Simulated Disease: Problems in Diagnosis and Management

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For long, I have been interested in patients without real disease who, for a variety of motives, attempt to deceive their doctors by simulating symptoms and signs. Far from being rare, factitious disorders are comparatively common and many, I feel sure, go undetected. Those that are eventually recognised take up an inordinate amount of time being investigated and re-investigated over a period of years. Haunted by the fear of missing organic disease even when incontrovertible evidence has shown gross deception by the patient, few clinicians have the courage to accept that the next group of symptoms is also likely to be spurious[1].

These patients are so skilful at manipulating the medical profession that they set consultant against general practitioner and one hospital department against another. Naish[2] termed them 'aggressive consultant bafflers'. Such people like to pit their wits against the best medical brains in the country. Their symptoms are always complex, their reactions to drugs bizarre and their lists of investigations long and frequently repeated. As Naish stresses, there is often another member of the family spurring on the doctor. Parents in the case of a child, or the too good husband who insists that the cause of his wife's illness must be found. He implies that if only the doctor were competent a solution could be found; the patient is handed from one consultant to another, the case notes becoming thicker and thicker with multiple labels. There may also be invalid and nurse role-playing in the family. Any suggestion to the nurse that the disorder is not serious is followed by a show of displeasure and in all probability a change of medical attendant.

Although as a dermatologist my experience has been largely of skin lesions such as dermatitis artefacta, this has usually been only one facet in a series of complaints for which no physical cause can be found. The discovery of an artefact may throw light on many years of ill-health, with episodes of chest pain, haemorrhage, pyrexia, abdominal pain and coma that have been investigated *ad nauseam,* and may well be helpful in the management of the whole illness.

My interest in patient trickery was originally aroused when I was a medical officer in a naval hospital. Three men were admitted in one day from a nearby naval detention centre. All were deeply cyanosed and looked superficially *in extremis*. However, they had normal pulse rates, were not dyspnoeic and lay quietly on stretchers. Tests showed raised blood methaemoglobin in each of them. It was later discovered to be common knowledge in the naval prison that if you consumed a tube of anti-gas ointment you would turn blue but nothing worse would happen. Hospital was more comfortable than detention quarters. The contents of the anti-gas ointment was an official secret so I have never discovered what produced the methaemoglobinaemia.

Since that time I have had a particular interest in self-inflicted disease and in this I have been assisted by my wife who spent many years in an accident department and the last ten as a psychiatrist. She found many of the patients whom we have studied languishing in the accident department.

Until recently the psychiatric literature has had little on this subject because the patient has a vested interest in playing the invalid and referral to a psychiatrist is usually the last one sees of the patient. I have been fortunate in that, to patients, a dermatologist's wife seems to be less of a threat than other psychiatrists and a considerable number of the patients I shall discuss have had at least one psychiatric interview with my wife.

Self-inflicted lesions of the skin have been recognised for centuries. Demoiselle Coirin spent 12 years in bed with supposed cancer of the breast and paralysis, but in 1731 was healed immediately by the application of earth taken from the tomb of the Archbishop of Paris[3].

There are many references to artefacts in the dermatological literature; one of the earliest, in 1907[4], reported 49 patients and in 1917[5] Simpson drew attention to the frequency of artefacts in young girls and to a particularly severe example in which the patient had suffered both breasts and one leg to be amputated and had given consent for removal of one arm before the diagnosis was made. Thomas[6] in 1937 described a patient who had had 33 operations for gangrene before the bottle of phenol was discovered.

In any discussion of simulated disease Asher's[7] Munchausen syndrome describing peripatetic individuals who told colourful lies about illness in order to be admitted to

hospital and then discharged themselves against advice, must be considered. They have been called hospital addicts by Barker[8] and wanderers by Carney[9]. They tend to masquerade under false names, have acute dramatic histories and are usually males.

Patients with simulated disease who present to the dermatologist come with skin lesions such as an artefact and belong to Carney's non-wanderers. In contrast to the Munchausen syndrome they remain with their families. They retain the same name and they enjoy invalidism over a long period, cleverly manipulating their friends, relatives and doctors.

Present Study

This paper is based on a study of 56 such patients, 50 women and 6 men who have been seen in the last 30 years (Fig. 1). They include 43 patients described previously[10]. The great majority of patients were young women and the few men tended to be older. The ratio of male to female is similar to that found by Fabisch[11] and in Carney's non-wanderers.

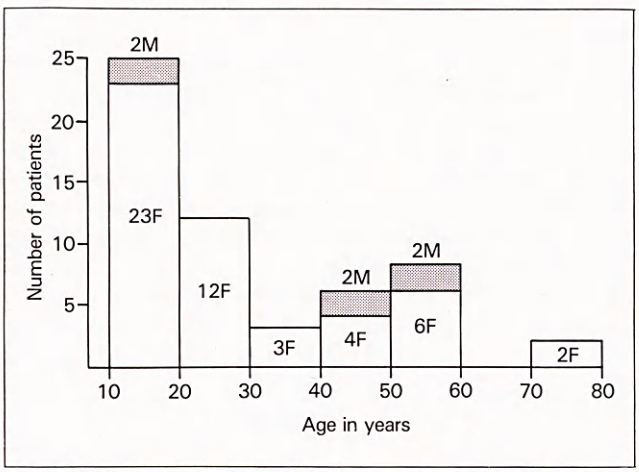

Fig. 1. *Patients with artefacts involved in study, by age (50 women and 6 men.)*

Patients with artefactual lesions do not give a clear history. A superficial lesion, which looks as though it should heal within a few days, persists for months, yet details of its onset are blurred, though frequently a new lesion may be forecast by the patient. Any persistence in enquiry as to the details of the appearance as it erupts is met with blocking or anger, and this difficulty in obtaining a history has very aptly been called by Gandy[12] 'a hollow history'.

In addition, symptoms affecting many systems of the body should arouse suspicion of simulated disease. The multiple referral syndrome in which the patient's case notes carry numerous consultants' labels and yet every investigation proves negative should also rouse suspicion, especially if the patient is a woman under the age of 30. Patients will rarely say that they have attended the other departments and it is a great step forward in some hospitals to be able to peruse the patient's complete dossier. Frequently one finds that the patient has attended the ear, nose and throat department for difficulty in swallowing or a painful mouth, the general physician for pain in the chest or breathlessness, the gastroenterologist for abdominal pain or constipation, and may have taken several overdoses. It is probably easier to collect information about patients in the provinces than it is in London, with its many hospitals.

Diagnosis

Artefacts

It has been said that skin artefacts can be diagnosed relatively easily because they have a bizarre shape, linear or geometric outlines and that handedness may be a factor in determining the sites of the lesions, the right-handed person producing lesions on the left arm and *vice versa*. This may be so with the unsophisticated, but those with some degree of medical knowledge, such as laboratory technicians or nurses, may produce lesions that mimic naturally-occurring disease very closely and since confrontation is contraindicated, the diagnosis may have to rest purely on a hunch for a considerable time. The following case illustrates many features of the typical patient.

Case 1. A dental nurse presented at the age of 17 with a lesion on her face and a history of having been under the care of a psychiatrist for the previous four years for falling attacks. In fact, while she was being investigated in the skin ward, she managed to fall down the stairs. A year later she developed superficial ulcers in her mouth, which puzzled her employers at the dental hospital. Three years later a worried dentist who was employing her rang me up because she had developed a hole in her forearm while he was out of the room. She claimed that she had accidentally produced it with a dental burr, but the wound refused to heal. She was treated with occlusion under plaster but at one stage her rather dominant mother accused me of not treating her properly and very stupidly I told the mother that I thought the girl was producing the lesions herself. The mother was indignant, the general practitioner was on her side, so the patient was sent off to see orthopaedic surgeons in both London and the provinces because the diagnosis was not acceptable. Eventually the lesion on the arm healed but a year later she reappeared with an inflamed nodule above the right eye. This recurred several times and puzzled the ophthalmic department. Eventually she confessed at a lecture I was giving that all the lesions were self-inflicted. The pseudo-abscess above the eye was caused by injections of milk. Later the same year headlines appeared in the local paper because she had been found sleepwalking wearing a dressing gown, having crossed two main roads unscathed.

Her father was a chronic alcoholic and both she and her dominant mother appeared to need to attract attention.

Case 2. This unhappy physiotherapist made an extremely good attempt at simulated discoid eczema (Fig. 2) at a

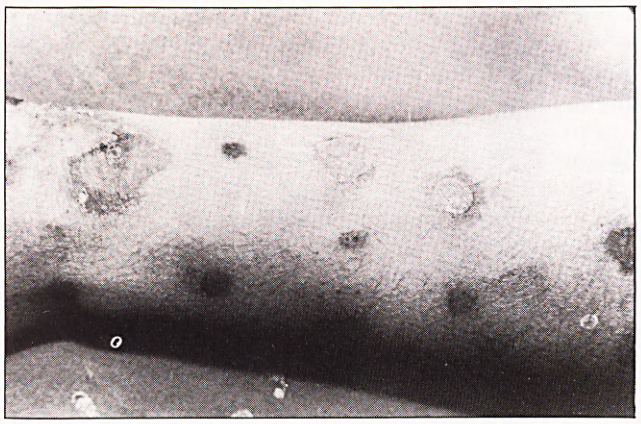

Fig. 2. *Simulated discoid eczema.*

time when she was going through the trauma of a divorce. But for an accident with the phenol bottle the diagnosis would never have become apparent. The condition cleared as her emotional state improved.

In patients with artefacts the lack of concern may be shown by their calm expression, likened by O'Donovan[13] to that of the Mona Lisa.

The lesions that we have identified as self-inflicted are shown in Table 1. In some of the trivial lesions of schoolchildren lipstick or rouge was used to mimic an erythema that could be wiped away.

Table 1. Lesions identified as self-inflicted.

Excoriations both linear and square
Heat, acid or alkaline burns
Bruising
Nail piercing
Rubber bands round limbs
Swelling produced by ligatures
Conjunctivitis
Crusting of the lips
Rectal and vaginal ulcers
Haemorrhage from every orifice
Factitious fever
Generalised discoloration of the skin

Opportunism plays its part, especially in the breaking down of operation wounds.

Case 3. A 20-year-old nurse complaining of pain down the arms and Raynaud's phenomenon in her fingers persuaded a surgeon to carry out a bilateral cervical sympathectomy. Much to the surgeon's dismay both wounds in her neck broke down within three days and she ultimately developed an osteomyelitis of the right clavicle. It was unusual in that the organism was *B. coli.* It was difficult to convince the surgeon that the whole disorder was artefactual particularly as an eminent professor of psychiatry could find no psychiatric abnormality, but after many months in hospital the condition healed. Seven years later, when she was working in another town, a normal appendix was removed after attacks of abdominal pain but the wound failed to heal for six months. Her surgeon asked me about her previous history and was informed that wounds tended not to heal. A year later she threw herself under a train and was fatally injured. She is in fact the only one of our 56 patients who committed suicide.

The use of acid may follow accidental burns but occasionally one comes across a case of ulceration in which there seems to be no reason for the ulceration (Fig. 3). Litmus paper is a valuable aid to investigation, since it will show strong alkali or strong acid but, once more, a high index of suspicion must motivate the use of litmus paper on a wound.

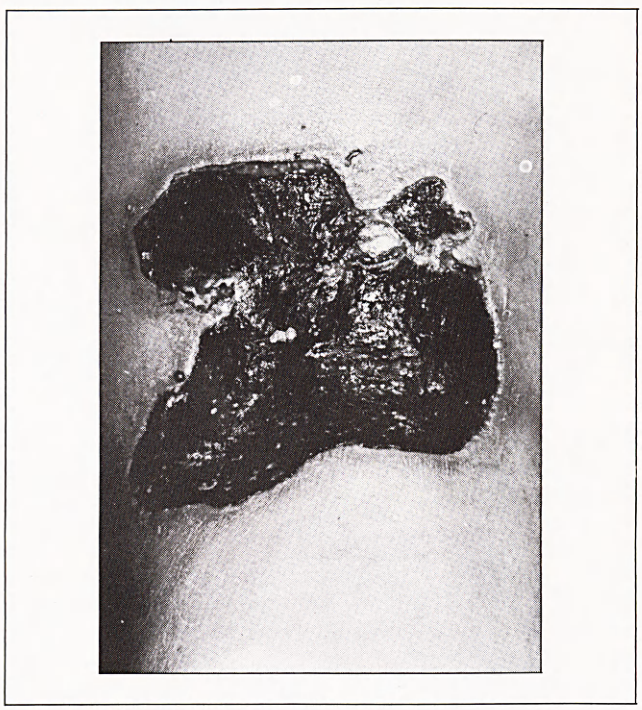

Fig. 3. *Acid burn on front of leg.*

Nails may be damaged by perforating them with a needle. An unpleasant looking granuloma may develop in the nail bed. Several of these cases occurred in a number of schools in Sheffield and it would appear that there is some organisation like Artefacts Anonymous through which information of value can be transmitted.

Elastic bands can be left accidentally around limbs and if there for a long period will produce notching of the underlying bone[14]. In my experience this damage is usually the result of forgetfulness rather than of deliberate intent. Leaving a rubber band round a wedding ring is a common habit. Figure 4 shows what happened to an elderly, somewhat confused lady who forgot an elastic garter which was left round her leg for many months.

Swelling of Limbs

Swelling produced by bandaging is a different problem and many patients fall into the group of deliberate

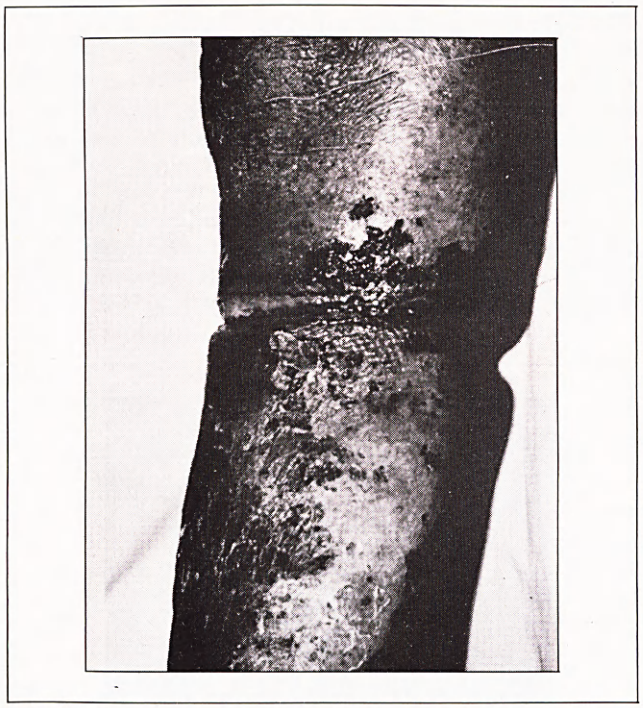

Fig. 4. *Deep groove left by a forgotten elastic garter.*

malingerers. This is especially the case when industrial compensation is a factor. It was originally described by Secretan[15].

Case 4. A girl accidentally ran a splinter into her finger while she was at work and continued to have swelling of the whole left hand for two years. Ultimately she threatened to sue the surgeon in the accident department who was looking after her. After hospital admission under my care and the confiscation of a bandage she had concealed under the bedding, the swelling recovered, particularly when she was told that if it did not recover she would be referred to a psychiatrist.

Case 5. A man aged 57 injured his wrist when using an electric drill at work and after operation for removal of his ulnar styloid he continued to have recurrent swelling. His court case was pending when he was seen with very obvious oedema of the left wrist and hand and a contraction mark around the arm. He recovered after hospital admission but four years later was admitted to a medical ward complaining of blackouts for which no organic cause could be found.

In an interesting study of 22 proved or presumed cases of factitious lymphoedema of the hand, Smith[16] came to the following conclusions.

1. Factitious aetiology should be suspected in any patient with recurrent or chronic unilateral upper limb lymphoedema without apparent lymphatic or venous obstruction.
2. Factitious aetiology may be presumed in any patient with recurrent or chronic unilateral lymphoedema that is limited proximally by a well-demarcated ring or sulcus of circumferential discolouration.
3. Factitious lymphoedema of the hand has been observed in two distinct groups: (a) the intelligent or well-educated adolescent girl or young woman undergoing social or emotional stress which she has difficulty in handling and (b) the male blue-collar worker who is dissatisfied with his job or his role or station in life.

I would add to these groups those who have had an injury and are hoping for monetary gain.

Swelling of a different kind also occurs in the hand-bashing syndrome which can start as a minor accident.

Case 6 was a single girl aged 22 whose left hand, after a trivial accident at work, remained bruised for a year. She was under the care of the orthopaedic department and was in plaster four or five times in nine months, during which time she lost a considerable amount of weight. She then took an over-dose of aspirin. Her father had died when the condition started and she had been depressed. She had, however, been drinking up to one litre of whisky a day since the age of 17, which was not known by the doctor, who diagnosed hepatitis and pancreatitis. She was later referred to a surgeon who also did not know that she had been drinking a bottle of whisky a day for four years, and he carried out a cholecystectomy. Her drinking came to light only after the self-inflicted lesion had been diagnosed. As in so many medical conditions, alcohol was a factor in this case of simulated skin disorder. That hand-bashing is a very definite syndrome is supported by an article by Schmauss[17], and my wife and I described a very severe case[10] which, although it began with the hand-bashing syndrome, ended some 14 years later with the patient a complete invalid unable to walk.

Another variety of swelling of the hand called *oedema bleu* by Charcot[18] differs in that the hand, as well as being swollen, is blue and often cold. Four such cases were described in 1980[19]. All the patients had severe psychological stress before the hand became swollen. Resolution of their problems was followed by recovery, but neither psychotherapy nor meddlesome surgery such as sympathectomy was of any value.

Simulated Haemotological Disorders

Bruising is a very different problem, since minor aberrations of clotting and bleeding factors can be found so commonly, and such cases are investigated again and again. There is a tendency to accept that some haematological minor aberration is responsible for haemorrhage from any orifice.

Case 7. This patient presented to the skin department with bruising but her other symptoms helped appreciably in the diagnosis. At the age of 29 she was admitted with pseudo-coma and tetany due to over-breathing. She then had several admissions to hospital for unexplained abdominal pain. Fortunately the surgeons were conservative and did not operate on her. She then appeared with bruising of the left thigh, the bruise having a clear upper and lower margin and on this occasion no laboratory evidence of haematological abnormality (Fig. 5). The

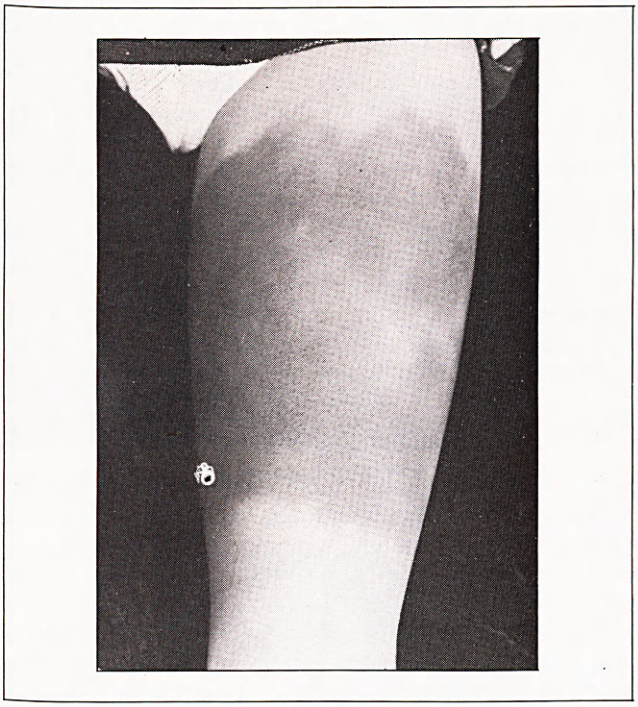

Fig. 5. *Bruising of thigh. Factitious bruising showing sharp demarcation.*

distribution of the bruise was characteristic of a self-inflicted lesion with a hard upper and lower margin. This, taken together with her previous history of emotional disorders and pains for which no organic cause could be found, was fairly characteristic. Five years later, during a period of marital stress, she took an over-dose of aspirin from which she recovered.

However, many simulated haemorrhages may well go undetected. Carney and Buzovic[20] in 1978 considered that 22 of 43 women referred for investigation of bleeding diathesis showed no blood abnormality. Rarely, in some cases of repeated bruising, the immunological disorder of auto-erythrocyte sensitisation occurs. The pathogenesis of this condition is unknown but, even in this, many workers have suggested that the bruises are self-inflicted largely because the clinical picture is almost always dominated by psychiatric disturbances. A recent account of this condition[21] describes a woman of 36 who had recurrent large and painful spontaneous bruises. Washed red cell stroma injected intradermally into the patient's back reproduced the bruises but injections of her plasma or physiological saline did not and she improved after plasmapheresis, whereas she did not improve after a placebo procedure. This would appear to show that she was suffering from a genuine immunological disorder, but even so the medical history of the patient included numerous features of simulated disease.

Factitious Fever

One of the problems associated with self-inflicted skin lesions is pyrexia. A girl whose case history I have already published[10] was able to produce a raised oral temperature even though the nurse stood beside her; a rectal temperature taken at the same time was normal.

Case 8. A 45-year-old health visitor had a dermoid cyst removed from the pre-sacral region in December 1974. An abscess developed in the wound; 10 drainage operations and several wound excisions were carried out in the following 11 months.

In November 1975 she was seen by me because of continued pyrexia and failure of the wound to heal (Fig. 6). Rectal temperatures were normal. She was also seen

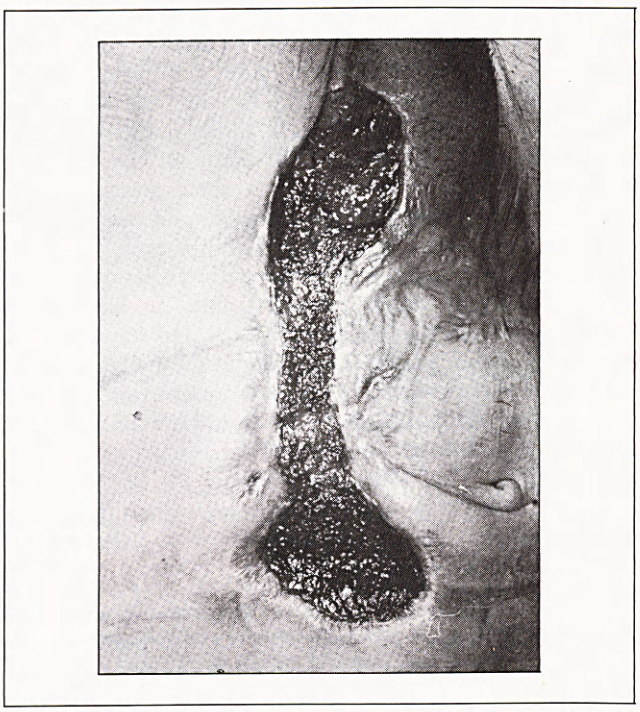

Fig. 6. *Chronic granulomatous ulcer of abdominal wall.*

by a clinical psychologist to whom she would not talk. In December 1975 she discharged herself because she refused further rectal temperature-taking. In February 1976 the wound had healed completely. In January and April 1978 she was admitted to hospital with chest pain for which no organic cause could be found. There was a background of a child with spina bifida who had died and another who had been killed in a road accident, but she would never discuss them.

This case illustrates many of the features of typical simulated disease; an organic lesion originally with an operation wound, failure of the wound to heal, factitious fever, histrionic behaviour and then a switch to recurrent episodes in different systems.

A group of workers at Bethesda, Maryland[22] reported that of 343 patients admitted to hospital with fever of unknown origin 32 were examples of factitious fever. It was striking that the great majority were nurses or laboratory workers. Many of the patients were found to be switching their thermometers, that is substituting a thermometer with a spurious abnormal reading, and one was caught as many as 45 times. The remaining patients

produced their fever by self-inoculation of material such as milk and faeces contaminated with bacteria and one was able to induce fever by taking a drug. The Bethesda workers suggested pointers which would indicate when the fever was artificial; a discrepancy between pulse rate and temperature; the absence of diurnal variation; the absence of spikes of temperature, and the difference between oral and rectal temperatures.

Case 9. I have come full circle by ending this series with the story of a blue lady. She was a 51-year-old nurse who was admitted under the care of a physician friend of mine[23]. Throughout her life she had suffered from a disabled right leg caused by poliomyelitis. She had been under the care of psychiatrists for multifarious complaints. She presented with a deep blue discolouration resembling cyanosis, which was more marked on the exposed parts of the body. The cause of the blueness remained a mystery for some time since spectrographic tests for methaemoglobinaemia and sulphaemoglobinaemia were negative. It was noticed, however, that her plasma was pink and that her urine, which was often dark yellow, changed, when made alkaline, to an intense purple colour. Ultimately she admitted that she took vast quantities of the laxative Dorbinex in the belief that she had severe constipation. Dorbinex contains two constituents, one of which, danthron, is a synthetic anthroquinone that does produce a pink or red colouring in urine and plasma. This does not explain the greyish-blue colouring of the skin, but she was at the same time taking phenolphthalein and it was considered that the combination of the two might account for the blue colour.

In the diagnosis of artefact or simulated disease it is important to keep the possibility of deception in the forefront of one's mind. Sir Norman Walker[24] said that neither rank, education, intelligence nor devotion to duty, nor the most exemplary life excluded the possibility of self-infliction of disease. Proof may well be impossible, though a search of the patient's locker may be justified and very revealing, as recently in our hospital when a brittle diabetic was found to have both a syringe and a supply of insulin.

There is, however, a tendency, certainly among dermatologists, to consider artefactual disease an easy explanation for ulcerated lesions which will not heal as they should. Only the astuteness of a colleague, Dr Mahood[25], prevented me from falling into this trap in the following case.

Case 10. A 31-year-old woman was referred with a recent blister on the sole of her left foot. It looked very much like a perforating ulcer in a diabetic. She had been in a psychiatric hospital for one year. Her complaints of nausea, vomiting and abdominal pain were considered to be due to a depressive illness. Examination revealed anaesthesia to pin prick in a stocking distribution. Her pupils did not react to light and she had no ankle jerks, all findings compatible with functional disease. She also had ulcers on her buttocks. Further investigations showed that she had peripheral and autonomic neuropathy. Nerve biopsy revealed the presence of amyloid in her sural nerve.

Even more fascinating was the finding that her mother, who had died 10 years previously aged 42, had been diagnosed by a colleague of mine as having self-inflicted skin lesions with ulcers on the buttocks. At her autopsy no sound diagnosis had been reached but a re-examination of available specimens revealed that amyloid was present in a large proportion of the tissues.

Here, therefore, was an example of the rare Portuguese type of familial amyloid neuropathy. The case served as a reminder that before making a diagnosis of self-inflicted ulceration a full neurological examination is essential.

Prognosis

Some years ago my wife and I traced 33 of 43 patients with artefacts[10]. We found that one-third continued to produce new lesions and were severely disabled more than 12 years after the onset of symptoms. Twenty were known to have recovered. Prognosis depended not upon management but on life events. For example, one girl who had suffered from continuous invalidism from the age of 14 to the age of 28 recovered completely when she married and had children.

Our findings agreed with those of Hawkings *et al.*[26] in that there were similarities between our patients and those with anorexia nervosa. The condition particularly affected young girls with immature personalities and dominant mothers. The most difficult problems occurred in those with nursing or laboratory training, for they had the knowledge to hoodwink the doctors.

It is astonishing how young some problem patients can be. One pleasant girl of 12 who suffered from a granulomatous ulcer on the knee which would only heal when covered with plaster of Paris, caused great anxiety to her family and doctors. It was many months before the crucial fact that her mother took in foster children on whom she lavished affection was revealed as a possible cause for the artefact.

Management

In the management of patients one cannot better Lyell's dictum[27] that one has to indicate indirectly that one knows of their activities yet sympathises. Direct confrontation of the patient or relatives is usually disastrous. Some form of relationship should be maintained. We have obtained encouraging results with the help of a clinical psychologist who teaches relaxing exercises and at the same time gives the patient an opportunity to talk and retains some contact with them. Patients will accept this when they will not accept attendance at a psychiatric department. Isolation and failure of communication are two of the major problems in the solution of these cases.

There still remain mysteries such as the man of 55 who for over 20 years suffered from an ulcer on his face which eventually became so severe that he could not work (Fig. 7a). Yet after 6 weeks of relaxation exercises the ulcer healed, he returned to work and the condition has not recurred (Fig. 7b). Why? I have no idea.

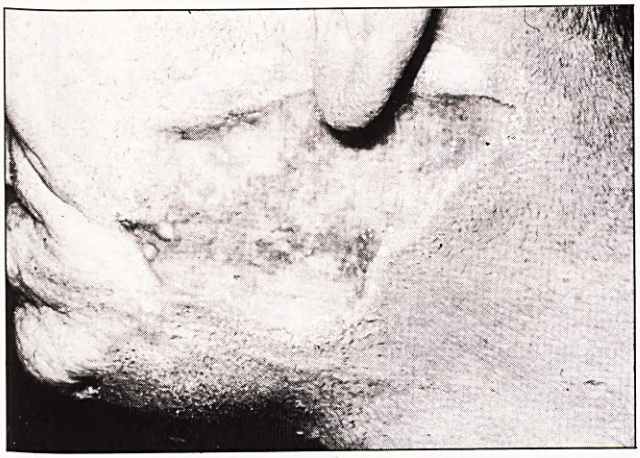

Fig. 7a. *Twenty-year duration of ulcer of face.*

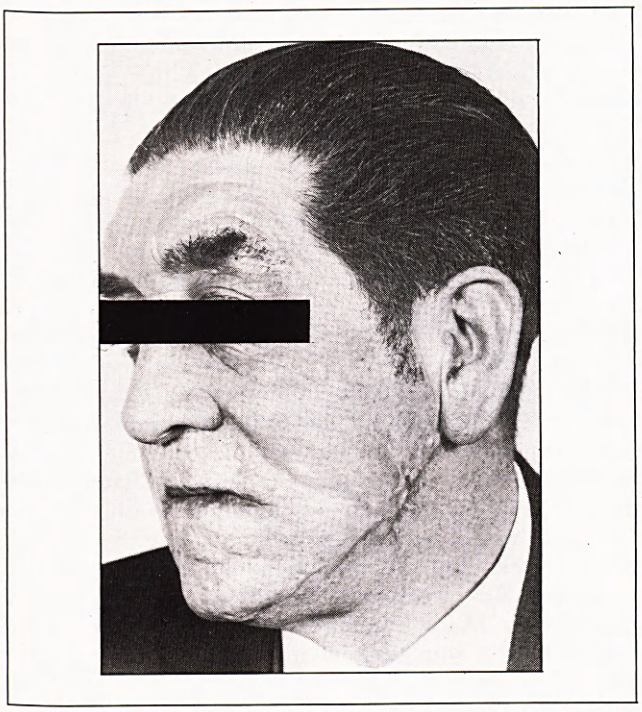

Fig. 7b. *Ulcer of face healed after 6 weeks of relaxation exercises.*

Time does not allow nor have I the skill to debate how nearly conscious the self-destructive process may be. It has been suggested that some patients may have several personalities and one or more may be responsible for the damage[28]. As long ago as 1879 Briquet[29] noted that those with a hysterical personality might, under stress, show symptoms in many parts of the body. They would recover only if changes occurred in their environment. Mains' comment[30] that inability to accept therapeutic failure leads to therapeutic mania should be remembered, as should the possibility that even the most charming, attractive patients can be simulating disease and only a high index of suspicion will enable the correct diagnosis to be made. It is, in my view, just as much a disgrace to miss and over-investigate simulated disease as it is to miss organic disease.

Acknowledgements

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