A REVIEW OF THE HISTORY AND ETIOLOGY
OF THE
NEURODERMATOSIS
WITH THE RESULTS OF A
PSYCHIATRIC SURVEY OF A GROUP OF
UNSELECTED SKIN OUTPATIENTS.

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"We see only what we are ready to see. We eliminate and ignore anything that is not a part of our prejudices". (Charcot).

The concept and importance of psychological factors in many dermatoses is well established. Civilian and Army practice has given the clinical impression that psychological factors are the largest single cause of skin illness. There is little published evidence to support this impression; part of this thesis records work on the incidence of psychological factors in an unselected group of skin out-patients. A proportion of this group has been followed up with a view to assessing the prognosis in these cases.

Among the earliest positive references in the literature are those of Klauder (1925) and O'Donovan (1927); following these pioneers there were a number of papers in the next decade by Barber (1930), Sack (1933), Stokes (1935), Gillespie (1938), Klauber and Wittkower (1939), Ingram (1939), Becker and Obermayer (1940). During and since the recent war, there has been a spate of literature on various aspects of the subject. It is part of our purpose to assess and integrate some of this work. Reference to this subject is making only a tardy appearance in modern textbooks of dermatology, although indirect references to the effect of the mind on the skin can be found in medical treatises published over two hundred and fifty years ago.

Sydenham (1681), writing of the "Hysteric Diseases" says
"The disease is not more remarkable for its frequency than for the numerous forms under which it appears, resembling most of the distempers wherewith mankind are afflicted. For in whatever part of the body it be seated it immediately produces such symptoms as are peculiar thereto; so that unless the physician be a person of judgement and penetration, he will be mistaken, and suppose such symptoms to arise from some essential disease of this or that particular part and not from the hysteric passion". A few pages on he appears to describe angioneurotic oedema affecting one leg............."and moreover as the disease affects most of the internal parts so likewise it sometimes attacks the external parts, and muscular flesh, sometimes causing pain in the fauces, shoulders, hands, thighs, and legs, in which the swelling which distends the legs is most remarkable. For whereas in dropsical swellings these two particulars may always be observed namely (1) they increase towards night and 2) pit for sometime after being pressed with the finger; in this tumour the swelling is largest in the morning, and does not yield to the finger, or leave any mark behind it; and it generally only swells one of the legs."

Turner (1726) realises that emotional upset plays a part in the production of rosacea and cites a case.... "A gentlewoman sometimes afflicted with a Gutta Rosea sive Rubra, from a hot and bilious blood flushing in to her Face upon the least Surprise or Exercise of the Body, the Humours at length stagnating....... and raised several Pustules and hard Tubercles, very much disfiguring her Face but much more disturbing and
disquieting her Mind; Upon enquiring into her Circumstances, I understood she fell into this inconvenience soon after the Death of her Husband, Grief of Whom, and taking cold by sitting up at nights, she had contracted this valetudinary state, ever since labouring under stoppage of her menses, unto which I imputed this Motion of the Humours upwards, or translation of them to her Face''.

Artificially produced skin lesions are noted by Dunlop (1825). "Ulcers caused intentionally are easily distinguished from real ones since their borders are less painful; and by the use of luke warm water, and covering them with lint, they are readily healed. Frauds of this description are frequently attempted in hospital or to avoid the performance of labour of every kind..... in the York Hospital in 1812 to 1813, we had many cases of this kind from the Peninsula and were obliged to lock up the leg in a wooden box, prepared for this purpose, in order to secure ourselves against the patient tampering with the sore........".

Pateman (1829) is in agreement with modern views when he writes "Pompholyx Diutinus.....the disease chiefly affects persons of debilitated habits.... It seems to originate under different conditions of the body, but often after continued fatigue and anxiety with low diet...."

Hillier (1865) states categorically..... "The influence of temperament is observable on skin diseases. The lymphatic temperament is most prone to eczema and impetigo; the sanguine to psoriasis, the nervous to prurigo, lichen and urticaria; the
bilious to various discolorations as ephelis and lentigo.

Nervous excitement may induce urticaria; fright has been known to cause eczema, and anxiety has caused loss of colour of the hair.

Few present day observers would disagree with Thomas Hillier; similar comments may be found in some textbooks of today; there is, however, little advance on these general statements.

Morris (1898) devotes seven chapters to Affections of the Skin dependent on Nerve Disorders; many of the diseases he mentions are trophic disorders secondary to organic nervous disease although he states "Besides the various modes of influence of the nervous system upon which have been referred to, cutaneous lesions may be indirectly of nervous origin, when, owing to injury or to a condition of impaired nerve force, conveniently designated by the term 'neurasthenia', the innervation of the skin is defective and the parts are therefore more vulnerable than in the normal state.

On skin lesions in connection with hysteria and other neurotic conditions there is not much to be said at present. Among the forms of cutaneous affection which have been observed in connection with hysteria are erythema, urticaria, pemphigus, pigmentation, hyperidrosis, chromidrosis, haematidrosis. There is nothing characteristic in the lesions. One point of difficulty in the subject is to eliminate the elements of fraud or unconscious deception in such cases. Charcot has recorded several cases of what he calls 'hysterical oedema' which may
ulcerate and simulate cancer; under the name of 'unilateral swelling of hysterical hemiplegia' a similar condition has been described by Weir-Mitchell and Renault has described a 'gangrenous urticaria of purely neurotic origin'.

AETIOLOGY

The aetiology of these conditions can be discussed best under the headings of psychoneurogenous mechanisms and psychopathology.

The questions to be answered are why the variation in cutaneous change in patients suffering similar mental stress and with a similar psychological response to it, and what is the mechanism of disordered physiology which produces these changes.

In answering the former it is first necessary to enumerate the conditions designated as the neurodermatoses. Becker and Obermayer (1949) list the following conditions:

- Idiopathic pruritus, generalised and localised, (ani, vulvae and of the scalp)
- Neurotic excoriations
- Neurodermatitis (dry and exudative)
- Dyshidrosis
- Idiopathic chronic urticaria and angioneurotic oedema
- Alopecia areata, totalis and universalis
- Lichen planus
- Vitiligo
- Rosacea
- Burning tongue
- Acarophobia
- Dermatitis factitia

Other dermatoses which these workers mention as appearing to belong to this group include scleroderma, dermatitis herpetiformis, and, herpes gestationis; chronic recurrent erythema multiforme, stomatitis aphthosa and ulcus neuroticum mucosae. There is, as yet,
little evidence that this latter group can be included amongst the neurodermatoses.

Fundamentally, any given skin reaction of psychological origin is the result of hereditary and environmental factors. The former appears to be the more important, as on it are dependent the basic skin type and the basic psychological make-up of the subject. It has also been suggested that these subjects are endowed with an excess of protoplasmic unrest. Environmental changes influence the skin through chemical, physical, bacteriologic or psychological media with concomitant responses in both psychic and somatic spheres.

The importance of the genetic constitution must be stressed and is well brought out in a case of Barber's (1950) with severe generalised alopecia areata. In this case, alopecia followed a bombing incident. His mother developed it when he was nearly killed as a baby, her sister after the illness of her child, and her brother after an injury. In this instance, therefore, the same target organ, the hair papillae, reacted to emotional stress in four members of the same family.

**PSYCHO-NEUROGENOUS MECHANISMS**

There is ample scope for original work into this facet of the problem; the literature in the English language on the subject is scanty.

Brill (1926) was one of the earliest workers in this field. He noted that vagotonia was marked in eczema and neurodermatitis.

Cutaneous reaction induced by hypnosis has been studied by Diehl and Heinichen (1931) who produced urticarial wheels experi-
mentally. Sack's classical experiment of anaesthetising one finger and then suggesting under hypnosis itching of the other fingers is often quoted. The itching was felt as intensely in this finger as in the other unanaesthetised fingers. Sack believes also that "anti-dromic" impulses provide the mechanism which, by a co-ordination of the various systems, allows emotional impulses to be conducted directly to the skin and there set up redness, wheals, blisters, or necroses. The "various systems" mentioned comprise the vegetative nervous system, the endocrine system and the shifting of the electrolytes in the cells, as suggested by Kraus and Zondek. (cit. Goldsmith).

Koenigstein (1948) reported a basic and important study into the aetiology of pruritus. Alizarin blue, a dye which has a strong affinity for tissues and also acts as a pruriginous and cramp producing substance, was injected intracisternally into a cat, and immediately after a scratching response was observed, the cat was killed and the brain examined. From the deep blue staining of the lower part of the medulla, it was concluded that a scratching centre is located in this part of the brain; the implication of this is that pruritus of emotional origin may be analogous to emotional tachycardia, tachypnoea or vomiting when it is remembered that there are cardiac, respiratory and vomiting centres in the medulla.

Goldsmith (1936) points out that "the mind can realise plastically on the skin conceptions suggested to it from outside, but it can also similarly realise its own ideas, arising more or less consciously in the personality itself. These realisations
have symbolic character. The representation is, of course, imperfect, being limited by the physiological mechanism; it will require interpretation." It is relevant here to mention an essay by Russell Brain (1950) on "The Concept of the Schema in Neurology and Psychiatry"; he concludes by writing "...The schema is a neurophysiological disposition which may or may not enter consciousness, and which plays an essential part in perception and action, speech and thought. It is both physical and mental, and, when its neurological character is more fully understood, it may prove to be the bridge between body and mind".

Brunner (1948) elucidates with clarity the biologic basis of psychosomatic skin disease. He writes that in response to certain stimuli, massive response of the autonomic nervous system occurs designed for the total mobilization of the body's resources for some particular goal. These responses are complex processes with manifestations in the psychic, autonomic and somatic spheres. He cites a stimulus such as fear producing on the autonomic nervous system a series of physiologic changes e.g.increase in cardiac rate and blood pressure and concomitant psychic changes such as desire for flight leading to somatic activity which completes the somatic response, in this case, flight. These signs of autonomic stimulation are transient, disappearing when effective somatic activity has taken place. For example, rage wanes when the infuriating cause has been appropriately dealt with; sexual excitement disappears with consummation of the sex act. He makes the point that when the normal somatic response is inhibited or
when the proper response cannot be selected because of conflicting stimuli, the physiologic "set" tends to persist for longer periods. Following repeated frustration of satisfaction of such basic instinctual drives, chronic disorganization of vegetative functions may result. In this persistent over-activity of the autonomic nervous system lies the physiologic basis for certain disorders various organ systems including the skin.

It is here appropriate to quote some of Brunner's paper at length as he summarises the fundamentally important psychophysio-logic mechanisms underlying psychosomatic skin disease.

1. Manifestations of autonomic nervous system stimulation constitute an integral part of emotional reactions. Under this heading belong such well known phenomena as pallor, changes in temperature of the skin and change in activity of sweat and sebaceous glands. Activation of this effector mechanism in each case depends on the transmission of impulses from diencephalic centres via cholinergic and adrenergic fibres of the autonomic nervous system with liberation of acetylcholine and sympathin respectively, at the nerve endings, exactly as in the case with response to changes in temperature, exercise and the like, in which emotions are not concerned. When somatic expression of the emotion is inhibited by one of several mechanisms, the autonomic hyperactivity continues and may become intensified.

2. With greatly prolonged, frequently recurring or intense autonomic response (e.g. the situation in the neurotic person or the normal person under stress) "functional" changes may pass over into the "organic". For example, the local asphyxia in the person with Raynaud's disease may terminate in gangrene and ulceration if emotionally caused stimulation of adrenergic fibres causing vaso-constriction is adequate to produce the requisite degree of anoxia. Emotional stimulation of parasympathetic fibres to cutaneous capillaries may cause vaso-dilatation and increased permeability through acetylcholine liberation and resultant whealing (emotional urticaria). Purpura may result if the increase in permeability is such as to allow formed elements of the blood to pass through (hysterical stigmas). Pointing to the role of acetylcholine in the production of dyshidrosis is the
report of Goldman. This author cites Tilbury Fox's original description of dyshidrosis. In all the severe cases, patients have been the subject of great nervous debility, and in some cases have been under the care of physicians for various anomalous nervous diseases - odd muscular affections. Some have been prostrated by mental anxiety or worry. They always perspire too freely, are speedily exhausted and are often dyspeptic. Goldman was able to reproduce the eruption in a group of psychoneurotic persons subject to this disease by injections of a cholinergic drug acetyl-beta-methylcholine. Functional changes may transfer into the organic by a different mechanism as for example when prolonged hyperidrosis produces maceration of the plantar skin.

3. A plausible physiologic basis exists for the well known clinical observation that emotional stimuli may lower the threshold for allergic cutaneous reactions. Acetylcholine liberated at the terminals of cholinergic nerves (as a part of the autonomic changes in emotion) may have a synergistic effect with histamine produced by the local union of antigen and antibody resulting in a clinical allergic reaction when the histamine alone would have been inadequate.

Deutsch and Nadell have shown that electrophoresis of acetyl-beta methyl-choline into the skin may increase the whealing response to histamine while adrenergic drugs tend to diminish the reaction. Rothman and Coon reported studies suggesting that liberation of acetylcholine plays a part in the production of the triple response of the skin to stimulation. Acetylcholine was demonstrated in the tissue fluid obtained from histamine wheals and from pathologic cutaneous lesions of neurodermatitis lesions in individual cases."

Brunner concludes by writing ...."It must be admitted that not all 'functional' cutaneous diseases are generated by disorders of autonomic function. For example, self induced eruptions, whether consciously or subconsciously produced represent somatic behaviour disturbances rather than autonomic reactions, although these somatic responses have the same causative background of frustration of basic drives".....

PSYCHOPATHOLOGY

Hodgson (1945) contrasted two clinical groups of psychosomatic skin disease - frictional and spontaneous - and submitted the view that, in individuals with neurocirculatory
instability, friction leads to excoriation, eczematization and lichenification according to the basic skin of the integument involved. He classified the basic skin types as being normal, ichthyotic, seborrheic and eczematous. In his view, examples of spontaneous diseases are; acute exudative neurodermatitis and acute erythema (in normal types of skin) exacerbations of eczematous changes (in ichthyotic skin); exacerbations of the respective conditions (in seborrheic and eczematous persons).

An attempt at co-ordinating skin conditions and personality types has been made by MacKenna (1944). He suggested that dermatitis artefacta is associated with an hysterical personality and that patients with neurodermatitis, seborrheic dermatitis, prurigo simplex and pruritus ani et vulvae are mainly obsessionals; those with rosacea, pompholyx, hyperidrosis, acne, excorée des jeunes filles often suffer from anxiety state. Narcissistic individuals are prone to exudative dermatoses, and skin infestations are common in persons of low intelligence. In any case, the reaction of individuals to their skin affections, whatever the etiology of these maladies may be, is bound to be influenced by the person's make-up.

Having reviewed the psychoneurogenous mechanisms and psychopathology of the neurodermatoses, the more common conditions comprising this group will be discussed further.

THE NEURODERMATOSES

IDIOPATHIC PRURITUS

The experimental production of pruritus by Sack in the
anaesthetised finger of a hypnotised subject has already been described.

The same observer also points out that if one lies with eyes shut in a state of maximum physical relaxation and directs attention to one's own normal skin, certain localised sensations of tension are noticed which he interprets as a projection of the tension of concentration. Then there develop quite fine isolated punctiform sensations like very weak electrical stimuli. These are clearly signs from the receptors which have been stimulated by some internal or external cause. It is well known also that the sight of a patient suffering from pediculosis or scabies can cause itching in a suggestible subject. That itching and scratching may be an escape mechanism, is remarked by O'Donovan (1950). Hall-Smith (1945) made a similar observation in Service personnel.

Functional pruritus can be divided into generalised or localised forms, the latter including pruritus ani and pruritus vulvae and pruritus of the scalp.

Generalised functional pruritus is usually seen in patients over the age of 50.

The following history provides an example:

CASE 87 T.C. Aged 61.
For four months before coming to hospital, he had suffered intense generalised pruritus, first starting in his face, and then spreading to his limbs and trunk. On examination, he exhibited some scattered excoriations of the trunk, but otherwise clinical and pathological examination was negative. There was no evidence of scabies or pediculosis. Antipruritic lotions and antihistaminics were without effect. The psychiatrist reported "here we have what I may call the skin-reaction. prone personality; conscientious, always on time, cautious, likes routine,
hates quarrels, likes neatness etc.; present job 26 years, quiet domestic interests but recent stress affecting amount propre. For the past year his daughter has wanted to marry a man of whom he strongly disapproves. The pressure has increased in the past three months and a week ago the patient gave in. He feels happier now he has made up his mind. In addition he has been working very long hours and this has lately ceased.

I think that the psychopathology here is adequate for his symptoms and now that he has taken his decision, his symptoms will probably subside".

The opinion of the psychiatrist was correct; his symptoms disappeared within two weeks of his psychiatric interview and there had been no recurrence when followed up six months later.

Pruritus ani and pruritus vulvae (including pruritus of scrotum) are frequently erogenous. Peterkin (1947) and Jeffcoate (1949) discuss the varied aetiology of this group of diseases and both mention psychogenic causes. In Jeffcoate's group of 254 consecutive cases of pruritus vulvae, 18 were thought to be of psychogenic origin.

An acute itching attack has great resemblance to the sexual orgasm, and repressed desires are released through the medium of scratching. When the normal instinctual development of the human being is considered with regard to sex, Freud has pointed out that the individual first attains satisfaction in himself - the auto-erotic stage. In this stage, satisfaction giving a pleasurable feeling to sexual feeling is attainable by stimulation of any part of the body surface, but especially of certain erogenous zones e.g. the anus. This stimulation of the zone of the anus is in some individuals associated with a pleasurable feeling and may persist in adult life as "anal erotism". Sometimes pruritus ani and pruritus vulvae (or scroti) are associated, and may serve as a
substitute for unsatisfactory or absent coitus; in other cases it may be used as a defence mechanism with the underlying purpose of avoiding sexual intercourse.

The following cases illustrate the syndrome described:-

**Case 108 H.B. 35.** A married woman complained of intense pruritus vulvae commencing soon after her marriage six years previously. She had one child born a year after marriage and she was strenuously opposed to any further pregnancy. She gave a history of neurotic traits in childhood and possessed a shallow histrionic personality. Her make-up was immature. She looked upon sexual intercourse as a dirty habit, had never enjoyed it and regarded it as "unclean". On examination, the labia were markedly lichenified - there were no other physical findings. She was of low intelligence and little improvement followed local treatment and psychotherapy.

**Case 157 R.McD.** Aged 34. A single woman in a secretarial job; symptoms of intense pruritus ani for four years, worse in the evenings, better during the day whilst at work; difficulty in getting off to sleep.

Family history - one brother suffered from neurasthenia and was treated as a psychiatric outpatient. One sister suffered from generalized pruritus. Over-strict father. Youngest of nine children. Some nervous traits in childhood. Pruritus originally attributed to nervous stress of bombing. Three years ago had a boy friend of whom father disapproved so patient left home. Six months ago, boy friend went off and married another woman and since then irritation has been much worse. She lives a very lonely life on her own in a flat; few friends or interests and admits that she is very shy and retiring. Improvement followed symptomatic treatment and attendance at group therapy clinic.

O'Donovan (1927) states "all of them described their symptoms in picturesque detail, and they are anxious upon any and every occasion to exhibit their excoriated anal region to any doctor who shows the slightest inclination to tarry for the examination. I have often noticed these patients take their place before the doctor, undo their belt or braces, turn round quickly, and present their legions to be seen before the doctor has had the opportunity to enquire
15.

whether they have improved from the last period of treatment. When the paroxysm of itching stops, these patients say (and this can be verified) that the local skin becomes very moist, which indicates that there is a local instability of vaso-motor tone, and a nervous excitement of the local sweat glands."

Personal experience agrees with these conclusions in regard to the exhibitionistic tendencies of some of these patients, particularly male patients with pruritus ani or pruritus of the scrotum if a nurse or group of medical students should be in attendance.

Pruritus capitis In this condition, too, organic and functional causes must be considered. O'Donovan (1927) included this condition amongst the neurodermatoses and more recently it has been described by Brown (1948).

The physical signs may be minimal, take the form of scaliness of varying degree, or scattered haemorrhagic excoriations; it is often present in those whose hair is sparse.

Case 32 E.A. aged 46.

Three years ago developed itching of scalp.

On examination, haemorrhagic scratch marks of scalp and mild dermatophytosis of toes. Otherwise healthy. He was the youngest of three children and describes sister as very nervy. His mother died when he was five and he was brought up by a couple of strict grandparents and an alcoholic father. He was an extremely timid, shy and nervous child and rows terrified him. At school, he was miserable, scared of teachers, other boys and games and never asserted himself for fear of being laughed at.

He has had a quiet, irresponsible job as a salesman with a builder's merchant for 27 years and has lived
most of the time with an adoring sister. During the war, he was in the Army for five years and hated it. It was all so rough and uncouth and he missed his comfortable home. This was when his skin trouble began. On release, he returned to his sister but began to feel he wasn't wanted there by her husband. When the opportunity occurred, therefore, to get married three years ago, he took it. His wife has turned out to be a hysterectomised chronic neurotic whose illness enables her to dominate him. He is a virtual slave and, in addition to his own job, he does all the cooking and housework. He poured out complaints about his wife for twenty minutes. He has also her dominating mother to cope with.

He is a pernickety, extremely timid man, who likes the minimum of variety and has many hypochondriacal notions. He is hard-working, conscientious, very methodical and is clearly under great stress at home.

Neurotic excoriations from the etiological viewpoint can be regarded as a corollary of pruritus, though in other cases, it may be a form of aggression, the patient turning his aggressive impulses inwards upon himself. Acarophobia may be looked upon as a senile variant of this condition, while acne excoriée des jeunes filles is self-explanatory.

**NEURODERMATITIS**

Brocq was the first to use this term; with Jacquet he described the lichen simplex chronicus of Vidal as "neurodermite chronique circonscrite" or "neurodermite diffuse à forme objective de lichenification pure".

They thought the appearance of the eruption was due to the skin of these patients reacting in this special way to scratching. Brocq thought that itching was the underlying change. He also included under neurodermatitis Hebra's prurigo and the multiform eczematolichenoid eruption called by Bernier "prurigo diathésique".

Becker (1949) divides the eruption into two types - dry
and exudative. In the opinion of the writer, this is a convenient and satisfactory classification in the state of our present knowledge of the aetiology of this condition.

**DRY NEURODERMATITIS**

The dry type of neurodermatitis may be localised or generalised; the term "lichen simplex chronicus" as used by Vidal is useful in describing the localised form though Brocq's term "nevrodermite" is more concise.

**NEVRODERMITE**

This condition is characterised by circumscribed lichenified plaques most commonly seen on the nape of the neck (often termed suboccipital dermatitis and by Twiston Davies "napex"), the inner surface of the thighs, extensor surface of the forearms, just below the elbows, and the knees though almost any part of the body surface may manifest such a patch. A form of localised neurodermatitis which may not be recognised as such is seen in the patient with hyperkeratotic fissured palms and soles, distinct from keratoderma climactericum and accompanied sometimes by manifestations of neurodermatitis elsewhere on the body surface.

These lesions may be looked upon as an external manifestation of chronic emotional tension. Emotional tension and frustrated aggression initiate the itching which occurs in paroxysms and is intense. This results in a conditioned scratch reflex, the skin changes being secondary to the rubbing and scratching.

Suboccipital dermatitis is an eruption occurring mainly in
women and belonging to the localised neurodermatitis group; it is discussed well by Lynch (1949). He writes that when the condition is compared with other examples of neurodermatitis, the most evident variation is the increased incidence of association with abnormal menstruation. The nature of the abnormality cannot be stated with certainty but it appears to be associated with a diminution in oestrogenic activity. Watts (1947) in discussing the psychopathology of the localized neurodermatosis states that many cases of pruritus ani and irritation of the perineum are due to displacement from before backwards, and are met with in bachelors, homosexuals, cases of functional impotence and unsatisfied women. He cites the following case:

"Mrs G., aged 40 was a widow with a patch of eczema at the back of her head. She was a vivacious mother of two children, divorced from her ex-teacher, ex-parson husband because of his penchant for old women with wealth and penniless nurse-maids. After her divorce, she lived impulsively on her energies as a shopkeeper with the financial help of her brother in Australia. By the time he died, and his help ceased, she had learned to live on her charm. She also retained a conscience but the two never functioned concurrently. During a more prolonged attack of the latter than usual, she deified her conscience and managed to be admitted to the Roman Catholic church. Then suddenly, it dawned on her that she could never marry again. The church satisfied her conscience, a married Canadian was satisfying her instinct, but neither would recognise the other. When I met her, she had just
managed to relieve herself of an early pregnancy. When asked how she squared the circle, she naively replied that she just put it at the back of her head."

**DRY DISSEMINATED NEURODERMATITIS**

Under this heading are included the terms "atopic dermatitis" and the asthma-eczema-prurigo complex (Rost). The sites of predilection are the flexures of the elbows and knees, the nape and sides of the neck and face and the eye-lids. The intense irritation and resulting scratching produces marked lichenification of the sites - if the lesions are not protected and the patients' nails are long, deep excoriations are produced and secondary infection may result; if during this state, strong medicaments are applied, a sensitization dermatitis may result.

The disease often begins in infancy, the eruption characteristically affecting the cheeks, the cubital and popliteal fossae and, in some instances, it is widely generalized; at this age, the disease is best known as "infantile eczema". Atopic or allergic diseases such as hay fever and asthma often accompany this condition and there is frequently a family history of allergy.

**EXUDATIVE NEURODERMATITIS**

The two most common manifestations of this condition are pompholyx or dyshidrosis, and what is commonly known as "nummular eczema".

It is only on the palm and soles where the skin is thick and resists rupture that vesicles occur in this condition;
elsewhere the serum does not collect in sufficient amounts to form vesicles as in a sensitization or contact dermatitis.

The characteristic sites of the pompholyx type of eruption are the sides of the fingers, the palms, the sides of the feet and soles.

Nummular eczema appears as varying sized moist or crusted patches on the skin of the dorsal surface of the arms, hands, legs and elsewhere. The cheeks may be extensively involved, but the eyelids are spared, an important distinguishing point from a contact dermatitis. Other points in the differentiation of this condition from a contact dermatitis are the absence of erythema, oedema and vesiculation and its occurrence on surfaces not exposed to irritant substances.

Becker also includes in the exudative neurodermatitis group otitis externa. He believes the infective elements are secondary invaders. This view is probably correct as ear-picking, like nose-picking is a common nervous habit or tic, and infection may be conveyed from the anterior nares. In some cases, the underlying seborrhoeic soil may be the predominant factor.

The aetiology of both the dry and exudative types have much in common. The writer is in agreement with Becker and Obermayer who have shewn that exudative neurodermatitis (Kreibich) is associated with signs and symptoms of allergy (or atopy) in a still higher percentage than is found in the dry type. It would seem therefore that the exudative variety could be called atopic dermatitis with greater justification. The mechanism of production of exudative neurodermatitis may be due to irritation of
the sensory nerve endings. Kreibich believed that eczematous reactions were produced in this way. If this is so, its dependence on psychogenic factors is apparent.

Becker (1932) and Stokes (1935) have developed a theory which offers a possible neurogenic basis for the disease. They postulate a basic state of increased or unstable capillary permeability in patients with neurodermatitis. Nervous instability and exhaustion are common findings in these patients and they consider functional pruritus as a cutaneous fatigue phenomenon.

Stokes (1940) was the first to suggest that the scratch habit is a physical mechanism for the release of emotional and nervous tension and that pruritus occurring in erogenous zones might be looked upon as a psychosexual neurosis. In some persons, notably the obsessional type, it may be that the scratching process is initiated by a desire to do something rather than be still in the face of mental difficulties, such hyperkinesia being part of their make-up. Eventually this frictional process becomes a habit and is continued during sleep.

A different approach to the aetiology of chronic disseminated neurodermatitis has been made by MacCardle, Engman and Engman (1941, 1942, and 1943). These workers found that chronic disseminated neurodermatitis was characterised by localised cutaneous magnesium deficiency. By specialised spectrographic analysis, they examined 83 biopsy specimens of skin from patients with chronic disseminated neurodermatitis. There was a decided
reduction of magnesium in every specimen from an active neurodermatitic lesion. These findings were confirmed on the same specimen by micro-incineration. The serum magnesium of these patients was well within normal limits as was the serum calcium. There was also a lack of phosphorous in active neurodermatitis but this deficiency is found in other active skin diseases. In localised neurodermatitis, the magnesium content was well within normal limits. Magnesium was also decreased in unaffected areas of skin examined in patients with chronic disseminated neurodermatitis. MacCardle and the Engmans believe that hyperpigmented, magnesium deficient, unaffected skin of the chronic disseminated neurodermatitis subject forms a lesion by reason of physico-chemical changes in the cytoplasmic proteins of the epidermal cells which prevents the retention of biologically essential amounts of calcium and silicon.

Lesions similar to those of neurodermatitis have been induced experimentally in rats fed on magnesium low diets. Pompholyx or dyshidrosis may be classified aetiologically with exudative neurodermatitis. A similar picture is produced in some cases of ringworm of the feet with a secondary allergic eruption of the hands. Becker, (1942) postulates that an irritant is released at the nerve endings which would produce vesicles in anyone's skin since the patients never show positive patch tests.

**IDIOPATHIC CHRONIC URTICARIA AND ANGIONEUROTIC OEDEMA**

Urticaria of probable emotional origin has been described by
Turner (1726) and Hebra (1866). This type of urticaria is also provoked by heat, exercise and alcohol. The work of Grant, Pearson and Comeau (1936) and later Hopkins, Kesten and Hazel (1935), produces evidence that this type of urticaria is due to the release of acetylcholine at the nerve endings.

Grant and his co-workers thought that acetylcholine acted by releasing a H-substance in the skin and this produced urticaria indirectly. Nomland, (1944), who described cases of pruritus unassociated with urticaria doubted whether urticaria was due to the release of the H-substance. Sigel (1948) reports on 22 American soldiers with urticaria caused by heat, exertion and excitement - Sulzberger and Beer (1949) commenting on this, state that cholinergic urticaria, in their opinion, is the only one in which attacks have been shown to be precipitated by emotional factors and they agree with Sigel that the lesions appear to be clinically and essentially different from those of ordinary urticaria. The lesions are pinhead sized wheals and papules, not large oedematous wheals with pseudopods as seen in ordinary urticaria. There is itching and burning, not just itching, as in ordinary urticaria. They also mention three other distinctive features. If there is a flare, it is bright red and its size is large and out of proportion to the size of the wheal; wheels and flares undergo involution much more rapidly, and no angioneurotic swellings are associated with the wheals. Our clinical impression is that ordinary urticaria with large wheals can be caused by emotional upset, though we have seen no case of angioneurotic oedema caused by psychological upset.
ALOPECIA AREATA, TOTALIS, UNIVERSALIS and VITILIGO

That alopecia areata, totalis and universalis may result from emotional shock is well known though the mechanism is obscure. O'Donovan (1927) devotes a chapter of his book, "Dermatological Neuroses", to the subject and cites numerous case histories in support of his thesis.

Much experimental work to determine its relationship to the vegetative nervous system has been performed. Joseph and Mibelli cut the posterior branch of the second cervical nerve of a cat, distal to the ganglion, and recorded the development of alopecia over the area of distribution. Wright (1929) repeated the experiments both in animals and man but failed to affect hair growth.

Roxburgh (1929), investigating the aetiology of alopecia areata and its relationship to vitiligo and sclerodermia got results that suggested that the tone of vessels responsible for skin colour, namely the subpapillary venous plexus, and also that of the arterioles responsible for the flare, is somewhat less well-maintained in the bald areas than in the normal. The various responses were noted after stroking, histamine and pricking-on of adrenaline. Levy-Frankel, Guillaume, and Juster (1925) have noted the vaso-constriction and diminution of the capillary loops supplying the bald patch; they also found the same phenomenon in vitiligo.

Goldsmith (1936) points out that the hair papillae do not depend on the capillary loops in the papillae of the rete or even on the subpapillary venous plexus. Brown (1939) discusses the possible relationship of alopecia to vitiligo and mentioned that both disturbances occasionally occur together and at the same time
in the same patients, also that both conditions may have a unilateral segmental distribution suggesting a nerve origin in both.

More recent work in support of the trophoneurotic theory is that of Haxthausen (1947.) In five cases of morphea, and four of each of vitiligo and acrodermatitis atrophicans, 2 sq. cm. Thiersch graphs were interchanged between normal and pathologic skin sites. Results were similar in all instances: the pathologic graft lost its abnormal character, whereas the normal graft took on the characteristic of the abnormal skin site into which it was transplanted. In no case did the transformation proceed from the margin of the graft but appeared simultaneously in all portions. Haxthausen argues on the basis of these results that the diseases could not have been due to a particular characteristic of the skin itself or to other factors with an entirely local affect, such as an infectious process. The transformation of the pathologic graft into normal skin showed that the aetiological factor no longer exerted its effect when the graft was placed in an area of normal skin, thus the assumption that the diseases develop under regional "trophic" influences mediated by the central nervous system seems to be confirmed.

**LICHEN PLANUS**

Many workers believe that this eruption may be initiated in some cases by mental disturbance particularly long continued worry in an anxiety-prone patient. Becker and Obermayer suggest that the nervous and infectious aetiological theories are by no
means mutually exclusive; it is possible that nervous influences
might activate a latent virus infection.

**Case 143 R.K. Aged 40.**

A loquacious, hypochondriacal and querulous woman. Multiple
symptoms including headache and dyspareunia. For five years
recurrent attacks of urticaria; over the same period repeated
investigations for sterility. Then developed generalised attack
of lichen planus with severe irritation; during the six months
whilst the lichen planus was manifest the urticaria cleared;
within two months of the lichen planus lesions fading the urtic-
aria had returned. Her relationship with her husband was most
unsatisfactory; it seemed that her skin troubles were used to
protect her from him sexually.

**ROSACEA**

The changes wrought in the skin by vaso-motor instability
are well exemplified by rosacea. Ingram (1933) emphasises this
point and mentions the "waxing and waning" as a measure of the
patient's mental and emotional unrest. Klaber suggests that
rosacea begins as a recurrent flush or blush which leads to
chronic capillary dilatation and the papulo-pustular eruption.
The seborrhoeic type of skin affected may influence the character
of the eruption.

The flushing may be the result of gastric disorder, or
alternately, the blush of guilt or shame. Wittkower (1939)
found 36 out of 50 cases of rosacea had high degree of social
anxiety long preceding the onset of the eruption. He draws
a comparison with seborrhoeic patients who show a like social
anxiety. Shorvon in a communication at a joint psychiatric-
dermatological meeting at the Royal Society of Medicine (April
1950) stressed the importance of guilt associated with sexual
problems and stated that the patient could be benefitted by
psychoanalysis; he supported his argument by a number of
histories and photographs of his cases before and after psychoanalytic treatment.

Case 71 F.E. Aged 36.

Rosacea and vasomotor instability for past 15 months; reactive depression. Obsessional personality and above average intelligence. Conscientious objector.

His wife, who was eleven years older and menopausal had suffered from a prolapsed uterus for the past eighteen months; intercourse, therefore, very infrequent - had relapsed into masturbation with much guilt. Aware of "struggle within himself"

PSYCHIATRIC SURVEY OF UNSELECTED SKIN OUTPATIENTS

An investigation, in conjunction with a psychiatric colleague, was made of a random sample of patients attending a hospital outpatient department for skin diseases.

Purpose of Investigation.

1. To determine what proportion of skin illnesses may be said to depend on psychic factors.

2. To obtain a picture of the psychic constitution of these patients.

3. To determine whether any particular kind of person seems likely to develop any particular skin complaint.

4. To assess the prognosis of those patients whose skin troubles were thought to be initiated or maintained by psychic factors.

Method

Interviewing a consecutive series of new outpatients would have proved wasteful of the patients' time, and was rejected in favour of referring the first, sixth, eleventh and sixteenth patient seen each day to the psychiatrist who was taking part in this investigation. By this means, waiting was reduced to a
minimum. If one of these patients had been interviewed already, the next patient was referred in his place.

Though a random sample of those attending the department might be obtained by this means, such a group would not be expected to be a fair cross-section of all those suffering from skin complaints. Selection must have occurred previously at least at two points; the patient selects himself to visit his doctor, and his doctor selects him to come to hospital, and it seems probable that psychiatric factors might have been prominent in such selection.

Interview technique

The interview lasted 1-1 hour. This is probably not long enough to obtain all the relevant facts and attitudes but there was a practical limit to the length of the interview. Klaber and Wittkower (1939) were able to spend 2-3 hours with their rosacea patients and their controls who were all inpatients. Several times the patient was actually walking to the door at the end of the interview before he let slip significant information.

Little resistance was encountered from the patients to psychiatric investigation. A surprisingly large proportion, after the purpose of the investigation had been explained to them, volunteered the information that they thought their skin trouble was related to nervous factors. Unfortunately, it was some time before the prevalence of this attitude was appreciated, but probably well over half were aware of the significance of nervous factors in their skin diseases.
RELATIONSHIP OF PSYCHIATRIC FACTORS TO SKIN DISEASES.

A total of 147 patients were psychiatrically assessed; 100 men and 47 women. The results could be grouped under the following three headings:

Group A. Patients with an abnormal personality and with a history of recent emotional stress.

Group B. Patients with abnormal personalities but who denied any recent stress of an emotional kind preceding the outbreak of skin disease or its recurrence.

Group C. Patients with sound personalities and with no history of stress; also those where the stress was of minor severity and there was no particular reason to connect it with the development of skin lesions.

The results in the three groups were as follows:

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acne nuchae.</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Acne vulgaris</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Alopecia areata</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Alopecia presenile</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alopecia totalis</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Boils</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Cheiropompholyx</td>
<td>10</td>
<td>2</td>
<td>-</td>
<td>12</td>
</tr>
</tbody>
</table>

A detailed analysis of the results is shown in Table 1.

(continued on next page)
<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermatitis infective</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dermatitis seborrhoecic</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Dermatitis-sensitization</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Dermatitis varicose</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Dermatophytosis</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Erythema multiforme</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Erythema stocking</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Folliculitis - legs</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Herpes simplex</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Keratosis senile</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lichen planus</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neurodermatitis - dry. nevrodermite, disseminated neurodermatitis etc.</td>
<td>10</td>
<td>6</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Neurodermatitis-exudative</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Otitis externa</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pruritus ani</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pruritus generalized</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pruritus legs</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Rodent Ulcer</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rosacea</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Scabies</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sycosis barbae</td>
<td>4</td>
<td>4</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Urticaria</td>
<td>1</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<p>| Total                             | 51      | 28      | 21      | 100         |</p>
<table>
<thead>
<tr>
<th>Women</th>
<th>Diagnosis</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acne vulgaris</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Alopecia areata</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Alopecia diffuse</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Cheiropomphlyx</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Dermatitis contact</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Dermatitis seborrhoeic</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Dermatitis sensitization</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Lichen planus</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Naevus</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Neurodermatitis dry</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Neurodermatitis exudative</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Pityriasis rosea</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Pruritus ani</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Pruritus vulvae</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Psoriasis</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Paronychia</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Tinea Ungium</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Toxic erythema</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Urticaria</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Warts</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Xanthoma</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>20</strong></td>
<td><strong>16</strong></td>
<td><strong>11</strong></td>
<td><strong>47</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>42.5%</td>
<td>34%</td>
<td>23.5%</td>
<td>100%</td>
</tr>
</tbody>
</table>
32. **Psychiatric Diagnosis**

Of the total patients seen, no less than 90 might well have consulted their doctors for psychiatric symptoms which were causing them some trouble. This figure is made up of 57 men and 33 women.

The diagnoses would have been:

**Men.** Anxiety state 42; Reactive depression 3; Hysteria 9; Hypochondriasis 1; Dull and backward 2.

**Women.** Anxiety state 18; Reactive depression 4; Hysteria 5; Hypochondriasis 2; Dull and backward 2.

**Possibilities of Psychiatric Treatment.**

21 men and 12 women did not seem in need of psychiatric investigation and treatment.

38 men and 17 women presented psychiatric problems but owing to their life-long abnormality, the condition would have had to be regarded as probably unalterable and attempts at treatment as likely to be nugatory.

41 men and 18 women presented psychiatric problems and might have benefitted from attempts at therapy or manipulation of their environment.

It is seen that the figures for males and females bear a close similarity in the relationship of psychiatric factors to skin diseases as shown in groups A, B and C, in the psychiatric diagnosis, and in the possibilities of psychiatric treatment.

An additional group of women are under investigation but it does not seem that the final results will show any marked difference.
The 100 male patients of the series were further analysed.

Age. The age distribution of the male patients is shown in Table II.

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of Skin Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 15</td>
<td>1</td>
</tr>
<tr>
<td>15-19</td>
<td>3</td>
</tr>
<tr>
<td>20-24</td>
<td>14</td>
</tr>
<tr>
<td>25-29</td>
<td>11</td>
</tr>
<tr>
<td>30-34</td>
<td>12</td>
</tr>
<tr>
<td>35-39</td>
<td>13</td>
</tr>
<tr>
<td>40-44</td>
<td>7</td>
</tr>
<tr>
<td>45-49</td>
<td>12</td>
</tr>
<tr>
<td>50-54</td>
<td>9</td>
</tr>
<tr>
<td>55-59</td>
<td>7</td>
</tr>
<tr>
<td>60 and over</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Marital status

75 of these patients were married or had been married; 25 were single. Grove and Ogbourn (1928) gave the figure of 27.2% for the percentage of single males of the population. This is derived, however, from the American census of 1910.

Religion

78 patients were nominally Church of England by faith but of these only 4 were regular churchgoers and 5 others attended occasionally; 15 were Jewish but six of these had given up all
religious observance. The figure of 15% of Jews compares with the figure of 11% derived from 350 general medical inpatients in the London Hospital. 4 Patients were Roman Catholic, 3 were Non-conformist. Of the whole 100 patients only 8 were seriously interested, orthodox and regular in their attendance.

Duration of Treatment at this Hospital.

<table>
<thead>
<tr>
<th>Duration of Treatment here.</th>
<th>Number of Patients.</th>
</tr>
</thead>
<tbody>
<tr>
<td>First attendance</td>
<td>15</td>
</tr>
<tr>
<td>Under 1 month</td>
<td>20</td>
</tr>
<tr>
<td>1 - 3 months</td>
<td>22</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>16</td>
</tr>
<tr>
<td>6 months - 1 year</td>
<td>8</td>
</tr>
<tr>
<td>1 - 2 years</td>
<td>8</td>
</tr>
<tr>
<td>2 - 5 years</td>
<td>6</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>5</td>
</tr>
</tbody>
</table>

TABLE IV

<table>
<thead>
<tr>
<th>Duration of Symptoms</th>
<th>No. of Patients</th>
<th>No. in whom present symptoms are a recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 1 month</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>1 - 3 months</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>3 months - 6 months</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>6 months - 1 year</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>1 year - 2 years</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>2 years - 5 years</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>5 years-10 years</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>10 years-20 years</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>More than 20 years</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
The chronicity of symptoms bears out the reputation of skin diseases. It was sometimes difficult to decide whether the present symptoms represented a recurrence or an exacerbation. Table IV shows that 69 either had had their symptoms for more than a year or had had an attack previously.

Estimates of an abnormal family history are notoriously unreliable, being at the mercy of the patients' memory and the observers' prejudices. However, 17 of these patients gave a positive history of chronic skin disease in first degree relatives, and a further 4 gave a less definite history. Of Wittkower's (1947) series of 100 cases of seborrhoeic dermatitis, 17 gave a positive family history of neurosis in first degree relatives and a further 15 less definite information.

Position in family

6 were only children, 20 were eldest, 20 were youngest, 2 were twins. In such a small series, any handicapping of a particular position in family would hardly be expected to show up.

Size of family

The mean size of family was 5.25 children per family. This is, of course, a high figure by present day standards, but when allowance is made for the large numbers of people aged 45 or more in the series, it is probably not unduly high.

Early Environmental Stress - Early loss of a Parent.

a) 11 patients lost their father before they were 14 and 9 lost
their mother before this age; 3 had lost both parents before they were 14, so 20% lost one or both parents early in life. Comparable figures are scanty but in a series of 500 psychiatric outpatients, 88 (17.6%) had lost one or both parents before the age of 14. Of a series of 364 non-psychiatric hospital inpatients, 53 (14.6%) had suffered a similar loss. $\chi^2$ is 1.75 and the difference in this respect between the skin patients and the controls might have occurred by chance in 15 cases in every hundred so that one can attach little importance to the apparently high figure of 20%.

b) Other factors.

7 patients remembered severe parental quarrelling during their childhood and a further four had parents who separated when the patients were quite young; one patient was the product of parents who later divorced and one other was reared in an institution; 5 remembered their father as being alcoholic and 4 more called him cruel. 15 regarded their parents as over strict, 28 thought that owing to poverty, they had suffered deprivation of essentials in childhood and 9 suffered in childhood from overcrowding.

These bald figures in themselves mean little. They seem consistent, however, with figures derived from neurotic populations by Sutherland (1941), Ballard and Miller (1944) and Slater (1943).

An assessment of the degree of adverse early environment allowing for all these factors yielded the figures in Table VI where they are compared with similar figures derived from a study of 500 R.A.F. psychiatric patients, Norton (1947).
Early Environment.

<table>
<thead>
<tr>
<th></th>
<th>100 Skin patients</th>
<th>500 R.A.F. psychiatric patients %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very adverse</td>
<td>15</td>
<td>13.4</td>
</tr>
<tr>
<td>Adverse</td>
<td>14</td>
<td>14.0</td>
</tr>
<tr>
<td>Mildly adverse</td>
<td>25</td>
<td>29.6</td>
</tr>
<tr>
<td>No stress</td>
<td>46</td>
<td>43.0</td>
</tr>
</tbody>
</table>

The agreement between the two series is clear. No figures are available for control populations, however, and in view of the high figure found for early loss of a parent, one should be cautious in attaching much significance to them. It may be that figures of the same order would be found to be characteristic of the general population.

**Childhood Neurotic Traits.**

Sutherland (1941), Hadfield (1942), Ballard and Miller (1944), Hyland and Richardson (1942), and Norton (1947) all agree that only about 20% of their neurotic populations were free of neurotic traits in childhood – despite the inevitably loose and individual definitions employed. Among the 100 skin patients, 42 seemed free of these traits. Shyness, self-consciousness and blushing, however, were very common (32) and so was nail-biting (13). Klaber and Wittkower (1939) found 66% of their rosacea patients but only 34% of their controls subject to blushing. Wittkower (1947), amongst a 100 patients suffering from seborrhoic dermatitis, found 23% had been nail-biters. 19 of these 100 skin patients had suffered from morbid fears in childhood, 6 had been stammerers and 5 had frequently walked in their sleep.
We may conclude that the incidence of neurotic traits in childhood among the skin patients is high but less high than among psychiatric patients.

**Intelligence**

A very rough estimate of intelligence, a notoriously unreliable "general impression", gave no reason for believing these skin patients to be in general of particularly low or particularly high intelligence.

**Work Record**

This was, in general, extremely good. 57 had been in one job for at least 10 years, of whom 18 had been in one job for 30 years or more. Only 12 had an unstable work record. For neurotic populations the percentage with unstable work records is much higher: Ballard and Miller (1944) 29%; Sutherland (1941) 27%; Hadfield (1942) 39%; Torrie (1944) 26%; Guttman and Thomas (1946) 36%. The discrepancy can be accounted for in part by the higher average age of the skin patient.

70 patients enjoyed their occupation; 5 found it too responsible, 3 not responsible enough, 8 were restless and 11 felt they were not in the right job.

**Social Relationships.**

These were wholly satisfactory in only 48; a large and significant group of 44 patients were shy and quiet and had few interests outside their homes; only 5 were solitary by nature and 3 solved their difficulties by habitual abuse of alcohol.
Sexual Adjustment.

68 of the 75 married patients were happily married or were widowers who had been happy. 2 were evasive in discussing this subject, one was divorced, one separated, and three were unhappy owing to quarrelling. Of the 25 single patients, 2 were aged 14 and 16 and the subject was not broached; 10 seemed well-adjusted; 2 were timid and mother-fixated; 5 were timid and anxiety-ridden; 5 denied any interest in the subject.

Previous illness.

a) Neurosis. 66 denied previous nervous symptoms entirely; 28 had had neurotic symptoms previously but not of sufficient severity to keep them from work; 6 had had a previous neurotic illness necessitating absence from work. Amongst various groups of neurotic patients, those without previous symptoms have usually been given as 20-40%, those with mild symptoms as 30-40%, those with a previous breakdown as 20-40%.

b) Psychosomatic illness. 10 patients had suffered psychosomatic illness previously; 3 with asthma, 6 with gastric or duodenal ulcer.

c) Physical illness. 23 had suffered serious physical illnesses previously but in only 10 cases did it seem likely that this physical illness had any relation to the patients' nervous or skin symptoms.

War Service.

The War service record of the 100 patients is shown in Table VIII.
TABLE VIII

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too old to serve</td>
<td>8</td>
</tr>
<tr>
<td>Served in 1914-18 War.</td>
<td>16</td>
</tr>
<tr>
<td>Satisfactory service in 1939-45 War.</td>
<td>30</td>
</tr>
<tr>
<td>Unsatisfactory - hated it</td>
<td>4</td>
</tr>
<tr>
<td>Invalided for psychiatric disability.</td>
<td>4</td>
</tr>
<tr>
<td>Invalided for physical disability.</td>
<td>4</td>
</tr>
<tr>
<td>Served in Mines</td>
<td>1</td>
</tr>
<tr>
<td>Reserved job</td>
<td>18</td>
</tr>
<tr>
<td>Rejected for service</td>
<td>10</td>
</tr>
<tr>
<td>Too young to serve</td>
<td>5</td>
</tr>
</tbody>
</table>

Recent Stress - a very large number of patients had been under physical and particularly emotional stress, and in many cases, it was difficult to escape the conclusion that this stress was casually related to the outbreak of skin trouble or to the exacerbation of a previously existing skin complaint.

TABLE VII Recent Stress.

<table>
<thead>
<tr>
<th>Type of Stress</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>25</td>
</tr>
<tr>
<td>Very slight</td>
<td>14</td>
</tr>
<tr>
<td>Slight</td>
<td>19</td>
</tr>
<tr>
<td>Moderate</td>
<td>25</td>
</tr>
<tr>
<td>Severe</td>
<td>17</td>
</tr>
</tbody>
</table>

The type of stress is shown in Table IX

(see over)
## TABLE IX: Types of Stress

| Stress created by patients' personality. | 22. |
| Domestic emotional stress.               | 18. |
| Emotional shock.                         | 11. |
| Wife's illness.                          | 4. |
| Poor housing conditions etc.,            | 7. |
| Occupational stress.                    | 22 |
| Overwork                                 | 6. |
| Money worries                            | 6. |
| Physical appearance                     | 4. |
| Physical disease and injury              | 10.|
| Compensation factors.                   | 4. |
| Others.                                  | 9. |

**Personality Disorders** - it is a matter of considerable difficulty to estimate personality types not only because people are all individual and unique but also because there is much disagreement over the meaning of the various adjectives employed.

As a group, these patients had surprisingly abnormal personalities. Only 11 had healthy, normal personalities; 34 showed mild abnormalities and as many as 55 had grossly abnormal personalities.

The adjective "obsessional" is here employed in its less restricted sense to imply overconscientiousness, orderliness, a liking for a routine existence, a seeking for completeness, a preference for peace and quiet, cautiousness and so on.
It does not here imply a subjective feeling of compulsion and the necessity to check and re-check, though many of the patients had these feelings, nor a preoccupation with particular words, phrases or numbers. 4 patients had obsessional traits in severe degree; 41 had them in a somewhat lesser degree.

6 patients were highly anxious individuals - they were grossly prone to worry unduly about the little things, to fear the worst. 31 additional patients were mild worriers.

Often these two traits were combined. No less than 70 showed either or both traits in significant degree.

Other traits were much less common:

- Hysterical - 7; Schizoid - 3; Paranoid - sensitive - 6;
- Hypomanic - 1; Depressive 2; Hypochondriacal - 3;
- Aggressive - impulsive 4; Immature - 3; Psychopathic - inadequate - 10.

Wittkower (1947) in a group of 100 seborrhoeic dermatitis patients found ultraconscientiousness and proneness to anxiety to be characteristic of 2/3rds of them, a figure very similar to 70% of this group of skin patients who showed these traits. Of his controls only 24% were overconscientious and 26% worried unduly.

The general impression given by these patients, as compared with a group of psychiatric patients, was that obsessional traits and a worrying disposition were far commoner among them but that other traits, those which gave rise to social and occupational handicapping, were far less common.
PSYCHIATRIC CHARACTERISTICS OF VARIOUS DIAGNOSTIC GROUPS

The work of Becker and Obermeyer has been discussed and the conditions designated by them as comprising the neurodermatoses listed. The concept of neurocirculatory instability which they employ in discussing the psychopathology of the neurodermatoses is, however, open to criticism. They regard the condition as "evidently inherited" in all instances and as manifested by a "hyperactive, hypersensitive nervous system which may eventually produce sufficient exhaustion to result in functional disease". They stress the importance of nervous exhaustion and the word "conflict" is hardly ever encountered. It is as though the development of psychiatry had ceased with Janet, and that Freud and even McDougall had never existed.

The most striking omission from Becker and Obermeyer's list is that of seborrhoeic dermatitis; another condition which figures prominently in our series amongst those conditions included in Table 1 under group A and group B (that is, patients with abnormal personality and history of recent emotional stress, or patients with an abnormal personality but without apparent stress) is sycosis barbae. Certain specific conditions in these two groups will be further discussed.

Seborrhoeic Dermatitis.

Of 13 cases in this series including both male and female patients, 10 were of anxious and obsessional make-up, one was hypochondriacal, and one man and one woman were of sound personality - in the case of the man, sensitization factors were playing a part in the continuation of his symptoms and the
woman, though stable emotionally, had suffered stress due to a road accident involving her child. 6 had frank anxiety symptoms and 5 had neurotic traits dating from childhood. A wide variety of stresses seem to be operating, including financial insecurity and unhappiness at work, sexual guilt and worry over health other than the skin trouble. Of the four where stress factors were not operative, two had grossly abnormal personalities.

These figures seem to confirm the conclusions of Wittkower (1947) about the psychic constitution of these patients though it was not apparent that, as he states, the skin condition was especially related to difficulties in social contacts.

During the recent war, seborrhoeic dermatitis was the commonest dermatological cause of hospital admission and prolonged hospitalization among service personnel; many cases failed to respond to treatment and presented a widespread exudative and infective eruption persisting for many weeks. It was recognized gradually that these cases were a liability to the Services and they were consequently invalided out of the Forces or home from overseas. Many of these patients, within a few days of learning of their intended release, showed a most remarkable improvement of their skin; if, however, a Medical Board decided they were fit for further service, an exacerbation inevitably followed. These Service patients, in general, suffered from anxiety state; the precipitating factor in many cases was infidelity on the part of the wife or some other pressing domestic worry.
Case 38. G.S. Aged 42.
This man volunteered the statement that he thought his exacerbations of skin trouble were due to worries, and said that ever since he got married his wife had had bouts of ill humour, in which she would not talk to him, sometimes for weeks on end. The last time was just before Christmas which coincided with the present attack. He dates his skin trouble from 1930, the year in which he was married.
He was a highly conscientious, punctual, neat, cautious, and friendly man who hated to be on bad terms with anyone. He knew nothing about his father and his mother died the year he was born. He had a strict and not very happy upbringing at the hands of an aunt.

Case 34. H.W. Aged 38
This man was a lifelong worrier. He worried about everything, his work, his children, his responsibilities; he was over-conscientious, cautious, neat, and over-punctual. His worries kept him awake.
He was invalided from the Army on account of his skin.
He had had precipitancy and frequency of micturition for years for which no organic basis can be found.
There was, apparently, no special source of recent stress.

Sycosis Barbae
8 cases are included in the series; the psychiatric findings were striking and of all the groups, it seemed to consist of the most abnormal people.

One was a dull hysterical with skin symptoms on and off for 25 years; one, an anxious hypochondriac, who had fussed over his bowels all his life and his skin for ten years; one, a grossly inadequate psychopath, a chronic alcoholic; one, an anxious obsessional working long hours and carrying heavy responsibility; one, an immature, mother-bound and narcissistic youth, plagued by severe guilt over masturbation; one had been invalided from the Army because the "pace was too hot"; one had pronounced feelings of inferiority, social anxiety, multiple neurotic traits, and continued to attend the psychiatric department for therapy; the last, a Jewish patient, was out of work, in severe financial difficulties and with marked feelings of
guilt because of debt.

Case 75. W.B. Aged 35.
Over-conscientious and a sufferer from pronounced inferiority feeling. He was able to rationalize his failure to get on socially by means of his rash, that is, people didn't like the look of him. At the age of 16, he had to take on responsibility for the family on his father's death. He gave a history of neurotic traits from childhood. He talked much about the unhappiness of his married life.

Case 74. G.W. Aged 22
An only child, fussed over and spoiled when small. Minor neurotic traits in childhood. Seven years ago attacks of blinking which lasted a few months.
Now immature, still adolescent, mother-bound and narcissistic. He found his job boring and wanted to launch out into commercial photography of which he knew nothing. He craved variety and his main spare time occupation was playing in a dance band.
He was not over-conscientious, cautious or obsessional, but was prone to anxiety and guilt over masturbation. He felt, for example, that his rash might be the wages of sin.

Neurodermatitis
This group in its various forms provided the largest number of cases. Only one case was considered to be of normal personality.

The cases seen of the dry type included three cases where the lesions mainly affected the flexures, 3 cases of dry disseminated neurodermatitis, 1 case of prurigo mitis, 1 case of asthma-eczema-prurigo complex and 1 of neurotic excoriations; the remaining 10 cases of the dry form were cases of lichen simplex chronicus, the majority having more than one lesion on the arms or legs or other parts of the body surface. The exudative cases involved the backs of the hands and arms, or feet and legs, and in one case the eruption became generalised necessitating hospital admission.

The large majority of cases were anxious obsessionals, 17 cases falling into this group. 3 were grossly inadequate and immature, 3 hysterical and one schizoid. 2 were dull and prone
to anxiety symptoms, 1 was normal, 2 of the hysterical cases, and 2 of the inadequates, belonged to the exudative type but in such a small series, this cannot be significant.

In 3 cases, compensation factors were of importance and 4 had serious financial worries; 4 were under emotional stress at home. 4 were worried about their work, 2 had severe guilt feelings with a sexual and moral basis. The remainder, though of abnormal personality, appeared to be under no particular stress.

Case 47. W.C. Aged 62.
Nevrodermite dorsa of hands. An exceptionally rigid, set, and punctilious patient – a Plymouth Brother. "If a thing is worth doing ..... etc..... Full of pride and self-esteem.

14 years ago was involved in a driving accident after having an accident free record for 30 years. The circumstances were such that a slur was cast upon his ability and truthfulness. He was, in fact, vindicated, but in Court before the hearing, he developed a violent trembling of his right arm and this has persisted ever since. He has also a duodenal ulcer.

Now working as a packing clerk and is often irritated by other peoples' carelessness and has difficulty in controlling his aggression. "I take a Great Pride in my Work". His history also included poverty in childhood, strict religious upbringing and his liking for a quiet routine life. He had little regular schooling as he was reared in the country and had laboured for years in night school to improve himself.

Apart from constant pin-pricks at work from the other "careless" workmates, there was no immediate precipitating factor.

Case 45. H.G. Aged 54.
Dry disseminated neurodermatitis. Excellent record; Sergeant in Army 1912-1919, foreman for nine years, happily married 34 years, never out of work. Obsessional make-up, over-conscientious, and full of his ability as a workman. He would rather not go to work than turn up late.

However, there were compensation factors which seemed to be prolonging his illness; there were also money difficulties due to giving up his skilled job on account of "dermatitis" – he attributed the latter to dirt at work and to "dirt getting into his system". He was receiving compensation through the N.H.S and was hoping for a lump sum settlement.
Case 131. K.G. Aged 27.

Exudative neurodermatitis. Dorsa of hands and forearms. Rejected by her parents and regarded as the black sheep of the family. Temperamental, tantrums and nail-biting in childhood; ran away from home at 16. Invalided from W.A.A.F. after 18 months for psychoneurosis.

Much stress and frustration since in her efforts to train as a nurse and to become State Registered. Incompatibility with a succession of ward sisters. Had rejected boy friend in favour of nursing career - conflict over this. Since skin has been bad, her headaches of many years duration have been better. Skin exacerbation coincided with onset of her period of night duty which she heartily disliked; further flare-up three days before her final exam which she wished to postpone.

Cheiropompholyx

Of 17 cases with this diagnosis, 12 were of anxious or obsessional make-up; 2 were impulsive, aggressive, psychopathic persons, 6 had neurotic traits during childhood and 4 had minor traits of nervousness. 7 had been under severe and 3, mild stress preceding the outbreak.


An obsessional personality, always exceptionally neat and tidy, cautious and prone to worry. Much stress in childhood and an over-strict upbringing. Present job for 30 years, but it is very responsible and he "takes it home with him". 3 years ago, he was disappointed over promotion and the man who supplanted him still works with him. He has a feeling of grievance over this. He exhibited frank anxiety symptoms - insomnia, tremor and over-smoking. 2 years after being first seen, he was still under outpatient treatment.

Case 20. F.D. Aged 28

This patient three years ago had a similar attack which he and others believed was due to cement. He received compensation and was away from work for a year. He thought his present job as a builder's labourer unsuitable and wanted another type of job.

His father was a worrier and suffered from asthma. He had some phobias as a child and a phobia for heights persisted with consequent stress in his present job. He was one standard retarded at school and had always been timid. He was rejected for service and does not know why. His backwardness seemed insufficient to account for this. His work record is poor and he has been many times out of work - he was anxious and somewhat obsessional.

General impression - a timid, dull, inadequate man with predisposition to neurosis.
Alopecia Areata

Of 8 cases, 5 showed anxious obsessional traits; 1 was immature; 1 was hysterical; 1 was an inadequate psychopath and 4 were youngest children. 3 had lost a parent early in life; 6 gave histories of emotional stress preceding the attack.

Case 5 S.L. Aged 28

This man had a previous neurotic breakdown in the Navy under stress in Burma in 1944-45. He went sick with palpitations, insomnia, amnesia, and crying attacks, which only really cleared up when the war ended.

He had mild neurotic traits in childhood and later played professional football. Two years ago, a favourite uncle died and 21 months ago his father had a stroke; six months ago he lost his job and the alopecia began soon afterwards. He is having trouble now with one of his bosses in his new job and worries on this account tend to keep him awake.

Stress in a poor personality appeared to be the predominating factor in the aetiology in this case of alopecia.

Case 7. S.C. Aged 37

This man sat throughout the interview in a fixed attitude, answering precisely and most seriously. He was highly obsessional, cautious, conscientious, over-punctual, unable to relax and prone to easy guilt. He called smoking an "unclean habit" - he is also a Plymouth Brother.

He has had one job all his life and leads an extremely neat, quiet and ordered existence.

His second child died in May 1946 from Rh incompatibility and his third in August 1948 from the same cause despite all precautions.

The alopecia came on during his wife's last pregnancy. He felt personal guilt and responsibility over these deaths. He believed that he was told it was his fault but this was probably a misinterpretation.

The dependence of this patient's alopecia, at least in part, upon emotional factors, seems obvious.

Psoriasis

Of 7 cases, 5 were anxious or obsessional and 1 was an inadequate psychopath. 3 of these patients came of broken homes, and a 4th had a vicious tempered father and suffered much poverty in childhood; though 4 admitted nervous traits in childhood, all denied neurotic symptoms in later life.
had noticed that emotional stress produced an exacerbation of the skin disease.

Wittkower (1948) states that psoriasis is not bound to any one personality type, either physically or mentally. Our small series does not permit of any firm conclusion on this point, though, as in other groups, there was a predominance of anxious or obsessional personalities; however, it is possibly a natural reaction for a person to be anxious and mildly obsessed by a chronic recurrent disease.

Barber (1950) includes psoriasis under Selye's "diseases of adaptation" i.e. morbid reactions that result from the exposure of an organism to stress; emotional disturbances are recognized as being as important a cause of stress as infection, trauma, fatigue, or metabolic upset which can also act as precipitants.

Case 70 F.B. Aged 57
His illness began in 1917 after a period of prolonged trench warfare. It has continued ever since but he has noticed that it gets much worse at periods of stress and strain e.g. at his first wife's death in 1923. Lately, he has had much worry over his right eye. He was examined by an ophthalmic specialist but not told the result of the examination. He was informed that no treatment was proposed but did not know whether it was because the condition was trivial or because it was serious, progressive and untreatable. This worry has coincided with an exacerbation of his rash.

This patient was loquacious, dramatic, superstitious and pompous, prone to worry and highly suggestible.

His early life was stressful - an ill-tempered father and severe poverty affecting his education; he described himself as a nervous child.
Acne Vulgaris

This small series of 9 cases formed a comparatively stable group; only three cases could be classed as having an abnormal personality, and deviation from the normal was not marked. One youth had an anxious personality and was under minor stress at home, one girl was chronically anxious and hypochondriacal, and another girl gave a history of childhood neuroticism and was over-worried by the fact that she blushed easily. There appeared little connection between psychic factors and the skin eruption in this group.

It is difficult to assess the importance of emotional factors in this condition, as acne occurs during an unstable emotional period of life, and the lesions in themselves cause much mental trauma and distress; more so than in most skin diseases the problem resolves itself into the question of the "cart and the horse".

Urticaria

Of 6 cases, 3 men and three women, 2 of the men had a sound personality; 1 man and 1 woman could definitely relate their attacks to emotional stress; this woman and one other woman were hysterics. The other female patient was a lifelong neurotic with migraine which had ceased when the attacks of urticaria started, and a history of a stressful childhood on account of a quarrelsome, alcoholic father; the male patient, already mentioned, whose attacks were related to stress also gave a history of a drunken father who deserted the family when the patient was 16; his attacks had started when he was serving overseas.

"I think it is my nerves. It comes on whenever I am upset."

(continued)
History of being a very nervous child and was away a lot from school on this account. Gets easily strung up; "I go all hysterical". Lives in top flat of mother's house and mother loses patience with her. Married four years and has one child. Scared of having more children which is her major worry. Contraceptive technique and sex life very unsatisfactory.

PROGNOSIS

A follow-up was attempted of those patients included in Group A and Group B of Table 1 (patients with an abnormal personality and history of emotional stress, or patients with an abnormal personality without recent stress); 76 men and 36 women are included in these two groups. All the patients had been seen, for the first time, at least 12 months previous to the follow-up. A letter was sent to all those patients who were not still attending asking them to report if possible on a skin outpatient day, or if they were not able to attend, to fill up an enclosed card marking the appropriate panel with a cross against one of four questions. The four questions put were:–

1) Condition clear.

2) Condition improved or mildly recurrent.

3) Condition unchanged or severely recurrent.

4) Receiving treatment elsewhere.

70 patients were successfully followed. Of these, 22 were still regularly attending the outpatient department, and 19 attended personally for assessment.

The diagnosis of those followed up in their respective categories is shown in Table X; a column is also given to those still attending, the condition in these cases being unchanged or improved but still requiring treatment. Those
receiving treatment elsewhere, 2 cases, have been grouped
with the "still attending".

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Clear.</th>
<th>Improved or mildly recurrent.</th>
<th>Unchanged or severely recurrent.</th>
<th>Still attending.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acne vulgaris</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Alopecia areata</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cheiropompholyx</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dermatitis seborrhoeic</td>
<td>7</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Dermatitis sensitization</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Erythema multiforme</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Folliculitis</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lichen planus</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Neurodermatitis - dry</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Neurodermatitis - exudative</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Pruritus vulvae</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Rosacea</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Stocking erythema</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Sycosis barbae</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Tinea Ungium</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Urticaria</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total                   | 23     | 15                            | 10                               | 22               |
An interesting feature of the Table is the high proportion of replies received from the seborrheic dermatitis group. 9 of 11 seborrheic cases which had been discharged and were now clear took the trouble to reply, a pointer to their over-conscientious and obsessional personalities. 12 out of 17 cases of cheiropompholyx also replied but 5 of these returned on account of mild recurrences and wanted further treatment. The response of the cases of neuro-dermatitis was, in comparison, poor - only 9 out of 20 replied, 7 others of this group being still in attendance. 13 of the 19 who attended in person at the outpatient department were those who were unchanged or had recurrences and wished further treatment. Four out of 9 cases of exudative neurodermatitis were still attending and in a further two the condition was unchanged. 2 cases of exudative neurodermatitis and 2 cases of sensitization dermatitis had a severe relapse within a few days of receiving the follow-up letter. 3 cases of cheiropompholyx gave a like story of recurrence after receipt of the letter but as this condition is so apt to recur no significance can be attached to this point. The fact that only 21 out of 112 skin outpatients with abnormal personalities were still attending after one year of first having been seen is striking, and at variance with the personal clinical impression that these patients attended indefinitely; 10 cases with only mild recurrences who attended personally expressed grave disappointment at not being permitted to sign on again for "observation", and others would have needed no encouragement to have recommenced as regular outpatients.
It does seem that in a proportion of these patients the skin lesion provides an excuse for attendance at hospital, a convivial morning with fellow sufferers during the long wait (it is rare indeed to see a long term outpatient with a newspaper or book), and an opportunity for verbal catharsis with the specialist; O'Donovan uses the term "logorrhoea" to describe the verbosity of many such patients. They require a prop additional to that of the general practitioner to help them through life; many of them have developed a well-adjusted symbiosis to their skin complaint and are not really concerned about it; summary discharge of these patients leads to their inevitable re-attendance.

**DISCUSSION**

If the findings of this study are reliable, there seems to be a high degree of association between various skin diseases and vulnerable personalities particularly if these people are under stress. That this should be so in cases of neurodermatitis is well known; the association in cases of cheiropompholyx, alopecia areata, psoriasis, and in view of Wittkower's work, of seborrhoeic dermatitis, is recognised. Despite the small numbers concerned, there seems to be a close association too with psychic factors in all the cases of sycosis barbae and in 51% of a group of 39 cases in which the skin condition did not arouse prima facie suspicion of psychogenesis. This is surprising. It is of interest also that psychic factors seemed to be operating in 7 of 13 cases of sensitization dermatitis. Robertson (1947) was of a similar opinion and had the impression that the skin of his cases might well have broken down had no sensitizing factor been applied.
The particular types of personality deviation which have been so frequently found are the anxious and the over-conscientious obsessional and these two trends commonly co-existed in the same individual. These traits were far commoner in the people represented here than they are in the general population, commoner even, perhaps, than in a group of psychiatric patients. They were found amongst patients with all types of skin illness, and there is little support from the evidence found here for the views of McKenna (1944) on the relationship between the particular skin complaints and particular types of personality. Anxious traits, for example, seem just as often to be associated with seborrhoeic dermatitis as with pompholyx. Separation of the anxious from the obsessional personalities seemed artificial for they were both found together so frequently. Similarly, Wittkower's (1948) concept of a "site of focal conflict" seems to involve an unjustifiable emphasis on one aspect of the patient's problems and obliviousness to other aspects, and over simplification which may be misleading. Amongst the 13 cases of seborrhoeic dermatitis, for example, conflicts concerning self-esteem were common, but so were they too amongst those suffering from neurodermatitis, and equally, other fields of conflict could not be ignored without presenting an incomplete picture.

As to the mechanism of the connection between the psychic constitution and the skin complaint, one can only speculate. It can hardly be that the skin complaint "causes" the psychiatric abnormality for the roots of the latter can usually be traced to a period before the skin condition arose, though by its
unsightliness the skin disease may well create additional difficulties for the patient. A genetic linkage between psyche and skin seems very likely and has been stressed, but clear evidence of this, derived, for example, from twin studies, is as yet lacking. If it does exist, it is most likely to take the form of a predisposition to each type of disorder which may be made manifest by external or internal stress. Granted this predisposition, can psychic factors provoke skin disorder? There can be little doubt of the answer. Again and again these patients, of their own accord, were aware of the close significance of emotional factors in provoking and prolonging their skin complaints. It is known too that both the skin and nervous system arise from the primitive ectoderm but the significance of this is speculative.

What of the interesting group of abnormal people who were suffering from apparently unrelated skin disorders? Why were abnormal personalities and emotional stresses so frequent in this group? It is difficult to escape the conclusion that these were the survivors of a much larger group of patients originally suffering from such skin conditions, of whom perhaps 10-20% would be psychiatrically abnormal; such a figure is often asserted to be a rough estimate of the psychiatrically abnormal in the general population and therefore of the psychiatrically abnormal amongst the "unconnected" skin population. These people will generally begin by treating themselves but the obsessional and anxious among them may itch and scratch more and in so doing prolong their illness; the complaint may seem more serious to them or more unsightly or more unclean, so that a
higher proportion of the psychoneurotic than of the stable decides to seek the advice of a doctor -- perhaps by then 30-40% of these patients consist of psychoneurotic people. The doctor treats them and will only refer his failures to hospitals, and these are again likely to be those who itch and scratch most, those to whom the illness seems unclean and who worry about it, those who are querulous and demanding. It may be that by these two processes of selection the percentage of abnormal personalities in the "unconnected" group rises to 51% (the total percentage of abnormal personalities in the series being 76.7, i.e. those included in groups A and B of Table 1).

If such an explanation is accepted, other questions at once arise. If selection in the sense described above operates in the case of skin diseases believed to be unconnected with psychic factors, may it not operate too in those diseases believed to be dependent upon psychiatric factors? Are there large numbers of people in the population with, say, neurodermatitis, or alopecia areata, or seborrhoeic dermatitis, who do not visit hospitals or doctors? If so, are these people psychiatrically normal or not? This seems to be a subject on which insufficient information exists at present.

Too little attention has been paid to these processes of selection which might distort the composition of an outpatient group, but on the whole, it seems unlikely that they would invalidate the conclusion that there is a close connection between the skin complaint, the psychic constitution and emotional stress in a majority of cases.
The psychiatric assessment of these cases and simple psychotherapy should be within the capacity of the dermatologist, and in many cases the general practitioner, were these facts more widely known.

Although psychoanalysis, abreactive techniques, and electro-convulsive therapy are of value in a limited number of patients, in the majority little more than psychiatric palliation can be offered. As Haldane (1950) says, "One or two talks with a psychiatrist are unlikely to effect any very fundamental change in a psychoneurotic patient. In the end we must put away our lingering hopes of omnipotent thought treatments, and recognise that reality requires long and painstaking and difficult work if we wish to treat those who suffer from psychoneurosis".

Even so, psychiatric palliation, and intimate case history taking, requires more time and privacy than are afforded in the usual skin-outpatient department; treatment along these lines, apart from topical medication, can do much to help these patients, and at the same time it gives the patient some insight into the cause of his trouble.

**SUMMARY**

The introduction includes a historical survey of the neurodermatoses with excerpts from the literature on the subject going back 250 years.

The conditions designated as the neurodermatoses are enumerated, and the psychoneurogenous mechanisms and psychopathology of these conditions are dealt with. The aetiology of the more common conditions comprising this group is
examined further and illustrative case histories are cited.

The results of a psychiatric survey of an unselected group of skin outpatients are analysed in detail, and the psychiatric characteristics of various diagnostic groups are discussed. The frequency of the anxious-obsessional personality amongst skin patients is stressed and differences between the findings in this series and that of other workers are underlined.

It is concluded that there is a close connection between the skin complaint, the psychic constitution and emotional stress in a large majority of cases; in the unselected series analysed, psychic factors were of significance in 76.7% of cases.
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