Drug Treatment of Disease

DRUGS IN THE TREATMENT OF SEBORRHOEA

BY

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Literally the term seborrhoea means a running of sebum, but here it is used to indicate the wide range of dermatoses related to and dependent upon the seborrhoeic diathesis. It must be said that such terminology, or indeed the idea of such a diathesis, is by no means universally accepted, but it has had an established place in British dermatology since Unna propounded his views on seborrhoeic dermatitis and the skin organisms involved.

Distribution of eruption and age of patient rather than a greasy skin often determine the label seborrhoeic, the distribution being that in which sebaceous glands and to some extent sweat glands are most in evidence—scalp, face, mid-trunk, and flexures. The age factors again relate to phases of major activity of such secretory glands at puberty and adolescence, menopause, and sometimes old age. Such activity may, however, be affected by other considerations such as climate, occupation, and systemic disease, including febrile, endocrine, and central nervous disorders.

Some would, as I think correctly, regard the diathesis as affecting the whole patient and not merely the skin, but chief attention will be paid here to the skin, though general considerations cannot be entirely excluded (Ingram, 1957).

Epidermal Hypertrophy

Characteristically the skin of the seborrhoeic patient is more greasy and coarse from increased size and activity of sebaceous glands and epidermal hypertrophy. There is usually increased sweating, especially in axillae, hands, and feet, and there may be a flabbiness from increased water content of the tissues. These changes may determine a plugging of follicles with horn and inspissated sebum, and in adult life may be associated with epidermal tumours, the benign so-called seborrhoeic warts and tags which have no tendency to malignant change.

The altered functional state of the seborrhoeic skin, and especially the change in the mantle of secretion and the water balance of the tissues, affects the normal resident flora of the skin but also increases its susceptibility to transient pyogenic infections, and increases its sensitiveness to external irritants; indeed, it renders the skin eczema-prone. The mantle of secretion on the skin consists of fats and waxes from disintegrating horn cells, the secretion of the holocrine sebaceous glands, and the eccrine sweat and apocrine glands. The sweat particularly serves to emulsify the whole and spread it over the surface.

Hormonal Balance

The pH and the relative proportion of the constituents vary with the state of health and particularly with hormonal balance and with emotional tone, the latter often being intimately confused with the endocrine as at puberty, adolescence, and menopause.

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The apocrine glands come into functional activity only at puberty, and they cease to function with the menopause. The span of sexual activity has a distinct influence upon the function of the other secretory glands. The increased secretion of certain saturated fatty acids, for instance, tends spontaneously to cure microsporum infection of the scalp hair in children at puberty (Rothman, 1954).

The increased sebaceous secretion, especially at puberty, is usually more acid than normal, though increased sweating may be associated with alkalinity. Beare *et al.* (1958) have found recently that newborn babies showing seborrhoeic manifestations tend to have a more alkaline skin, but here the position may be complicated by the fact that the normal child before puberty does not show seborrhoeic features because of endocrine immaturity, and in the baby the effects are probably dependent upon hormonal factors derived from the mother. From all this it will be clear that endocrine function associated with sexual maturity plays an important role in the aetiology of the seborrhoeic state and its disorders, but in spite of much clinical and experimental evidence of the relationship there is not yet any clear-cut therapeutic answer to the problems as there is in the administration of thyroid for myxoedema.

It must further be emphasized that not all the skin changes mentioned will necessarily be seen in all dermatoses that are labelled seborrhoeic because of their clinical character and distribution.

Seborrhoeic dermatoses tend to be of a chronic or long-term character and only limited success can be achieved by local treatment. It is for this reason that attention is drawn to the systemic aspects of such disease, even though local treatment is of importance and will be dealt with first.

The dermatoses that will be considered are seborrhoeic pityriasis capitis and corporis, infective seborrhoeic dermatitis and sycosis, and rosacea.

The ordinary eczematous dermatitis and ordinary pyoderma in the seborrhoeic will not be discussed here.

Pityriasis Capitis and Corporis

In lay terms this concerns scurf of scalp, or dandruff, and "flannel rash" of mid-chest and back. These are associated with abundant growth of the normal skin organisms, particularly the *Pityrosporum ovale* ("bottle bacillus") and diphtheroids. Any mild antiseptic measures are curative, but vigorous or strong measures may provoke an eczematous dermatitis. The old-fashioned mercurial (2% hydrarg. ammon.) and sulphur-and-salicylic (2%) ointments, together with the use of soap and water, are rapidly effective. Flannel and wool—which are not boiled and sterilized—should not be worn next the skin.

On the scalp a mercurial and resorcin lotion as in the following prescription is effective, but a suitable weekly

shampoo is necessary; one incorporating 15% cetrimide and 15% lanolin is recommended. The popular selenium sulphide preparations (like the old-fashioned mercurial cinnabar) are also good but carry the risk of irritation and sensitization and even falling of hair if used too frequently.

Hydrarg. perchlor.	...	...	2 gr. (0.13 g.).
Tinct. cantharid.	...	...	1 dr. (3.5 ml.).
Indust. spirit	...	...	2 oz. (57 ml.).
Resorcin	...	...	1 dr. (4 g.).
Aq. dest.	...	ad	6 oz. (170 ml.).

Infective Seborrhoeic Dermatitis and Sycosis

In this state pyogenic organisms give rise to a chronic pustular folliculitis of beard area and sometimes of scalp and pubes, blepharitis, and a low-grade, fissured dermatitis of flexures behind ears, angles of mouth, scalp, axillae, pubes, genitals and perineum, and other parts. This may light up into a more active, exudative eruption, with foul-smelling pus and scabbing. The organisms concerned are mostly staphylococci and non-haemolytic streptococci.

As local measures the halogen products of β -oxyquinoline are most valuable, particularly "steroxin," but also "quinolor" and "vioform." They are best used as ointments but may be incorporated in other pastes such as zinc paste, or tar paste if there is much irritable eczematization. Sensitiveness and irritation from these are uncommon. Other effective local treatment includes antibiotics, preferably those not used for internal therapy, such as neomycin, bacitracin, gramicidin, and others. They can be incorporated in a variety of ointments. Though in principle it is not a sound procedure, sometimes the combination of such antibiotic with hydrocortisone is valuable when applied for short periods in cases of localized infected dermatitis behind the ear or in the perineum. The aniline dyes, such as gentian violet 1%—generally used in an ointment or paste—are also beneficial, but stain clothes and skin badly. Brilliant green $\frac{1}{2}$ % combined with perchloride of mercury $\frac{1}{2}$ % in spirit as a lotion is also valuable for sycosis and infected seborrhoeic dermatitis, as is the careful use of Dalibour water, in full strength or diluted with equal parts of water:

Zinc sulph.	...	...	6 gr. (0.4 g.).
Cupri sulph.	...	...	4 gr. (0.26 g.).
Aq. camph.	...	ad	1 oz. (28 ml.).

Potassium permanganate baths (1 in 8,000) may usefully precede some of these measures if the condition is widespread.

It is generally desirable to supplement such local treatment with chemotherapy internally as sulphatriad 0.5 g. three times a day or sulphamethoxypyridazine ("leiderkyn") 1 tablet daily for a few weeks, or an antibiotic as mentioned above. There is no greater risk of sensitization eruption from such internal medication than there is from the use of these measures in general medicine. Steroid hormones internally are not usually helpful and may aggravate this type of eruption.

The occupation and the general medical and emotional health of the patient suffering from infective seborrhoeic dermatitis and sycosis are matters for serious consideration; working in hot dusty atmospheres may seriously aggravate the condition, as may a state of physical debility, especially if associated with a focus

of chronic infection, perhaps in the upper respiratory tract. Mental depression, which may readily follow such a skin disease, may also affect it adversely, especially in the serious-minded, over-conscientious, perfectionist type of patient.

Rosacea

Rosacea is an interesting affection in that it is limited to the face, is largely dependent on vasomotor instability and consequent variable flushing, and is particularly seen in women at the menopause. The associated eruption of granulomatous papules, often tuberculoid, in the skin which come and go in the course of days but may undergo degeneration, necrosis, and secondary infection, is also a unique feature of the disease. Similar lesions may affect the conjunctiva and over the cornea may produce serious ulceration. Usually both hormonal imbalance and emotional instability afflict these subjects, but on occasion toxic influences, even tuberculosis, may play a part. Other symptoms such as dyspepsia, palpitations, sweating, circulatory instability, and nervousness—symptoms closely resembling those of hyperthyroidism—are associated and aggravating but not causative features.

The response to local treatment is usually dramatic and is almost a diagnostic test. The patient should avoid soap and water, use a 2% sulphur and salicylic acid ointment at night, and receive very small unfiltered doses of x rays (50 r) once, twice, or thrice at 21-day intervals. Other ointments such as mercurials or even the ointment bases may be as effective as sulphur and salicylic acid, but not as consistently. Cosmetics used by day are of value as bland and protective applications, for exposure and heat aggravate rosacea.

Involvement of the cornea (5–10% of patients) was in the past often serious but to-day is usually controlled readily by 1% hydrocortisone locally.

Internally it is generally desirable to give a small dose of sedative (phenobarbitone $\frac{1}{4}$ gr. (16 mg.) or sodium amytal 1 gr. (65 mg.) twice a day or a tranquillizer such as chlorpromazine ("largactil") 10 mg. three times a day. Menopausal symptoms may require treatment independently.

Hydrochloric acid by mouth, as in the following mixture, taken once a day in a glass of water as a beverage with the main meal may be useful, probably by relieving flatulent dyspepsia which is often present:

Acid. hydrochlor. dil.	...	30 minims (1.7 ml.).
Glycer. pepsin.	...	1 dr. (3.5 ml.).
Syr. aur.	...	30 minims (1.7 ml.).
Aq.	...	ad $\frac{1}{2}$ oz. (14 ml.).

A little dietetic care is wise, especially the avoidance of gastric irritants and stimulants and particularly hot, strong tea.

For no very clear reason antibiotics (penicillin, chlor-tetracycline) or sulphonamides given internally may produce rapid improvement, probably by controlling the common secondary infection, but possibly because the original papular eruption is in part dependent upon the activity of skin organisms.

Apart from the general sensitiveness and lack of confidence, patients with rosacea are not uncommonly reacting to stress, the understanding and relief of which may be essential to recovery.

The disease is apt to recur, usually at long intervals over the course of years, but this depends on circumstances. Attention to general health naturally

reduces the tendency. Rosacea arising in patients other than women at the menopause is usually responsive to similar treatment.

Body Odour

Distress to the patient and offence to society may arise from body odour. This is very variable racially and individually and is influenced by sex, age, emotion, and by health and tone generally, as well as by diet. In the main it is dependent upon apocrine secretion and so upon sex hormones. It is the decomposition of apocrine sweat by surface organisms that is responsible for odour, so that cleanliness and care of underlinen is very important. In addition, shaving the axillae and the use of an antiseptic deodorant locally may be indicated. Hexachlorophane detergent 0.5% is of value, as is a 25% solution of aluminium chloride or a saturated solution of bicarbonate of soda (Shelley, 1953). It is doubtful if chlorophyll is a direct deodorant.

The administration of oestrogens by mouth as suggested for acne, but in larger dosage, such as stilboestrol 1 mg. daily, appears sometimes to reduce apocrine activity.

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NIGHT CALLS: THEIR FREQUENCY AND NATURE IN ONE GENERAL PRACTICE

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The night call may be described as the bugbear of general practitioners, but relatively little is known about how often night calls occur, or about their nature. Various studies of general practice have reported the number of such calls in different practices, and these estimates vary greatly.

The aims of the present study were to ascertain not only how often night calls occurred in this practice and how their frequency varied at different times of the year and days of the week, but also the reasons for patients making such calls, the doctor's diagnosis, and the action which he took.

Details of 254 consecutive night calls were recorded in a ledger in which there were columns for the date, time, period the doctor was at the call, the patient's name, address, age, and sex, the reason given by the

person putting in the call for wanting the doctor, the doctor's diagnosis, and his immediate and subsequent treatment.

The Practice

This practice is classified as semi-rural, and is situated in Penicuik, some 10 miles south of Edinburgh. There are four doctors, all principals, in the practice, and the number of patients registered with them was 9,023. Penicuik burgh had a population of 5,789 at June 30, 1956, and it is probable that the great majority of the Penicuik population were patients of this practice, as no other doctors have surgery premises there. The practice extends approximately 7 to 10 miles in each direction from Penicuik. Paper-making is the main industry in Penicuik, and the surrounding area is largely a farming community.

Frequency of Night Calls in Other Studies

Previous studies of general practice in which the number of night calls have been recorded have all been in urban areas. Brotherston and Chave (1956), studying a new housing estate, reported 70 consultations between 8 p.m. and 8 a.m. in a period of one year and related to 3,710 patients. Fry (1952) in his practice in the urban outskirts of London reported 110 visits between 8 p.m. and 7 a.m. in a year's study of his 4,456 patients. In the urban practice of 3,084 patients studied by Backett, Heady, and Evans (1954) there were 120 calls between 8 p.m. and 8 a.m. in a year. These represent annual rates of 19, 25, and 39 per 1,000 patients—a considerable variation.

Another series of figures, so far unpublished, is provided by D. McVie (personal communication), of Edinburgh. In his practice in the centre of Edinburgh he recorded an average annual rate of 84 calls between 8 p.m. and 8 a.m. per 1,000 patients, over a period of four years. This last rate is more than twice as great as that of Backett *et al.*, and more than four times that found by Brotherston and Chave.

Maternity work will account for some part of this variation but can hardly explain all of it. Over two-thirds of the calls recorded by McVie were between 8 p.m. and midnight, and the rate of calls between midnight and 8 a.m. was 25 per 1,000 patients per year. Unfortunately, comparable data are not available for the other three practices.

None of these earlier inquiries give any information about the type of call involved.

Frequency of Night Calls in this Study

In this inquiry "night" was taken to be the period from 11 p.m. to 8 a.m. The 254 calls studied occurred between November 8, 1955, and June 8, 1957, a period of 19 months. The number occurring during the calendar year 1956 was 155. This, in a practice of 9,023 gives an annual rate of 17 per 1,000 patients, but since "night" in this study is much shorter than that in the studies of Brotherston and Chave, of Fry, and of Backett *et al.*, it is not possible to compare this rate with their data. A comparison with McVie is, however, possible if calls between 11 p.m. and midnight are excluded, as he divides his calls into those before and those after midnight. The former constituted 30% of the calls in the present series, so that the annual rate for calls between midnight and 8 a.m. per 1,000 patients were 12 in this practice and 25 in that of McVie. We