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THE SIGNIFICANCE AND MANAGEMENT OF PSORIASIS*

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I am honoured by the invitation to deliver the first Watson Smith Lecture, and I recognize my responsibility. The Watson Smith Lecture may be delivered upon any subject in medicine, including dermatology, and I believe this is the only lecture of this College which carries that specific reference. It may be thought to give dermatology some little cloak of respectability.

Attention having been drawn to this branch of medicine, we might ask ourselves why the skin does not figure more significantly in our medical curriculum and training, in the facilities afforded for hospital and medical practice, and in research. The skin is the one part of the whole organism the physiological and pathological processes of which are clearly displayed to view, and, if careful observation is the basis of clinical practice and of research, here is a training-ground which cannot be equalled.

Common sense would seem to urge that, not for the sake of dermatology as a specialty but for the better and easier understanding of medicine as a whole, the doctor in training should be taught to recognize the fundamentals of his subject in the skin. Nothing should happen in the skin which he cannot interpret in general medical terms, and every medical problem should be approached by way of the skin, which has so much to tell.

This College will no doubt use its influence in deliberations on the medical curriculum and on hospital accommodation to improve the position of dermatology, which enjoys much less consideration and poorer facilities in Britain and the Commonwealth than in most other countries. This is only part of the problem of the necessary reorientation of our views regarding the general and the special in medicine in the interests of the patient and for the training of students. It is necessary that men of ability should be attracted to work in dermatology and should reveal truths that lie hidden in the skin and that must bear significantly upon the whole of medicine.

Sydney Watson Smith was a Fellow of this College and of the Royal College of Physicians of Edinburgh, and to both he extended his generosity. He had a high sense of his vocation and was beloved by patients and colleagues. Starting general practice in his home town of Dundee in 1907, he settled, after service in the first world war, in Bournemouth, and was appointed a consulting physician to the Royal Victoria and West Hants Hospital in 1924. In common with most of us who are Fellows of this College, Watson Smith's contributions to medicine were modest; he did not flaunt an international reputation, but he gave of his experience and philosophy in some 40 papers in our medical literature, many of which were on dermatological subjects. His address as President of the Annual Meeting of the British Medical Association in Bournemouth in 1934 was on "Climate and Health" (Watson Smith, 1934) and is relevant to the subject of my lecture to-day.

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A Common Disease

Psoriasis affects all sorts and conditions of men and women, of all races and creeds, all strata of society, rich and poor, wise and foolish, the hungry, the well-fed, the sick, and the sound. In temperate climates it is the most prevalent skin disease after eczematous dermatitis. It is also a fascinating disease, creating, from guttate and small nummular beginnings, plaques and such colourful arcuate and figurate patterns as may rival the heavens for beauty and design.

In ancient literature this term "psoriasis," which indicates an itching, scaly affection, was used to cover a range of skin diseases including pyodermia, scabies, and leprosy. In the early part of the last century Robert Willan, of Yorkshire, the acknowledged father of modern dermatology, first gave a full and accurate account of the disease, but it is only in the last hundred years that the use of the term has been restricted to the disease as we know it. Yet so common is the disease and so distinctive its features that it can be traced down the pages of history, an offence to society, a curse to the afflicted, epitomized in the Scriptures in the "leper as white as snow." Men afflicted would travel far to seek the aid of the gods as did Naaman, and others would know that their affliction betokened their wrath as did Gehazi.

Few diseases have such marked and constant features. The student meeting psoriasis as a "short case" in his final examination is happy, and the general practitioner makes this one diagnosis with confidence. But to be unable to roll up one's sleeves or wash in public; to shun school, to avoid sport, and not to indulge the joys of a holiday at the coast or a voyage at sea; to leave a trail of silver scale about the house and blood-stains on the sheets and to fear the public gaze—this is a cruel

fate. Let no medical man console himself or think he comforts his patient by telling him that he will not die of psoriasis.

Incidence of Psoriasis in the Population

No one can give an accurate figure of the incidence of psoriasis in the general population, but I have judged that in this country there are no fewer than 500,000, and probably nearer 1,000,000, persons affected—that is, 1% to 2%. Gahan (1943) suggested that at least 1% of the population of New York was psoriatic. In Denmark the figure is estimated at about 2% of the whole population (H. Haxthausen, personal communication), while Szántó (1935) gave 0.26% for Budapest.

It is important to draw psoriasis into the fold of general medicine and to understand its significance in relation to the whole. One purpose of my remarks will be to present psoriasis aetiologically as a disease with two distinct and separate facets. The first shows psoriasis as an adaptation reaction, to use modern jargon, in which the epidermis of the skin is the target organ and the stress derives from climatic environmental factors. This facet of the disease may run its course independently of the second, which shows psoriasis as a constitutional disorder amenable to the constitutional approach. The second purpose of my remarks will be to secure for the psoriatic patient the effective treatment that is too often denied him by our present inadequate hospital facilities.

Psoriasis a Disease Sui Generis

This common and startling disease bristles with problems. Why, among so many scaling diseases of the skin, is the silver scale of psoriasis so distinctive? Why is the livid salmon-red colour of the psoriatic plaque so exactly limited to that site of epidermal change that psoriasis alone among skin diseases can be recognized from afar by reason of its absolute demarcation? Why is it that the elbows, knees, and scalp are so commonly affected? Why often nails but never hair?

We may say that the root of the hair is buried deep and is well protected; that elbows and knees are subject to trauma and the scalp to irritation from scurf. But these answers are no more complete than is the knowledge that light reflected from the air spaces entrapped in the psoriatic scale causes the silver gleam.

Why does psoriasis not affect mucous membranes? The condition has in fact been reported, but its existence remains very doubtful. In my own series of 1,346 patients 7 showed lesions of tongue or mucosa, but in all they were shown by biopsy or otherwise not to be psoriasis. Yet most other reactions of the skin involve the mucous membranes (Schütz, 1898).

A recent American report on ocular psoriasis is misleading, and in my opinion recalls no more than the fortuitous association of such disorders as conjunctivitis and keratitis with psoriasis (Kaldeck, 1953).

Von Hebra, a careful clinician, described psoriasis as a disease of the healthy, and, while modern medicine with its emphasis on the social and psychological could not accept this observation at its face value, yet it is a fact that patients will suffer psoriasis for tens of years and maintain that they have enjoyed perfect health. Unless psoriasis be so extensive as to be almost generalized, there is very little physical disturbance from the psoriasis itself.

There is no analogous condition of any other part or organ of the body that can be related to this common and universal skin disease.

Incidence of Arthritis

A possible exception to that statement may be arthritis. I will not discuss rheumatism in relation to psoriasis, for I believe that term covers a multitude of ills which few escape. The question of arthritis is more vexed. French authors have stressed the association between psoriasis and arthritis and described arthropathic psoriasis. Bazin (1860) separated psoriasis into the arthritic and herpetic or dartrous types but did not rely only on the presence of arthritis. Bourdillon (1888), under Besnier's direction, describing a series of 36 cases, suggested that they were affections occurring alongside one another rather than one causing the other.

The incidence of arthritis in psoriatics is reported by different authorities as between 1% and 7%, though in the Mayo Clinic the figure was 12% to 15% (Brunsting, 1943; O'Leary, 1943). My own figure is 7% in 1,346 cases. This is much higher than in patients suffering from other skin diseases, given as 0.7%, and higher than in the normal population. My youngest patient with psoriasis and arthritis was a girl aged 12 years. The incidence of psoriasis in arthritics is said to be 2% to 3%, which is much higher than in the normal population, given as 0.7%.

There have been important papers in recent years on this subject by physicians, orthopaedic surgeons, radiologists, and dermatologists, but the conclusions drawn have been conflicting (Comroe, 1944; Sherman, 1952; Reiter and Nørholm-Pedersen, 1953).

Romanus (1945), in his admirable statistical review of psoriasis, regarded the association as coincidental, as did Hench *et al.* (1938). Others, as Sterne and Schneider (1953), however, state that the figures recorded are statistically significant and that the relationship is not fortuitous. I am told that rheumatoid arthritis is practically unknown in Africans in Uganda, Kenya, and Tanganyika, where the same is true of psoriasis. There is no doubt that the incidence varies considerably in different climates.

Emphasis is placed by many on the destructive character of the arthritis, especially as it affects the terminal phalangeal joints; but in fact all types of arthritis are seen in these patients, and similar joint changes are seen in those not suffering from psoriasis. Nevertheless it would seem certain that there is some relationship between these two diseases, if only in the sense that environmental factors responsible for the psoriatic reaction may be an important component in the aetiology of arthritis.

Arthritis apart, psoriasis is essentially a cutaneous affection and does not involve other organs. Neither does it affect animals so far as I am able to learn, though Selye (1950) described a reaction as being psoriatic in one of his experimental animals used in hormonal tests.

Histological Features

The histological changes in the epidermis are striking. There is hyperplasia, with impaired keratinization and some budding down of epidermal pegs (Burks and Montgomery, 1943). There is attraction into the epidermis of trails of leucocytes which collect as plumes under the horny layer and are shed with the horny layer as dry abscesses (Munro, 1900; Civatte, 1924).

Such authorities as Tilbury Fox, Jamieson, Munro, Montgomery, Gans, and Haxthausen see evidence favouring an epidermal source for the disease, while others, as von Hebra and Sabouraud, have favoured a dermal source of the reaction. Civatte, whose work in this field is classical, suggests that the histological findings can be used to support either a primary dermal or epidermal origin for the disease, but, taken in conjunction with clinical features, I suggest that the weight of evidence is in support of the epidermis, the dermal changes being of secondary significance. That does not deny the possibility of the stimulus provoking the epidermal changes arriving upon

occasion by way of the blood stream or nervous system. Madden (1941) claimed to have shown dermal changes in skin unaffected by psoriasis, but this is not really relevant to the question whether the essential lesion of psoriasis is epidermal or dermal.

Geographical and Racial Distribution

It is interesting to consider such figures as exist regarding the incidence of psoriasis in different countries. My own figures concern only those patients seen by me in private practice in the past twenty-five years, and are therefore entirely personal. The total is 1,346, which is 6% of all patients seen. This is almost the same as the incidence in the hospital clinic—5.5% from 1928 to 1938 (Hellier, 1940). Of my patients, 41% were males and 59% females, a proportion of two males to three females. These figures are similar to those published in this country in the past (Radcliffe Crocker, 1903) and to the present figures given me by colleagues in Copenhagen, Stockholm, and Oslo. Figures quoted by Romanus (1945) for other European countries are generally lower, and for the United States of America are in the region of 2% to 4% of all skin diseases, psoriasis being many times more common there in whites than in blacks. Figures for warmer climates are considerably lower, mostly in fractions of 1%.

Jews are said to be more susceptible than others, and Tas (1947), reporting on psoriasis in Israel, found the incidence seven times as great in Jews from Europe as in Oriental Jews.

Many colleagues in Kenya, Uganda, and Tanganyika, including my late chief Sequeira, have assured me of the rarity of the disease in those parts. Lewis (1942) and Gelfand (1947) confirm this, and the latter quotes Morrison as finding psoriasis in the negro easy to treat. The disease is less common in the yellow-skinned than in the white and is rare in the full-blooded negro. Very variable but lower figures are given from India, where the Parsee is said to be more susceptible than the Hindu or Mohammedan (Gans, 1952). There are no figures available for Australia or South Africa. However, psoriasis is reported as common among the aborigines of Central Australia (Cleland, 1928), whereas in an eight-year survey of skin diseases among North American Indians Lain (1913) saw no psoriasis.

Generally it would seem true that the inhabitants of warm climates are less subject to psoriasis, and in temperate climates the majority are better in the summer season and respond favourably to exposure to sun, warmth, and air at the seaside on holiday or abroad. The face and exposed parts which usually escape may be affected in industrial areas, which get less sunlight than other areas.

While this is true, there are exceptions, and in 1% of my series the patients longed for the cold and were comfortable and sometimes clear only from December to March. It is not difficult to imagine that humid heat may be a major source of stress upon the skin of some patients —the seborrhoeic and those subject to prickly heat, for instance—and such stress might well aggravate psoriasis. Rarely, actinic light provokes psoriasis.

In the Eskimo, P. V. Marcussen (personal communication), in a survey of 1,100 Greenlanders in the south, saw no psoriasis, though he emphasizes the difficulties of examination and the bad light. His survey was primarily into venereal disease. Bertelsen (1940) quotes Kiaer (1912) as mentioning one case, an adolescent girl, but as not having previously seen the condition in Greenland. Ehrström in his monograph, *Medical Investigations in North Greenland* (1948–9), does not mention psoriasis.

On the other hand, Dr. H. Gudmundsson informs me that he is of the opinion that psoriasis is more common in Iceland than in other Scandinavian countries. There the climate is cold but relatively dry. Finsen in 1874 gave the incidence in Iceland as 8%, but total figures were small and scabies was rife (42 psoriatics in 513 cases of skin disease) (Allbutt and Rolleston, 1911). Eskimos, like Red Indians, have very little body hair.

However, incidence given in relation to skin diseases is of limited value because of differences in race, habits, diet, and endemic diseases. It would be profitable for a single team of research workers to conduct surveys in different countries, and this is obviously true not only for psoriasis and skin diseases but for many general medical ills. It is an aspect of clinical research that might yield valuable and fundamental knowledge. It is interesting that geographers are seeking a rational classification of climate based upon the transpiration of plants (Thornthwaite, 1948). It is an indication of the fundamental importance of climate in relation to ectodermal function.

We have, then, a skin disease mostly of covered parts essentially epidermal in character; not involving any other organ; very common in the Caucasian, less common in coloured races, and rare in the negro; and significantly influenced by sunlight, warmth, and exposure.

I am suggesting that psoriasis is basically the expression of disturbed adaptation to climatic factors on the part of the cutaneous epidermis. There is no question of the ability of climatic environmental factors to influence epidermal function, and sunlight, temperature, and humidity are the most important in this regard. Hellier (1940) has shown, from a survey of figures from the department at Leeds over a ten-year period, that the incidence of psoriasis may be related to variation in sunlight hours. Samberger (1930) postulated an inherited epidermal dyscrasia and Van Kerckhoff (1930) a light deficiency aspect to psoriasis.

It is a little unnatural to regard the epidermis separately from the dermis or from the organism as a whole, but there is clearly some justification for doing so, and this might explain some of the independence in the behaviour of psoriasis which marks it off from so many other diseases of the skin and allows it to pursue its course often without interference with the general health of the patient.

We recognize that other influences have a specific action on the epidermis. This is true of the smallpox and the wart virus; of drugs, as arsenic and gold; of androgenic hormones at puberty and in A.C.T.H. therapy; and of vitamins, especially vitamin A. It is more than probable that mental factors can affect epidermal function, for there is a very intimate relationship between the epidermis and the central nervous system. If this conception is true it is of importance in treatment.

Psoriasis a Constitutional Disease

I wish now to leave this aspect of the aetiology of psoriasis and to turn to psoriasis as an expression of constitutional disturbance. It must be accepted—indeed, the evidence is overwhelming—that, whatever else may be significant, constitutional disturbances play a major part in the behaviour of psoriasis in many patients.

Inheritance

In the first place we may accept that there is a genetical component in the aetiology of psoriasis. Romanus (1945), in his careful statistical review of over 1,400 patients, 768 of whom were observed over thirty years, postulates a modified dominant inheritance. A positive family history in the region of 30% is usually recorded, and in my series is 33.9%, but for obvious reasons this figure is of little value. Relatives do not broadcast the fact that they have psoriasis, and most of us have converted a negative family history to a positive one by examining a relative accompanying the patient. Families are often restricted because of psoriasis, and we have all known parents who have developed the disease many years after the child.

Such family trees as those here illustrated, for which I am indebted to Dr. Sneddon, are common and significant, but much work remains to be done in this field, correlating the incidence in each generation with the incidence of

psoriasis in the population as a whole (Fig. 1). Four patients in my series of 1,346 had a twin, but in only one case was the twin affected. In eight pairs of dizygous twins Romanus had only one affected.

From his statistics Romanus gives an indication of the risk of psoriasis arising in his own series. The risk of a

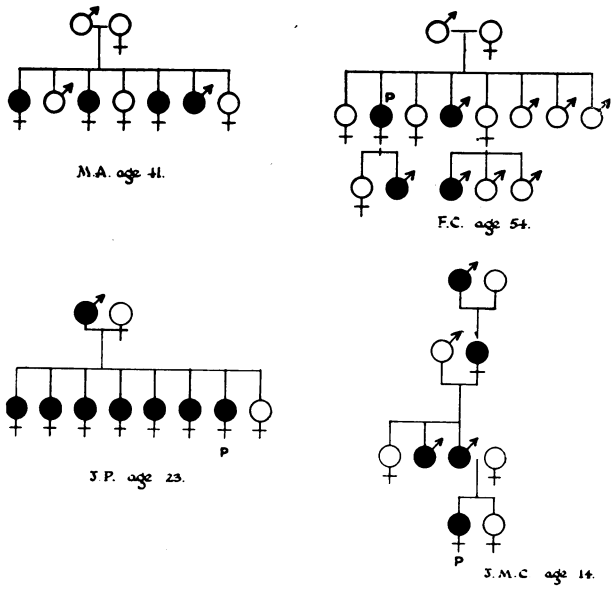

FIG. 1.—Family histories of psoriasis.

child developing psoriasis before the age of 30 if one parent had psoriasis was about 13% if the grandparents were free and 19% if one grandparent was affected. If the person with psoriasis already had a child suffering from the disease the risk of a subsequent child developing it was about 20%. If two persons not suffering from psoriasis had a child with psoriasis the risk of subsequent children contracting psoriasis was less than 1%.

Age of Onset—Hormonal Influence

Apart from heredity, the age of onset of psoriasis suggests that hormonal activity plays an important part.

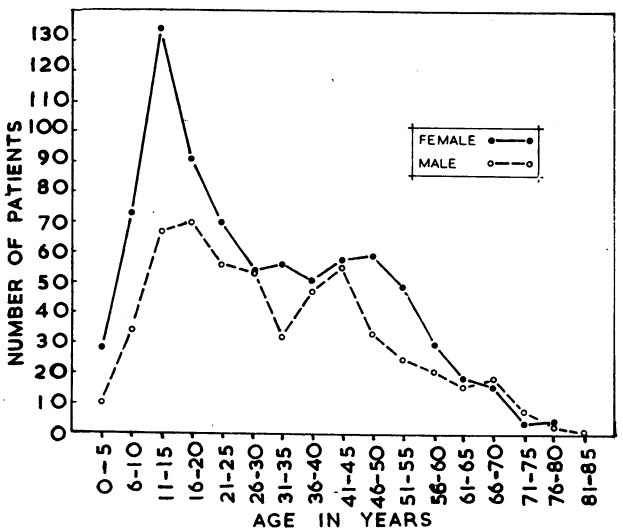

FIG. 2.—Onset of psoriasis.

There is a considerable peak both in males and in females during the pubertal years and another minor peak at the climacteric, after which there is a rapid decline (Fig. 2). Frequently the onset is with the menarche or the menopause, and there is no other obvious precipitating factor. The influence of pregnancy is pronounced, and generally it clears the eruption temporarily (Grüneberg, 1952). Petrini (1912) reported on a patient whose psoriasis cleared during each of her five pregnancies. The original onset of psoriasis may be after confinement, and it is common for psoriasis to be worse after confinement in those subject to the disease, but in some patients pregnancy will terminate a long history of psoriasis.

It is interesting to recall the emphasis placed on the amelioration of rheumatoid arthritis by pregnancy when cortisone and A.C.T.H. therapies were being developed. The same amelioration is common in psoriasis, but we can perhaps see it in better perspective in considering the skin disease. A.C.T.H. and cortisone are of very limited value in this disease. The climacteric peak is more marked in the male than in the female, and this may be related to the fact that the female is subject to regular excursions of hormonal activity throughout the active sexual life.

In 20 of my patients (1.5%) the onset of psoriasis was before the age of 5 years. In one patient it was at 8 months and in another at 9 months, only one of the two having a positive family history. In a very few patients the onset was after 70 years of age, in "the lean and slipper'd pantaloon."

Acute and Chronic Infections

Another precipitating factor may be acute infection, especially the infectious fevers and upper respiratory tract infections such as tonsillitis. It is more common in the young, and the pattern of the psoriasis is a widespread, often peripheral, guttate eruption appearing about ten days after the onset of the infection. It may well be that chronic infective foci maintain a chronic eruption, and this seems sometimes to be the case.

Emotional Stress

Perhaps the most potent influence, however, is the psychological, and much that is undoubtedly true has been written on this by Wittkower (1946) and others. A careful review of the social and psychological background of 80 of my patients in the last seven years has made this abundantly clear to me. It is equally certain, however, that no one type of personality or any single pattern of emotional conflict determines the psoriatic reaction.

Space does not permit the recital of numerous instances of emotional provocation of psoriasis in this series, but I may mention one woman whose psoriasis started from an injury to her thigh from a fall of cliff which at the same time killed her husband by her side.

The burden of psoriasis to society and to the patient who is the victim is obvious. Perhaps the most important aspect of this side of the problem is the attitude of the doctor. If psoriasis is effectively treated and cured soon after it appears it will make no more impression on the patient, his mind and skin, than will the exanthem of measles, and nothing can be more favourable to prognosis than that. Unfortunately there is a tendency sometimes to impress upon the patient the incurability and hopelessness of his disease. This is a grave misdemeanour and to be condemned.

One other important psychological aspect is the sense of shame which the patient and the public may entertain about psoriasis. It is important to dispel this and to let it be known that psoriasis is a common affection of which the patient should be no more ashamed than of acne or baldness.

Mixed Psoriatic and Eczematous Eruptions

Many other constitutional forces may play upon the tendency to psoriasis, but those mentioned are some of the more obvious. I wish now briefly to refer to the existence of other skin reactions occurring with psoriasis, sometimes independently, sometimes combined in the same lesion. These are particularly eczema of either the

catarrhal or the lichenoid pattern; pompholyx, especially of the persistent pustular type; seborrhoeic reactions, usually combining to give a flexural psoriatic eruption; and lichen planus. The knowledge that these combined reactions occur makes their recognition relatively easy, but without that knowledge errors in diagnosis are common. Most of these patterns occur in the later age groups at or after the climacteric, and they are almost invariably very resistant to treatment.

Ordinary catarrhal eczematization may coexist with the psoriasis, and is particularly seen in the sulcus behind each ear and in other flexures, particularly in women at the climacteric. In some patients separate lesions of psoriasis and of eczema may present at the same time or at different times. A number of my patients had eczema from infancy and psoriasis later; others had seborrhoeic eczema at one time and psoriasis at another. The most common change, however, is from lichen simplex at one time in life to psoriasis at another or vice versa, the same sites often being affected.

Lichenoid psoriasis usually affects the flexures and those sites involved in lichen simplex. Alcohol particularly seems to be a poison in these cases. A peculiarly intractable type of lichenoid psoriasis is that which affects the hand or foot like a glove or sock. I have seen good responses to A.C.T.H. and cortisone in such cases, though these measures are of very uncertain value in simple psoriasis.

So-called pustular psoriasis, which Barber and I described in 1930, is probably a mixed eczematous or pompholyx reaction with psoriasis, the catarrhal element converting the dry abscesses of Munro into flat lakes of sterile pus. It may be a temporary phase in ordinary psoriasis and may occur on any part of the body, though the palms and soles are the sites of election. The phase may be provoked by an acute illness or may accompany chronic sepsis. In many patients, however, there is no such cause, and many such eruptions appear to be constitutional in origin. In my experience septic foci are not present in more than 30%, and, in these, treatment of the sepsis, though it may be followed by temporary cure, is rarely a permanent solution of the problem. The condition may occur without ordinary psoriasis, and in my series of 109 cases of pustular psoriasis 33 were associated with or followed by ordinary psoriasis, and only these 33 have been included in my figures.

Pustular psoriasis sometimes alternates or is associated with that markedly scaling form of psoriasis called rupioid psoriasis. Both forms are seen in association with infection, including gonococcal and non-specific urethral infection and infection of the bowel. Holsti (1948) reported some 300 to 400 cases under the title of Reiter's disease in an epidemic of bacillary (Flexner) dysentery in Finland which affected a quarter of a million of the population.

I will mention, without elaboration, that other pustular reactions occur or sometimes alternate with the psoriasis, including vegetating lesions and impetiginous lesions of the rare impetigo herpetiformis type. Though not sterile and giving pyogenic cocci on culture, long observation of such cases and the response to treatment have made me regard them as being essentially mixed psoriatic reactions.

Seborrhoeic psoriasis, more common in females, is a mixed reaction of psoriasis and seborrhoeic dermatitis, largely flexural and often a climacteric affection. It is not as resistant to treatment as the other mixed reactions.

Finally, psoriasis may give place to generalized exfoliative dermatitis. Goeckerman and O'Leary (1932) give an incidence of 1 in 1,000 for this in 22,000 patients with psoriasis. My own figures are higher, 13 cases, or 1 in 100, having at some time shown a complete or almost complete generalized affection, sometimes of transient character, sometimes persistent and resistant, but usually recognizable as psoriasis. The difference in these figures is probably to be explained by the criteria adopted, for psoriasis may assume this phase without entirely covering the skin surface. I assume that in the Mayo Clinic figures involvement of the whole skin was accepted as the criterion.

Treatment of Psoriasis

The treatment and general management of psoriasis call for two distinct lines of approach.

First, on the constitutional side there is the assessment of the individual, the considerations of his health and constitution and of their adjustment to his environment. This I will not elaborate, but it is important and makes each problem of psoriasis an individual one, often demanding a short-term and a long-term policy. It is common to all constitutional disorders.

There remains the treatment of the psoriasis itself. I do not propose to dwell on all possible local treatments for psoriasis, but I would indicate briefly the features of one line of treatment which, with proper facilities, may be expected to clear the eruption of psoriasis in two to three weeks in all but a few patients. It is important that psoriatic patients should know that this can be done, and I feel that it is incumbent upon our medical services to provide this treatment for the large number of psoriatics in our midst, for the treatment cannot usually be conducted in the home.

I have discussed treatment in detail with illustrations in previous papers (Ingram, 1953). The following are the essentials.

The patient soaks for ten minutes in a warm bath containing liq. picis carb. 4 oz. to 20 gallons (114 ml. to 90 litres). After drying, he is exposed to ultra-violet light to produce the slightest erythematous reaction. Each lesion is then obscured with Lassar's paste containing dithranol, 2 gr. in 1 oz. (0.13 g. in 30 g.). The paste must be stiff and the melting-point of the paraffin base should be 46° C. The limbs and trunk are covered with stockinet and the patient assumes his clothes and normal routine until the following day, when the procedure is repeated. This is a stable preparation of dithranol—dioxyanthranol—the synthetic equivalent of the active principle of chrysarobin minus the methyl group. It is a powerful oxidizing agent which becomes active as soon as it comes into contact with the skin and literally burns off the psoriasis. Care must be taken to apply it exactly to the psoriasis and not to normal skin.

There are endless minor modifications of this regime which can be made to suit individual patients and patterns of eruption.

With widespread eruptions of small pattern a soft instead of a stiff paste is applied over the whole affected area and is not localized to lesions. The original dithranol paste is prepared with equal parts of soft paraffin for this purpose. This soft paste is relatively mild in its reaction, and it is used in flexures where reaction to the stiff paste would be fierce.

Paste cannot be applied to the scalp. Here a pomade of mercury and tar, or oil of cade or dithranol or any combination of these, may serve. They will not remain stable in the same application, however, and must be dispensed separately, otherwise the dithranol is rapidly reduced and rendered ineffective.

The treatment demands facilities which should be made available at all hospitals. Baths, lamps, and a competent staff are necessary. In the department at Leeds, which is a busy one with out-patient sessions every morning and afternoon of the working week, some 50 to 60 psoriasis patients are treated daily in addition to the out-patient routine.

For many patients an exposure to ultra-violet light after the daily bath as part of the toilet routine is a valuable and simple maintenance treatment reducing the tendency to recurrence. There are, of course, on the constitutional side many other possible requirements in regard to maintenance therapy, varying with each individual but important in prognosis.

Prognosis

It is clear from clinical experience, and it has been confirmed by statistics, that the prognosis in patients treated effectively within a year of the onset of the disease is very much better than in other patients. Romanus (1945) found that 20% of patients treated at the time of onset of the disease remained clear for twenty years or more, whereas no more than 8% remained clear for such period if treatment was delayed until twelve months after the onset of the psoriasis. I would urge treatment within a few weeks of the onset, and the whole eruption must be cleared. Malcolm Morris (1902) pointed out that "the best security against relapse is the completest possible removal of all remnants of the disease."

It might be expected that the onset of psoriasis in very early childhood was of bad prognostic significance, but this is not supported by evidence from my figures.

As to prognosis generally, some 10% to 25% (Romanus, 1945; Hallam, 1934) are found to clear for very long periods, if not for life. One of my patients who suffered from psoriasis at the age of 14 years was subsequently clear until the age of 70, when he had a second attack.

The majority of patients suffer recurrent attacks at variable intervals, sometimes of months, sometimes of years. A small minority are persistent chronic sufferers in spite of treatment. And these have not been significantly helped by A.C.T.H. or cortisone treatment.

I have mentioned certain mixed types of psoriasis that are particularly resistant. Psoriasis tends to be resistant also in the ginger-haired, the arthritic and gouty, and the alcoholic.

The chronic sufferers from psoriasis, whether they be recurrent or persistent sufferers, tend to improve after the climacteric. In the main psoriasis seems to be an affair of the active sexual hormonal phase of life.

Abandoned Theories

I have emphasized the two factors of epidermal adaptation and of constitutional disturbance in the aetiology of psoriasis and would choose not to confuse the issue by introducing other unlikely theories.

The concept of infection has long been abandoned, though from time to time suspicious cases are recorded. In four of my patients the partner was affected, two of them after marriage. One patient relapsed with psoriasis when his wife was two months pregnant with her second child, at which time she also developed psoriasis for the first time. Both recovered, but after five years the husband has recently suffered another attack, which cleared in ten days with treatment.

Destôt inoculated himself with a plaque of psoriasis and subsequently developed the disease in the usual sites but not at the site of inoculation (Destôt and Angequeur, 1889). He had four further attacks in the subsequent two years. There is also a report by Unna of the three charges of a psoriatic nursemaid contracting psoriasis. Some still adhere to the probability of a parasitic or infective cause, but it has been rejected by most authorities (Schamberg, 1909).

Gans (1952) has reviewed the evidence put forward to support a metabolic aetiology, that of Grütz and Bürger (1933) suggesting a disturbance of lipoid metabolism being the most popular. Gans finds no evidence to support these views, and that is the general consensus of opinion. This does not mean that further investigation along biomolecular or chemical lines may not indicate the part played by particular metabolites in the mechanism of the psoriatic reaction in the epidermis itself; and such knowledge might revolutionize the treatment, local or general, of this disease.

Gans stresses the lowered metabolism, increased acidity, and increase in oxidase in psoriatic patches, and this is interesting since our most effective local treatment involves the use of oxidizing agents.

Summary

As to the significance of psoriasis, I have suggested that for its proper understanding a different approach to its aetiology from that relating to most diseases and reactions is necessary, and have stressed the importance of climate and race.

As regards prognosis, I believe that some discovery relating to the mechanism of the reaction in the skin may well revolutionize treatment. Even so, I believe that, with the measures at present at our disposal, the life of the psoriatic patient could be largely transformed if facilities were made available for the proper use of those measures.

If there are any truths in the concept I have presented of the nature of psoriasis, a common skin disease, they must be truths which have an application in some important fields of general medicine. If there is any serious need for the pattern of medical treatment I have outlined for psoriasis, it is a pattern, you will agree, that is necessary in fields other than the dermatological.

I do indeed suggest that there is much important clinical research to be done into the place of climate and geographical location and of race in relation to disease which may throw light on some of our obscure problems. As on other occasions, the skin may be of service to general medicine in this regard.

We may hope that one day international relations will reach that Utopian phase when those afflicted by disease may seek their fortunes in climates which are judged to provide the most favourable environment.

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