Observations were not possible in conditions approximating to those of the day of the fatality until late in September. This was a rather cool morning, but there was brilliant sunshine. Radiators were not in use. At 1.30 p.m. the shade temperature in room A was 85° F. (29.5° C.) (the sun temperature was 95° F.—35° C.). The wet-bulb temperature was 69° F. (20.6° C.). In room B the shade temperature was 79.5° F. (26.4° C.) and the wet-bulb temperature was 66° F. (18.9° C.). In the theatre the shade temperature was 79° F. (26.1° C.), the wet-bulb temperature was 66° F. (18.9° C.) and the temperature under the mackintosh sheet which covered the patient was 91.5° F. (33.1° C.). (On another day, when the theatre temperature was 73° F. (22.8° C.), the temperature under a mackintosh sheet covering a patient was 87° F.—30.6° C.)

No other marked rises in axillary temperature were found, but a slight rise of the order of 0.5–1° F. (0.3–0.6° C.) was frequently observed in young patients confined in room A on sunny days. The deceased had lain in room A for one and a half hours at the hottest part of the day. This was most unusual, and was due to an unexpected prolongation of the preceding operation.

Discussion

The most striking feature of this case is the extreme hyperpyrexia. It is difficult to believe that the very brief convulsive episode was responsible for a rise of temperature to 110° F. (43.3° C.). Even after lengthy and severe convulsions in a 12-year-old boy, Wright (1933) records a temperature of only 106.8° F. (41.6° C.)—the temperature at the beginning of the operation being 101° F. (38.3° C.). Convulsions have been reported in association with trichlorethylene anaesthesia by Culbert (1942), by Garland (1942), and by Condon (1948). In each of those cases the patient's temperature was normal both before and after the convulsions.

While it is unlikely that the wet-bulb temperatures exceeded the limits of thermal tolerability for an adult on the day of the fatality, they may have done so for a patient such as this 13-year-old girl. It is probable that her temperature started to rise in room A, and continued to rise in the theatre, when partly covered by a mackintosh sheet and wholly covered by drapes. It is perhaps worth considering whether this, in a convulsion-prone individual, would initiate convulsions, which would cause further pyrexia. It is perhaps worth emphasizing that when a patient is covered by a mackintosh sheet the temperature under the sheet may exceed the theatre temperature very considerably.

The subject of hyperpyrexia in the post-operative period has been ably reviewed by Mangiardi (1951), who claims that patients can survive a temperature of over 108° F. (42.2° C.) with full recovery.

Summary

A fatality associated with the anaesthesia of an apparently fit girl of 13 is recorded. The outstanding features were a brief convulsive episode and a hyperpyrexia of 110° F. (43.3° C.). No lesion which might account for this was found in the brain at necropsy. Some environmental factors that may be significant are reported.

I am indebted to Dr. H. H. Pinkerton for advice, to Dr. H. E. Hutchison for the necropsy report, to May and Baker Ltd. for help with references, and to Imperial Chemicals (Pharmaceuticals) Ltd. for the analysis of trileone.

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PRURITUS IN MELANCHOLIA

BY

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Emotional states have long been recognized as causative agents in some skin reactions. The literature contains many references to the psychological factors found in sufferers from skin complaints. MacKenna (1944) had correlated particular skin reactions with different personality types. Hellier (1944) has drawn attention to environmental and psychological influences in skin conditions. He states: "He [the eczema patient] may adjust himself to the environment, but the rash is likely to return at puberty, at the menopause, or old age, or at any other time when things go against him." Hall-Smith and Norton (1952), in a psychiatric survey of a random sample of skin out-patients, found psychological factors in 78.5% of their patients. Of these, the largest group contained those of the anxious-obsessional type. There were no psychotics in their series, and they remarked that the symptoms characteristic of endogenous varieties of depression were conspicuously absent.

That a relationship exists between psychological factors and skin reactions appears to be generally accepted. In most cases reported in the literature the patients were clearly considered to be showing a neurotic reaction, and little mention is made of psychosis. Shorvon, Rook, and Wilkinson (1950), in reporting on the treatment of 50 cases of dermatitis by abreactive techniques, mentioned that one of the cases was psychotic and failed to respond to treatment. On the other hand, Forman (1954), in a review of cases of pruritus, found that in 23 of his 62 cases psychological factors appeared to be causative, and of those 23 cases it seems likely, from the diagnosis made, that four were psychotic.

It is, however, generally less appreciated that pruritus and skin reactions may be due to melancholia, and the following cases are of interest in that respect.

Case 1

A spinster of 55 years was seen in the wards of a general hospital nine days after she made a suicidal attempt by taking 66 $\frac{1}{2}$ -gr. (32-mg.) tablets of phenobarbitone. At that time she was agitated and depressed, expressing marked ideas of hopelessness. Her skin condition was poor. She had a weeping dermatitis of both arms, shoulders, breasts, and buttocks which she managed to scratch despite the covering bandages.

Her history showed that the dermatitis had started in 1946 and had not responded to any form of treatment. She had also suffered from poor, disturbed sleep and loss of appetite over the previous three to four years. These symptoms had been attributed to the dermatitis and pruritus. More recent symptoms were loss of taste and smell.

She was admitted to the reception unit of the North Wales Mental Hospital in May, 1952, when the diagnosis of endogenous depression was made. Her skin condition, with the intense pruritus and weeping dermatitis, was considered to be secondary to her mental state and was treated conservatively with bland ointments only. In view of the risk of another suicidal attempt, electric convulsion therapy (E.C.T.) was started without delay.

The initial response to treatment was good, both her depression and her dermatitis largely clearing up. A month after admission, however, the agitation and depression

returned, to be followed by a recrudescence of the dermatitis. Despite further E.C.T. and a course of modified insulin therapy, little further improvement was obtained, and she was discharged, relieved, in July, 1952.

She was followed up at the out-patient clinic for the next few months, but she became so depressed that it was thought prudent to readmit her, and she entered hospital again in November. Her skin and mental conditions were similar to those on her first admission, and she was again given a course of E.C.T., to which she once more partially responded. After her discharge in January, 1953, she was again followed up at the clinic, and at first made some progress. In the spring she began to deteriorate again. Her skin condition, which had previously cleared up apart from patches on her arms, flared up in response to the increased pruritus, and the agitation and depression returned.

In view of her repeated relapses, the operation of bilateral prefrontal leucotomy was thought to offer the best chance of recovery, and this was performed in July, 1953. Following the operation her agitation disappeared, and within three weeks her skin was clear apart from residual roughness in the flexures of the elbows. Her mental condition also progressively improved, so that it was possible to discharge her to the care of her relatives in September. She was last seen in March, 1954, when she was at home, looking after her own house and garden, and very happy. Her skin was quite soft and showed no trace of the previous lesions.

Comment.—This patient has undoubtedly done very well, and the recovery from her depression was reflected in the clearing of her skin lesions. It seems almost certain that the skin lesions were essentially due to scratching in response to the pruritus that was itself a symptom of her depressive illness. This view finds support in the following: (1) the skin condition was unrelieved by any form of local medication; (2) it was improved by E.C.T., and a worsening of the skin condition followed, rather than preceded, a relapse in her mental state; and (3) both the dermatitis and the depression were finally cured by leucotomy.

Case 2

A married woman aged 30 was admitted to the North Wales Mental Hospital in June, 1952. She gave a history of an intense pruritus following an attack of measles in August, 1951. She had, as she put it, scratched herself to bits.

On examination she was agitated and depressed. Her thought content revealed preoccupation with ideas about death, and she admitted suicidal thoughts. Her skin condition appeared to be that of a seborrhoeic dermatitis, especially in the face and scalp, but there was a well-scratched rash involving the whole body. She also had pruritus vulvae. The diagnosis of endogenous depression was made and she was given a course of E.C.T. After the second treatment the pruritus had gone, and at the time of her discharge she had made a good recovery from both the skin condition and the depression. Traces of seborrhoea remained on the face and scalp, but there was no irritation.

Case 3

A married woman aged 37 was seen at the out-patient clinic in November, 1951. At that time she presented as a case of endogenous depression. She was depressed, agitated, and a little retarded. She expressed marked feelings of hopelessness and had suicidal thoughts. In view of the severe depression she was admitted to the North Wales Mental Hospital, where she made a good recovery and was discharged in December. She was again seen at the out-patient clinic in June, 1952, having been referred back to us by the dermatologist. At that time her main complaint was a severe itching, particularly in the pubic and anal regions. Examination revealed an urticarial rash, well scratched, all over the body, and excoriation of the perineum and vulva. Her mental condition was similar to that of her first referral. She was readmitted to hospital and

responded well to a further course of E.C.T. At the time of her discharge she had recovered from her depression, and her skin condition and pruritus had gone.

This case is interesting in that pruritus was not a symptom of the initial depressive attack, but occurred in the second episode and was associated with a marked increase in agitation.

Case 4

A married woman of 46 was referred to the out-patient clinic in November, 1953, because of pruritus vulvae and a general nervous condition. The pruritus did not worry her during the day, but, although she was able to get to sleep, she was awakened in the early hours (2 a.m.) by the vulval irritation and was unable to sleep properly afterwards. On examination she was agitated and depressed, with ideas of hopelessness and unworthiness. In view of her distressed condition she was admitted to the North Wales Mental Hospital. A diagnosis of recurrent depression was made and she was given E.C.T. On this treatment she lost her pruritus and her depression cleared.

This patient's past history is interesting in that she had had three previous attacks of pruritus, and careful inquiry showed that she also had symptoms of an endogenous depression at the same time. During one episode she developed a generalized pruritus, associated with an urticarial reaction, as well as the pruritus vulvae.

Case 5

A married woman aged 50 was admitted to the North Wales Mental Hospital in February, 1953. Her main complaint was of intense pruritus involving the whole body. She described the pruritus as a feeling of swelling and burning in her skin, and that she had to scratch.

On examination she proved to be tense, depressed, tearful, and agitated. She was extremely garrulous and hypochondriacal. Despite some reactive factors, it was felt that the underlying illness was that of an involutional melancholia. Her skin condition was a papular erythematous rash covering most of the body, and well scratched. Her history showed that the rash and nervous trouble followed an operation in December, 1951.

In hospital she was given a course of E.C.T., to which she partially responded. Her skin condition improved as her agitation decreased. At the time of her discharge she was mentally much more stable, although still agitated and easily upset. The skin condition had cleared apart from patches in the flexures of the elbows.

Case 6

A single woman of 59 was admitted to the North Wales Mental Hospital in April, 1950. There was a family history of psychosis and an aunt had committed suicide. The patient herself was diagnosed as suffering from an agitated melancholia, and the illness appeared to have started eighteen months previous to admission and followed an operation for varicose veins.

When she came into hospital she was restless, agitated, and depressed, complaining continually of a dermatitis, which she persistently scratched. The dermatitis involved the limbs and trunk, and had developed after the varicose-vein operation. It had proved resistant to treatment, and her thought content was entirely filled with her skin condition and the hopeless outlook for the future. During her stay in hospital she was given a course of E.C.T., and on her recovery from the depressed state the skin condition cleared up.

Discussion

Six cases of pruritus in melancholia have been described; five other cases of a similar nature have also been admitted to the women's reception unit during the same period. Although these cases amount to only just over 1% of melancholics admitted to this unit, the relief given to their skin complaints by treatment of their mental condition seems to justify the publication of this type of case.

Although the details of each case naturally differed, there were certain similarities between them. In each case pruritus, rather than any particular skin reaction, was the main feature, and this was associated with agitation. The skin reaction appeared secondary to the pruritus and could be shown to be due to scratching. Thus relief of the depression obtained by use of E.C.T. was accompanied by a cessation of pruritus and an immediate improvement in the skin condition. In those cases in which a relapse of the depression occurred it was noticed that pruritus, with scratching, returned before the skin condition reappeared.

All cases showed evidence of the endogenous type of depression. Disturbed sleep, with early waking, loss of weight and appetite, and low spirits, with diurnal variation, were common. The favourable response to E.C.T. was also confirmatory evidence of the affective nature of the illness. Apart from ideas of hopelessness, however, none of the patients showed psychotic thought content. This fact is interesting and perhaps explains why the depressive nature of the illness remained unrecognized in some cases for months or years.

It is well known that anxiety and obsessional states may be symptoms of an underlying depression, and the neurotic picture so presented may be misleading. That somatic symptoms are also common is equally well known, but it does not appear to be generally recognized that pruritus, with skin reaction, may be the main presenting symptom of melancholia.

In some instances the response to E.C.T. was dramatic, in others less so, but in every case the skin condition closely followed the mental state of the patient. No claim is made that E.C.T. benefits skin conditions as such, except when they are secondary to a disorder that itself responds to E.C.T.

Summary

Six cases of melancholia complicated by pruritus and skin reactions are described. All cases benefited from E.C.T., although in one case neither the depression nor the skin condition was cured until leucotomy was performed.

Evidence has been brought to show that the pruritus was secondary to melancholia and could rightly be regarded as a symptom of it. This fact does not seem to be generally appreciated.

I would like to thank Dr. J. H. O. Roberts, medical superintendent of the North Wales Hospital, for permission to publish these cases.

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An article in the December issue of the *NAPT Bulletin* discusses what the doctor should tell the patient with suspected tuberculosis. "There is an art in these things," it says, "an art not always taught in medical schools. It is not what the doctor says, or leaves unsaid, but the way he does it. The greatest clinicians have practised this art to perfection upon patients and relatives. To watch them at work, or even to read their clinical letters, is an education. They don't necessarily 'tell.' It is not a question of facts at all. But they can generally relieve the tension in the patient's mind. The greatest clinicians have the power to communicate a real dilemma in a way that causes least distress. They can confess ignorance without losing face. They express a danger in such a way that it braces the patient to put forth his best effort. It is not humbug. On the contrary it is the finest expression of medical skill."

CASE OF ACHLORHYDRIC ANAEMIA IN A MALE FOLLOWED UP FOR 20 YEARS

BY

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In 1933 I wrote a paper with my then house-physician, Dr. W. Weisswange, on "Simple Achlorhydic Anaemia in Adult Males."* It is well known that typical achlorhydic or hypochlorhydic anaemia is very much rarer in males than in females and that the history of male cases, if followed up for a number of years, often discloses peculiar features or associations. The following history is that of Case 4 in the above-mentioned paper.

Case Report

A commercial traveller and collector aged 32 came under observation in December, 1932, with the history that he had looked pale for a long while and had had dyspeptic troubles for the previous four months. For some time he had had a sore tongue, which the dentist told him was not due to his teeth. In 1931 he had had double pneumonia, and (at another hospital) was given two blood transfusions. Blood count (December, 1932): haemoglobin, 38%; erythrocytes, 2,400,000; C.I., 0.8; leucocytes, 5,750 per c.mm. (polymorphs 77%, lymphocytes 20%, monocytes 3%); anisocytosis, poikilocytosis, and a little basophilia punctata. Fractional examination of the gastric contents showed complete achlorhydria, even after the subcutaneous injection of histamine; pepsin present after the histamine. Brachial systolic blood pressure: 115/45 mm. Hg. Negative Wassermann reaction. Vitiligo. In February, 1933, the spleen could be felt during inspiration.

The presence of achlorhydria was confirmed in January and July, 1933. In July no enlargement of the spleen could be detected, and the blood count gave: haemoglobin, 75%; erythrocytes, 5,000,000; C.I., 0.75; leucocytes, 6,950 per c.mm. (eosinophils 2%, polymorphs 62%, lymphocytes 29%, monocytes 7%); very slight anisocytosis and poikilocytosis. The out-patient treatment, doubtless somewhat irregularly taken, had been ferrum reductum and an acid pepsin mixture with meals. Dr. Price-Jones, who examined blood films of December, 1932, and February, 1933, wrote that the extreme degree of poikilocytosis did not suggest simple microcytic anaemia.

The patient was readmitted to the German Hospital on September 18, 1936, in a more anaemic condition: haemoglobin, 60%; erythrocytes, 3,660,000; C.I., 0.82; sedimentation rate, 14 hours (Linsensmeyer). A complete gastric achylia, even after subcutaneous injection of histamine. X-ray examination of the stomach showed nothing abnormal. After four weeks at the German Hospital he left very much improved. In the out-patient department on November 12 his erythrocytes were 5,400,000; haemoglobin, 82%; C.I., 0.75. At this period he sometimes seemed queer in his head. He would complain of various peculiar subjective feelings, notably as if part of his face was absent (unreality feelings). He was given a letter for the out-patient department of the Maudsley Hospital, which communicated with the German Hospital, the patient being under the care of both hospitals jointly.

Mrs. S. Brock, of the German Hospital, has kindly looked up the scattered notes relating to the patient and the correspondence about him with other doctors until 1952. I myself last saw the patient some time before 1952, and I am indebted to Mrs. Brock for a summary of the notes and correspondence about him, and also to Dr. H. C. Lauber

*F. Parkes Weber and W. Weisswange, *British Medical Journal*, 1933, 2, 1066.