mohs practices in the United States: a recall survey of the ACMS surgeons. *Dermatol Surg* 2007;33:1413–18.
  14. Klein AW. Techniques for soft tissue augmentation: an a to z. *Am J Clin Dermatol* 2006;7:107–20.
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