REFRESHER COURSE FOR GENERAL PRACTITIONERS

SEBORRHOEIC DERMATITIS AND ACNE VULGARIS

BY

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A seborrhoeic subject is born with a skin that has a tendency to produce an excess of sebum, and in some cases this is complicated by a periodic diminution of its resistance to infection by bacteria, yeasts, and fungi. Such a skin is not necessarily in itself pathological. The seborrhoeic state is a constitutional trait conditioned by the endocrine make-up of the patient under genetic influences.

Many seborrhoeic subjects can be recognized by the dirty yellow or grey and greasy skin of the face. The pilosebaceous orifices are patulous, particularly over the alae nasi, temples, and concha of the ear. The patient may not claim that his skin is greasy and he may even complain that it is too "dry." This is due to the presence of fine greasy scales in the nasolabial folds and sometimes over most of the facial skin. Similar scales are found on the eyebrows, around many eyelashes, over the temples, and on the hairy areas of the chest, the axillae, and the pubes. There is nearly always some pityriasis capitis (dandruff) or scurf.

The seborrhoeic state is usually the background of seborrhoeic dermatitis; acne vulgaris; folliculitis; sycosis of the beard, moustache, and nape of the neck; furunculosis; and intertrigo. Acne necrotica and rosacea frequently have a similar background.

Predisposing Factors

Although there is probably no single cause, certain initiating and perpetuating factors are recognized, and an analysis of the many possible causes must be considered in every case. External conditions which augment the seborrhoeic state are the inadequate removal of sebum by washing, retention of sebum by wearing wool and flannel garments, and infrequent change of clothing. Important internal factors are lack of exercise and a diet containing more carbohydrate than is required for normal metabolism. The presence of an acute or chronic anxiety state is a very important factor. Shyness, frustration, an inferiority complex, or a tendency to make mountains out of molehills all play an important part in the aetiology.*

The influence of the hormones on the seborrhoeic state, and particularly on acne vulgaris, has been stressed by H. W. Barber, who regards both as the expression of epidermal stimulation by androgens. It is interesting that testosterone given in large doses will induce greasiness of the skin, comedones, papules, and pustules in women, and spontaneous recovery of the skin follows when this hormone is stopped. Acne in young women often shows a premenstrual exacerbation, and this may be relieved by stilboestrol therapy.

Seborrhoeic subjects are prone to develop eruptions from halogens. The bromide in a sedative mixture or iodide in a cough mixture or gargle may provoke an outbreak of papules and pustules.

*Wittkower, E., *Brit. J. Derm. Syph.*, 1951, **63**, 214.

Eventually there is a breakdown in the normal defences against micro-organisms. The *Pityrosporum ovale*, the *Corynebacterium acnes*, and the *Micrococcus cutis communis*, which are normal inhabitants of the skin, may induce inflammatory processes in those areas where there is the maximum amount of sebum. *Staphylococcus aureus*, *Staphylococcus albus*, and *Staphylococcus citreus* may also be responsible for folliculitis, boils, and certain cases of pustular acne. It is important to remember that the staphylococcus frequently inhabits the vestibule of the nose and is thus easily disseminated over the upper lip and beard areas, either directly or by means of a handkerchief. This is of particular importance in cases of sycosis barbae and folliculitis of the upper lip, chin, and neck. It is difficult to assess the part played by a focus of bacterial infection, but there is no doubt that many patients improve when the focus is removed by radical treatment. Operations which entail an unusual strain on the epithelium or glands of the skin, such as the frequent or prolonged contact with oil, paraffin, or other chemical substances, are detrimental to seborrhoeic subjects. Profuse sweating such as one would see in a heavily laden soldier in the Tropics also predisposes towards a seborrhoeic dermatitis. In the armed Forces it may be prudent to exclude from tropical service a seborrhoeic subject who has had one acute attack.

Clinical Features of Seborrhoeic Dermatitis

In the development of seborrhoeic dermatitis one can discern five different grades of severity.

1. An almost asymptomatic abnormal greasiness with greasy scales in some places.

2. Irritation and itching associated with such scaling and greasiness, relieved by washing, appropriate clothing, and a healthy regime.

3. Sensitization to the normal skin saprophytes or possibly to drugs used in treatment, resulting in erythema, exudation, and a slight crusting—an actual dermatosis. Patches of

FIG. 1.—Seborrhoeic dermatitis in a boy, showing retro-auricular fissures. (With acknowledgment to Dr. W. J. O'Donovan.)

scales behind the ears or within the external auditory meatus are present, and may be associated with painful splits or fissures (Fig. 1). Yellowish red groups of papules surrounding the hair follicles and covered with scales are seen over the sternum and in the interscapular region (Fig. 2). Confluence tends to occur, producing greasy, yellowish red, or sometimes scaling lesions, often compared with the petals of a flower.

4. Secondary infection by pathogenic organisms—sometimes with a yeast or fungus infection. In severe cases secondary pathogenic coccal infection is superimposed, producing a marked exudation and "impetiginization" (Fig. 3). Scales are replaced by crusts and the regional lymphatic glands may also be enlarged and tender.

5. A widespread generalized sensitization with all the above features and most of the body involved. The patient may become incapacitated by extreme discomfort from oozing of the skin, matting of the hair, and deafness from painful swollen ears with retro-auricular fissures. Boils in the auditory meatus, axillae, neck, and buttocks add to his troubles. Infection of the apocrine sweat glands leads to deep abscesses in the axillae and ano-genital regions. Such a severe case may have an atopic background with a familial tendency to asthma, eczema, and hay-fever.

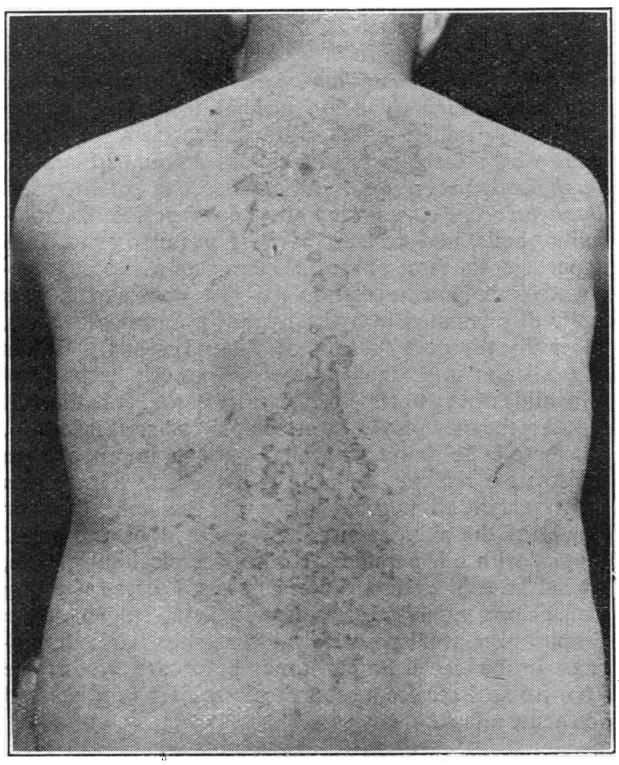

FIG. 2.—Seborrhoeic dermatitis of the back. (With acknowledgment to Dr. R. M. B. MacKenna.)

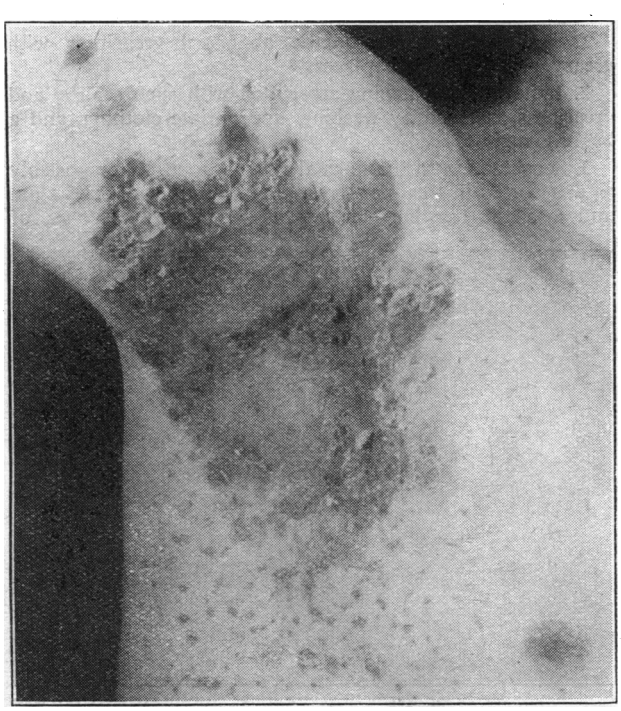

FIG. 3.—Seborrhoeic dermatitis of the axilla.

Clinical Variants

Infantile seborrhoeic dermatitis often occurs in the first few months of life as a dry crusting of the scalp. Yellowish patches with fine scaling may be seen on the body, and the flexures tend to become red and may ooze.

Folliculitis barbae (Fig. 4) may occur in seborrhoeic subjects with little evidence of frank seborrhoeic dermatitis elsewhere. It is important to recognize this back-

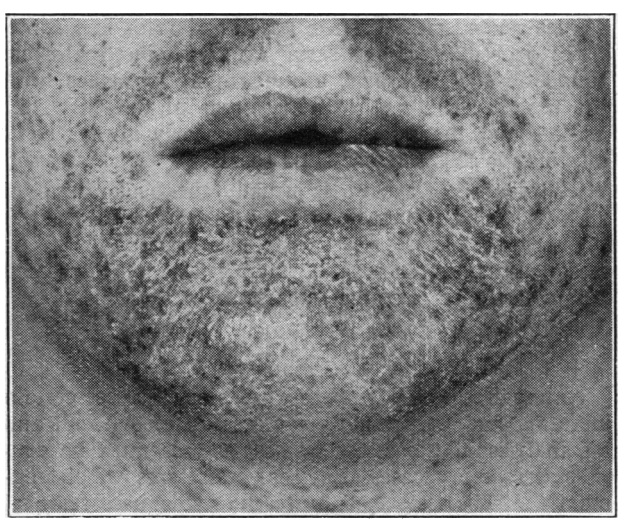

FIG. 4.—Folliculitis barbae in a seborrhoeic subject.

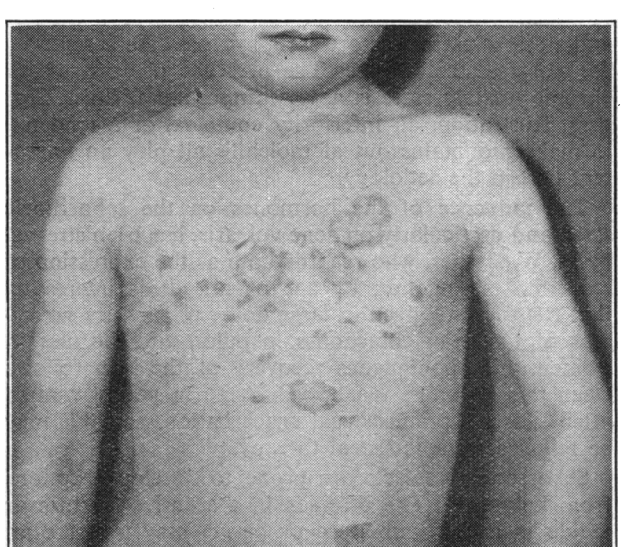

FIG. 5.—Circinate seborrhoeic lesions on a boy's chest. (With acknowledgment to Dr. W. J. O'Donovan.)

ground in cases in which diffuse coccal dermatitis with "impetiginization" has been superimposed on a seborrhoeic state.

Discoid lesions (Fig. 5), varying in size from 1 to 5 cm. across and covered with the characteristic greasy scales simulating psoriasis, chronic localized eczema, or ringworm may occur on the limbs and trunk of seborrhoeic subjects.

Differential Diagnosis

The importance of distinguishing primary impetigo and sycosis barbae from those with a seborrhoeic background has been emphasized. Infantile seborrhoeic dermatitis may in some instances closely simulate infantile eczema. A familial tendency to allergic disorders, and early involvement of the face rather than the scalp, favours the diagnosis of the latter.

Intertrigo in seborrhoeic subjects must be distinguished from monilial intertrigo and tinea circinata. In both seborrhoeic and monilial intertrigo the opposing surfaces are affected symmetrically in relation to the skin folds. A white sodden undermining of the edge is characteristic of monilia. Tinea circinata occurs near, rather than in, the skin flexures, and vesicles and scaling are seen at the edge of the lesion. In patients with a familial tendency to psoriasis one must always be on the watch for psoriasis occurring in the same regions as those frequently affected in seborrhoeic dermatitis. The resulting picture, with lesions in the flexures rather than on the extensor surfaces, is the exact opposite to that seen in ordinary psoriasis, and occurs characteristically in women after the menopause. Pitting or discoloration of the nails sometimes assists in the diagnosis of psoriasis.

Treatment of Seborrhoeic Dermatitis

General hygiene, such as frequent bathing and hair washing, is still the first rule to be observed by a seborrhoeic subject. Most of these people know by experience that wool "irritates" their skin, and the wearing of light clothing is an important measure in overcoming this type of skin disease. The patient should reduce his intake of carbohydrates, sweets, chocolates, and pig fat, and also avoid snacks with tea or coffee between meals.

The seborrhoeic skin is delicate, with an increased tendency to sensitization, particularly to sulphonamides or penicillin when applied locally. While sulphur and resorcinol often produce great benefit, they may induce an inflammatory reaction if applied for too long or in too high a concentration.

Mild scaliness of the scalp and presternal plaques may be removed by ung. acid. salicyl. et sulphur. (*N.F.*) rubbed in twice daily. The ointment may be washed out twice a week from the scalp with a spirit-soap shampoo. If soap irritates the skin 10% cetrimide in water can be used. A watchful eye should be kept for signs of aggravation of the disorder by overtreatment.

In the more severe cases with widespread secondary bacterial infection, particularly in the armpits and groin, daily potassium permanganate baths (1 in 8,000 in normal saline) for fifteen minutes are of value. In many cases this treatment can be augmented by an application twice a day of a watery solution of 1% gentian violet or "triple dye" (pig. violae crys. co., *B.P.C.*). A course of systemic penicillin therapy for a week, followed by the use of staphylococcal toxoid and vaccines, is of great value in cases with severe staphylococcal infection. The local use of penicillin is contraindicated as stressed above. Sycosis barbae arising on a seborrhoeic background usually responds to 1% ichthammol in lot. calamin. oleos., either smeared on four-hourly or applied as a wet dressing under a face-mask. In these cases it is helpful to keep the beard clipped short with scissors. Shaving with soap and an ordinary razor aggravates inflammation and spreads infection. An electric razor minimizes this tendency.

To the old-established plan of administration of alkalis such as mist. gent. alk. (*B.P.C.*), ½ oz. (14 ml.) three times a day, may be added an injection of crude liver extract twice weekly. Sometimes ultra-violet light therapy to the body as a whole, as well as to the infected areas, may be beneficial, or alternatively local treatment with *x* rays.

Clinical Features of Acne Vulgaris

Acne affects chiefly the face, chest, and back. The flush area of the cheeks, the centre of the forehead, the sides of the chin, and the nasolabial folds are the sites of predilection (Fig. 6). Only in severe cases does it extend widely over the face and on to the neck behind the ears or on the nuchal region. Lesions may be noted in the presternal region of the trunk, across the shoulders, and even as far as the buttocks. In some instances the lesions are seen only on the back, while in others the face alone is affected. The primary lesion is a comedo (blackhead), which is always present. The patient may also show small sebaceous retention cysts, papules, pustules, deep indurated cysts, abscesses, and scars. Comedones are flush with the skin or slightly raised, and may be found most frequently on the nose and temples. The contents can be expressed as greasy wormlike masses. The orifices of some pilosebaceous follicles become narrowed and obstruction occurs at the opening into the sebaceous gland, resulting in a retention cyst, which shows as a pinhead-sized white, glistening papule with no apparent opening from which the contents can be expressed.

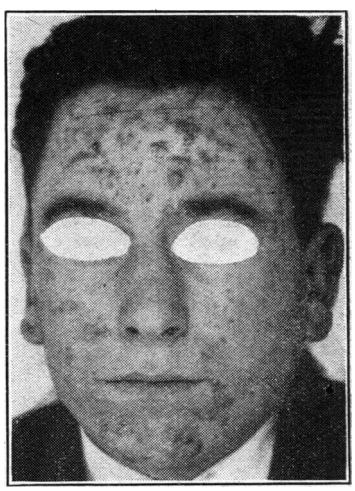

FIG. 6.—Acne vulgaris. (With acknowledgment to Dr. Twiston Davies.)

The comedones become infected with acne bacillus or staphylococci of low virulence, and inflammatory changes appear around the follicle. Papule formation and perhaps pustule formation result. Many of these lesions are sterile, and the explanation of this apparent anomaly may be that the lipoid material in some follicles has induced a granuloma of the foreign-body type below the level of the skin. The cyst so produced may ultimately fibrose and visible pitted scars result.

Differential Diagnosis

The clinical picture of halogen acne occurring in seborrhoeics is identical with that of acne vulgaris. An unusual distribution on the arms, legs, and buttocks

suggests that oil, perhaps encountered at work, is a causative factor. The acne due to iodides or bromides on a normal skin looks very superficial and "stuck on." Spontaneous papules and pustules arise without the usual comedo formation. In a person with a tendency to acne, however, the diagnosis may be by deduction only.

Acne necrotica is really a bacterial folliculitis resulting in necrosis, crusting, and, finally, depressed scars, with complete destruction of the hair follicle. Pruritus is usually marked, and the site of predilection is the scalp and forehead.

Acne rosacea is better termed rosacea. Here there is an undue lability of the flush mechanism of the face. A moderate permanent erythema of the flush area appears with papulation and pustulation, but there are no comedones. It is most common in women who are seborrhoeic subjects and usually first develops in the early thirties.

Maculo-papular syphilides are increasingly rare nowadays. They may simulate acne, but the eruption, which appears suddenly, is usually widespread and there are other signs of secondary syphilis present.

Certain tuberculides produce papular and pustular eruptions on the face and the diagnosis can often be made with certainty only by means of a biopsy. Here the lesions, which affect mostly young people, have a sudden and symmetrical evolution in the form of indolent miliary nodules which may suppurate and subsequently heal with scarring. There may be no other signs of seborrhoeic diathesis and probably an absence of comedones. When a patch of the eruption is compressed with a glass slide (diascopy) brown staining like the "apple-jelly" nodes of lupus vulgaris may be detected.

Treatment of Acne Vulgaris

In planning the general treatment it is important to assess the various predisposing factors. Usually halogens and contact with oils can be ruled out. In the adolescent, general factors such as lack of exercise and excessive intake of carbohydrates and even of vitamins should be corrected. Although the vitamin-B complex is useful in combating furunculosis, it may aggravate acne vulgaris. General measures outlined under seborrhoeic dermatitis, including the use of oestrogens and thyroid extract, are useful adjuncts. The use of *x*-ray therapy, sedatives, autogenous vaccines, staphylococcal toxoid, and manganese must be considered in resistant cases.

Local treatment is directed to removing the horny plug from the orifice of the pilosebaceous follicle and preventing further obstruction. Frequent washing of the face with soap and hot water is sometimes effective in mild cases. When the back is affected, daily bathing and lathering will soften the plugs and reduce the general greasiness of the skin. Gentle friction with a loofah, huckaback towel, or hard face-flannel loosens the comedones and promotes a little healthy peeling.

Comedones which are not infected—that is, those which show only a black plug without surrounding erythema—may be expressed with an extractor. If the patient is instructed to do this herself daily, it will prevent many of the follicles becoming infected and so reduce the chance of subsequent scarring. The skin is first rubbed with either spirit or acetone and the comedone expressor is then applied. Cetrimide, 1% or even 0.5% in aqueous solution, is a useful "degreaser" and may be used for cleansing the face. An antiseptic such as hydrarg. perchlor., 1 in 5,000 in 75% spirit, should be applied to the lesions after expression.

The application or administration of antibiotics is of limited value in acne, except perhaps in a few cases in which pustule formation is pronounced, when a course of systemic penicillin may be helpful. Past. resorcin. et sulphur. (*N.F.*), smeared on at night and cleansed off with cetrimide the following morning, produces a fine superficial peeling. For daytime application the incorporation of 1% ichthammol or 1% sulphur into the patient's face-powder is useful. The scalp should be washed every four or five days and a lotion such as lot. acid. salicyl. et hydrarg. perchlor. (*N.F.*) rubbed into partings at night, twice weekly.

Hair washing with a spirit shampoo is helpful. Ultraviolet light is a useful measure in many cases. It improves the general condition of the skin and induces mild desquamation.

Treatment of Special Conditions

Sycosis Nuchae.—Epilation with forceps is beneficial and should be followed by the application of antiseptic paints, lotions, or compound "quinolor" or "vioform" ointment. Bandaging and prolonged fomentation should be avoided. Resistant cases may respond to superficial *x*-ray therapy.

Acne Conglobata.—This is notoriously resistant to treatment. The combination of subcutaneous as well as cutaneous suppuration with surrounding dense fibrosis renders topical therapy and systemic therapy with antibiotics less effective. The combination of wide incision of the large infiltrated abscesses and infiltration of the whole area with procaine penicillin, 10,000 units per ml., is probably as effective as any other treatment. Up to 5 ml. may be infiltrated weekly. This should be done only after swabs have been taken and it has been confirmed that the organisms are penicillin-sensitive. If improvement is going to occur it is usually noticeable after three or four injections.

The general practitioner can do much by regular treatment to improve the condition and minimize the scarring, but in severe cases the advice of a dermatologist should be sought.

Conclusion

This article has been planned as a revision of the established undergraduate teaching. But experience shows that, clinically, only a certain number of patients can be accurately fitted into the pictures that are traditionally recognized. Many processes in a patient's metabolism, and also the factors which influence metabolism, may affect the skin. And the appearance of many skin disorders may be influenced by a particular tendency of that patient's skin to produce an eczematous or urticarial reaction owing to a constitutional inclination towards allergic disorders. Again, the skin disorder may initiate or aggravate a mental disorder, and the effect of the disorder of the skin and the mind becomes almost inextricably mixed. The hazards of modern life and industry may produce traumatic lesions on the skin which may be followed by sensitivity reactions, and still later by changes in immunity.

Allergic reactions, alterations in immunity, and the appearance of psoriasis or lupus erythematosus on the skin all point to the tremendous importance of always considering not only the patient's skin but his body and environment as a whole.