in old age is that changes in secondary sexual characteristics may cause mild or serious disability (for example, "senile" vaginitis or leukoplakia) and/or reduce sexual activity in elderly couples who might otherwise have continued a more physical relationship. Of course, older people are influenced by their own and society's emotional attitudes, which have tended to encourage a reduction in the physical aspects of sexual relationships. Nevertheless, strong physical and mental links may persist into extreme old age. One consequence is the way the survivor of a very long partnership often dies soon after the other. It is difficult to make any specific recommendation regarding replacement therapy. Short and long-term sex-hormone therapy have serious hazards when given parenterally but they occasionally help improve incontinence. Topical applications of an oestrogen cream may help so-called "senile" vaginitis (the patient is not really senile—she is old and has a medical problem). Bleeding may be a problem with such creams, and topical corticosteroids may be effective, though they too have side effects.

Conclusions

There is no evidence that hormone supplements or hormonal ablation can improve the health or life-expectation of old people, unless indicated to treat a specific endocrine disease. Endocrine diseases are common in old age and may often be atypical in their

presentation. Great skill may be needed in their diagnosis and management.

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Today's Treatment

Diseases of the Skin

Treatment of Scalp Disorders

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The skin of the scalp is no different from other body skin, but its covering of hair and its visibility make it important cosmetically. The treatment for generalized dermatoses may also be applied to the scalp, but the presence of hair may mean that the concentrations of active constituents and of vehicles have to be changed.

Dandruff and Seborrhoeic Dermatitis

Normally all hairy animals have skin keratin flakes arising from the skin. The stage at which ordinary desquamation becomes pathological is not clear, though histological examination of troublesome dandruff shows an appearance resembling eczema with parakeratotic (nucleated) keratin scales.

Shampoos are the most important aspect of treatment, as the scales are often made more adherent to the hair by sebum. Many people suffering from dandruff do not wash their hair frequently enough, and many problems are solved when they begin to use a shampoo two or three times a week. Apart from detergents a very wide variety of chemicals are added to shampoos, and the effective ones in treating dandruff include coal tar, purified coal tar derivatives, antiseptics, zinc pyridium thiol, and selenium sulphide. But as they are in contact with the scalp and hair for only a short time, these ingredients must act rapidly if they are to be effective, unless they are chemically fixed to keratin. Zinc pyridium thiol is in Head and Shoulders, Deep Cleansing Shampoo, and ZP11, none of which proprietary shampoos can be prescribed for National Health Service dispensing, yet they are helpful in the control of dandruff.

Shampoos containing selenium sulphide include Selsun and Lenium. They appear to act by reducing the mitotic activity of epidermal cells. Many patients are helped by them, but some complain of an increase in the greasiness of the scalp when they use them for a long time. As with other shampoos the detergent bases vary and often one is more acceptable than another.

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ANTISEPTIC SHAMPOOS

Hexachlorophane or other antiseptics in shampoos help to eliminate secondary infection, but there is little evidence that they help primary dandruff and the widespread incorporation of hexachlorophane into toilet preparations entails a risk of toxicity from percutaneous absorption. Genisol and Alphosyl Application are cosmetically acceptable shampoos with therapeutic effects because they are combined with purified fractions of coal tar. Virtually all treatments for non-inflamed dandruff are helpful for controlling scaling rather than curing it.

Sulphur compound lotion *B.P.C.* and salicylic acid lotion *B.P.C.* are topical medications which are keratolytic and make the dandruff scales softer, less adherent, and more easily washed out. These may be applied to the scalp each night or morning; the hair is parted and a little of the lotion allowed to run on to the scalp without making the hair messy. The traditional mild antiseptic copper and zinc sulphates lotion *B.P.C.* and ammoniated mercury and salicylic acid lotion *B.P.C.* are now rarely used, yet they benefit some dandruff cases. Mercury-containing preparations should be used only for short periods because of the risks of toxicity as a result of absorbing the element.

Simple dandruff merges with a more itchy and inflamed scaling dermatosis, which is called eczema or seborrhoeic dermatitis if other greasy areas of the body are affected. These eczematous conditions require active treatment with topical corticosteroids or, if a little more chronic, with topical corticosteroids, coal tar, and sulphur. If the dermatosis is too acute any primary irritant medication may make the condition worse. Betnovate Scalp Application, Synalar Gel, or Tricaderm Solution are topical medications for use on hairy areas, and the eczematous eruptions respond well. Occasionally the alcohol bases may irritate seborrhoeic dermatitis of the scalp, and the healing may be started by using the more soothing corticosteroid ointments or creams, followed by the alcohol-based formulations. Absorption is helped if the head is covered with a polyethylene shower cap at night after the corticosteroids have been applied.

Because of the widespread habit of scratching the scalp, any scalp dermatosis tends to become secondarily infected. Treatment with topical antibiotics or short courses of systemic antibiotics often help sore and itchy dermatoses even when frank secondary infection is not very obvious. When seborrhoeic dermatitis affects the postauricular area, secondary infection with candida may prevent healing until medications containing Nystatin, amphotericin, or clotrimazole are used—such as Nystaform-HC, Fungilin, and Canesten.

Eczema and Lichen Simplex

The rash on the scalp may be part of more widespread atopic or constitutional eczema. If very acute—as sometimes seen in contact eczema from hair dyes—the initial symptoms may be controlled by short-term intramuscular injections of tetra-cosactrin depot (Synacthen Depot) (1 mg) and the use of astringent lotions. Aqueous aluminium acetate 2.5% lotion or aqueous potassium permanganate lotion 1 in 10,000 will reduce exudation from the scalp until the corticotrophin preparation becomes effective. Topical corticosteroids in alcohol bases will often be highly effective once the treatment has begun.

Chronic lichenified eczema (lichen simplex) of the scalp may result from the habit of rubbing an eczematous area on the scalp. Frequently this occurs on the occiput. Treatment with corticosteroids is effective if continued for long enough and with sufficient intensity. More resistant cases will be helped by fluocinolone cream 0.2% (Synalar Forte Cream) or by injections of triamcinolone intradermally from an ordinary syringe and needle, or from a needleless injector of the Portojet or Dermojet type.

Psoriasis

Classically the scalp is affected in psoriasis and the treatment of the thick silvery scales on their erythematous base is similar to the therapy on other parts. Fluorinated corticosteroids, such as betamethasone-17 valerate (Betnovate Scalp Application) or fluocinolone (Synalar Gel) often cause quick initial resolution followed by a relapse when the treatment is stopped. These preparations are more acceptable cosmetically than the more messy coal tar compounds, but the greater success which follows coal tar, cade oil, and dithranol preparations makes the use of the latter worthwhile. A patient might use a corticosteroid preparation in the morning and a messy compound such as coal tar and salicylic acid ointment *B.P.C.* at night, or on two or three nights each week. The addition of dithranol (0.1%) to this ointment makes it much more effective. Permanent staining of the hair may result if dithranol is used by very fair-haired or white-haired people. Steroid absorption is helped if the head is covered with a polyethylene shower cap when corticosteroids are used alone.

Infections and Infestations

Impetigo of the scalp is especially common in children who have the disease elsewhere. It responds quickly to topical antibiotic preparations such as chlortetracycline ointment *B.P.C.* or fusidate ointment (Fucidin). Widespread impetigo of the scalp should also be treated with systemic antibiotics. Folliculitis from staphylococcal infection may be minor or may appear as a furuncle or carbuncle. Systemic antibiotics are usually indicated when the scalp is affected, and, if crops of furuncles occur—especially on the occipital region and nape of neck—the systemic antibiotic may have to be continued for three to four weeks.

Tinea capitis from infection with ringworm fungi needs treatment with griseofulvin. For adults 500 mg should be given in a single daily dose, while for children the dose is 10 mg per kg body weight, of the syrup. This treatment is helped by using topical antifungal preparations such as tolnaftate cream or powder (Tinaderm) or clotrimazole cream (Canesten). Animal ringworm infection often leads to an acute inflammatory reaction, and the formation of pus suggests pyococcal infection, whereas in reality a kerion is developing. Symptomatic therapy with aluminium acetate lotion 5% compresses, or magnesium sulphate paste *B.P.C.*, combined with oral griseofulvin, results in resolution in a few weeks with hair regrowth within a few months.

Virus warts, the common verruca, occur on the scalp—especially if there are warts on the patient's fingers. The lesions are usually single and are best treated by curettage under local anaesthetic.

Scalp pediculosis responds rapidly to two treatments, at 48-hour intervals, with shampoos containing gammabenzene hexachloride (Lorexane). Secondary infection with bacteria may result in impetigo of the scalp and enlarged regional lymph nodes, and these will need topical and systemic antibiotic therapy.

Tumours

Naevi of the scalp often have a warty surface even if there is a deeper dermal component. Sebaceous naevi may become malignant later in life and are best excised when they first appear. Epidermal naevi may be treated initially by curettage and cautery, but, if they recur, require excision. Many different benign tumours of the skin appendages seem to be particularly common on the scalp, and if their diagnosis is not clear on clinical grounds they should be biopsied or excised to enable histological diagnosis. Secondary deposits from internal malignant tumours occur more commonly on the scalp

than elsewhere and histological examination may help to determine the site of the primary tumour.

Squamous cell carcinoma, basal cell carcinoma, and malignant melanoma occur more frequently on the scalp than would be expected from the surface area concerned. Radiotherapy epilation for childhood ringworm of the scalp often lead to these tumours. After biopsy, therapy with radiation, surgical excision, or curettage and cautery will be required depending on the size and nature of the lesion.

Senile and solar keratoses often occur on the scalp of bald men who do not wear hats or who are fair-skinned. Individual lesions may be treated by curettage and cautery. But if there are many lesions (large and small) a twice-daily application of the cytotoxic drug 5-fluorouracil gives good results. The drug should be used at a concentration of 1% in propylene glycol or soft white paraffin, or, if no reaction occurs, the strength should be increased to 5%. This therapy results in erythema and tenderness at the sites of the lesion, and goes on to superficial erosion. The treatment must be continued (despite the soreness and erosions) for about four weeks, and when the epithelium forms again on the skin there is a good cosmetic result without the keratoses. Corticosteroid ointments with antibiotics may give some relief when the skin is sore and eroded.

Epithelial cysts—the so-called “sebaceous cysts”—are common on the scalp and sometimes become infected. They should be excised if they become so large that they are injured when the hair is combed, or if secondary infection occurs. Excision in a relatively bloodless field is helped if an assistant presses the ring of the handle of a large pair of scissors or other surgical instrument round the cyst while the surgeon incises the skin in the centre of the ring. The pressure around the cyst also tends to make it protrude from the wound making dissection easy.

Alopecia

The division of diseases characterized by hair loss into the scarring and non-scarring alopecias is important. Scarring alopecia arises from trauma, burns, discoid lupus erythematosus, lichen planus, folliculitis decalvans, and in some cases of obscure aetiology which are grouped together and called pseudopelade. No treatment of a scar will result in the hair regrowing, so therapy must be directed towards excision of the bald area, or transplantation of hair-bearing skin from another part of the scalp. If the bald scarred area is small, excision and suturing of the normal scalp across the defect gives good results. If the scar is large the process may be done in several stages. Very large areas may be considered for punch grafting. By this system 4-mm skin punches are transferred from the sides of the scalp to the bald areas. Usually about six to ten follicles are contained in the 4-mm punch. The cylinders of hair-bearing skin are inserted into holes made in the bald area with a 3-mm punch and, after an initial hair fall lasting about three months, the hairs start to regrow.

This therapy results in multiple “oases” of hair within the bald area. The small amount of hair is often quite acceptable cosmetically to the patient when compared with a completely bald patch of scalp. The technique is simple but time-consuming and, though it has become a popular cosmetic treatment in the U.S.A., few doctors in the United Kingdom advise the treatment for physiological male-pattern baldness—

though it has a definite place in the therapy of the scarring alopecias.

A scarring alopecia may result from folliculitis decalvans, which characteristically occurs in people with seborrhoea. Prolonged therapy with low-dose antibiotic therapy, as in acne, will often arrest the process if treatment is continued for several years. Negro women, who straighten their hair by drawing hot combs through the hair while soaked in grease and with the hair under tension, develop a scarring traction alopecia with granulomatus folliculitis from the oils. The hair loss may be permanent unless the traditional hair-straightening process is discontinued. Hereditary male-pattern baldness is seen in men at an early age and women later in life. It is physiological and no treatment influences the condition.

SECONDARY ALOPECIA

Hair fall in postpartum women, in infants during the first few months of life, and in patients who have suffered from an acute debilitating or febrile illness, arises because of a variation in the normal cyclical pattern of scalp hair growth. At the time of the incident—for example, parturition, birth or febrile illness—many hairs enter the resting (telogen) phase of follicle activity. About three months later, when the follicles reactivate, the old hairs fall, giving noticeable hair loss at a time when the new hairs are growing and the past episode has been ignored or forgotten. The patient needs to be reassured that spontaneous recovery will occur.

Diffuse hair loss may be an untreatable inherited condition in both sexes. Nevertheless, chronic iron deficiency may be a cause in young women with heavy periods or who are blood donors. The importance of determining serum iron and serum iron-binding capacity levels in these cases must be emphasized. The haemoglobin level is often normal or only a little low, while the body stores of iron are absent. Iron therapy over several months, using oral or parenteral administration, will raise the serum iron and body stores of iron.

Most doctors recognize hair loss caused by hypothyroidism, though the diagnosis may not be easy. Alopecia in hyperthyroidism is equally important. This is also difficult to diagnose, and patients should have simple thyroid function tests. The alopecia of specific diseases or therapies including secondary syphilis, psychogenic hair traction, falling hair (due to radiotherapy or cytotoxic drugs) must all be considered and the appropriate therapy given or treatment changed. The use of wigs to counteract the effect of cytotoxic drug alopecia is important, especially in women, who find partial or total wigs cosmetically acceptable.

Alopecia areata, or its more severe forms of alopecia totalis and alopecia universalis, appears to be an autoimmune disease. The traditional idea that it was psychogenic in aetiology does not bear unbiased scrutiny, and psychotherapy is not helpful. Corticosteroids make the hair regrow. Unfortunately, when oral therapy stops, or the effect of injections wears off, the hair may fall again. Small patches of alopecia areata, which are approaching a spontaneous recovery phase, recover more quickly with the use of potent topical steroid lotions such as Betnovate Scalp Application, or by intradermal triamcinolone injections with a syringe and needle or a Portojet Needleless Injector. The so-called stimulant lotions, which contain skin irritants such as cantharidin, or the use of ultraviolet light, have only a placebo effect.