Breakthroughs in the Diagnosis and Treatment of Male and Female Pattern Hair Loss

All men and women experience some degree of hair loss with advancing age. When severe or premature it can cause significant distress. The diagnosis of androgenetic alopecia can usually be made clinically by visual inspection of the frontal scalp and examination of follicular units with dermoscopy. In some women further investigations may be required to identify contributing factors, comorbidities such as polycystic ovary syndrome, diabetes, hypertension and hyperlipidaemia and exclude other potential differential diagnoses such as chronic telogen effluvium and frontal fibrosing alopecia. Computer generated 3-D reconstructions of the arrectorpili muscle have delivered a new model for scalp hair growth that explains how men and women with androgenetic alopecia can lose up to 50% of their scalp hair volume without visible balding; why women develop diffuse hair loss rather than complete baldness and why hair follicle miniaturization is fully reversible in alopecia areata but only partially reversible in androgeneticalopecia. Gene associations studies have identified candidate genes and epigenetic silencing of the androgen receptor gene on the occipital scalp explain the inheritance and pattern of androgeneticalopecia. Combination therapy of oral antiandrogen and oral minoxidil with topical stemoxydine reduce hair shedding, arrest natural progression and stimulate partial hair regrowth.

Cosmetic camouflage, scalp micropigmentation and hair transplantation complement medical therapy.

Biography

Rodney Sinclair is Professor of Dermatology at the University of Melbourne and Director of Sinclair Dermatology. He is Past-President of the Australasian Society for Dermatology Research, the Australasian Hair and Wool Research Society and the Skin and Cancer Foundation of Victoria. Prof Sinclair is the co-author of the section on Dermatology in the Oxford Textbook of Medicine, the Hair Chapters in Rook and Bologna and lead author of Therapeutic Guidelines–Dermatology. He has written 13 textbooks of dermatology, and has over 400 research publications. Sinclair Dermatology conduct clinical research in psoriasis, hair loss, urticaria, atopic dermatitis, hidradenitissuppurativa, and skin cancer prevention and treatment as well as laboratory research into stem cell biology, regenerative medicine and gene discovery.

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