CASE I.

A schoolgirl, aged 12½, came to the Skin Department of the Royal Southern Hospital in February, 1919. She displayed at that time a white glistening ivory-like patch situated in the lower third of the left arm on its extensor surface. It was hard, and the skin could not be raised in folds; there was no itching, no pain, and no disturbance of sensation. There was impaired movement of the elbow, but the wrists and digits were freely movable and the skin in these regions apparently normal. A similar change in the skin was noticed in the left foot implicating the two outer toes and extending along the dorsum pedis to some four to five inches above the external malleolus.

Her mother stated that the child first noticed this condition during the summer holidays, July and August, 1918. She thought she had sprained her arm when playing with the may-pole. The condition of the toes and outer margin of the foot and ankle was not noticed until November, 1918; but neither the patient nor mother can definitely state when or how the disease began, and these data are not therefore quite trustworthy. From February, 1919, to the present time scleroderma has slowly extended, implicating the whole of the extensor region of the upper extremity. The flexor aspect of the limb is not involved, and over the biceps and flexors of the wrist and hand the skin is supple and apparently normal. The hand itself shows typical sclerodactyly. The scapular region is also involved, and here appeared slight ulceration, of which the cause could not be ascertained. This is now healed, leaving a scar like that of a burn. In April, 1919, two circumscribed patches, one in the left hypochondrium and the second in the umbilical region, were discovered, and have since undergone a certain degree of involution. This fact has been noted by various observers in the circumscribed type.

The present redness of the skin of the hand and fingers is referable to the cold weather, and does not suggest any connexion with Raynaud's disease, which some writers would appear to support. The morbid histology is briefly that of atrophy of the fibrous elements of the true skin and subcutaneous tissue. The elastic element is not involved. The blood vessels are atrophied, the result of interstitial inflammation of the walls. The glandular apparatus, as well as the hair follicles, show secondary atrophic changes. The epidermis is diminished in depth, but otherwise normal. I hope to show a microscopic specimen of these changes at a forthcoming pathological meeting.

The pathology of scleroderma is unknown, and equally so its etiology. Of course, hypotheses are forthcoming, but no facts to support their validity. There is an angioneurotic hypothesis, a central nervous hypothesis, and an autotoxic hypothesis. I have no extra one to offer, and cannot explain scleroderma. It cannot be referred to malnutrition, although the parents think that the food rationing in the early part of 1918 may have had something to do with its appearance. I have not read of any increase in scleroderma among the inhabitants of Central Europe who have suffered immeasurably more from malnutrition than we.

Treatment locally and constitutionally has signally failed. It has not prevented the progress of the disease. Locally, linimentum potassii iodidi c sapone, beloved of the surgeons, has been vigorously rubbed into the affected region for a month or so. This was followed by more stimulating liniments—turpentine and ammonia equal parts—for another month. Then successively the following ointments were used, but with no benefit: Unguentum acidi salicylici, unguentum hydrargyri compositum. At present, more from a massage standpoint of view, olive oil is being vigorously rubbed into the withered limb.

Internally fibrolysin was given hypodermically every week for three months. It made not the slightest impression. Fibrolysin is another name for thiosinamine, which is an organic derivative from oleum sinapis. It was introduced as a solvent or discutient of fibrous, and especially cicatricial, tissue in tubercules and hypertrophic scars as a result of burns. In these cases, used as a plaster, I have noted great benefit. Since August, 1919, thyroid extract has been administered, 2½ grains thrice daily, and she is still taking this, but with no benefit as far as I can judge. The only point I can make is that during the last six months the disease has not extended. The withered condition of the left arm has become more striking owing to the atrophy of the muscles.

The blood has not been examined by the Wassermann test for syphilis; there is not the slightest clinical indication of inherited or acquired syphilis. Colonel Harrison returned the blood of a case of scleroderma as positive; three other bacteriologists returned the same case as negative. According to Drs. Browning and Kennaway (bacterio-

logical experts) the blood of every patient, no matter what the nature of the disease may be, should be submitted as a matter of routine to the Wassermann test. If this be a correct method of handling suffering humanity, then I plead guilty to this sin of omission. I have, however, serious intention of repairing the fault, for who of us knows nowadays that on a serological test he may not be declared to be possessed of latent syphilis which a Wassermann test has rendered patent! And, moreover, are not "606" and "914" potent remedies, and fit to be tried in diseases in which hitherto we have been impotent to cure? [A Wassermann test has since been made and reported negative.]

CASE II.

A woman aged 35, married twelve years, who has no children, but gave birth to a premature child at seven months which died shortly after birth, shows a patch of circumscribed scleroderma in the middle of the biopital groove of the right arm, from which a band extends along the ulnar margin of the forearm. She has had it for six years, and has only recently complained of weakness and impaired movement. She was sent to the Royal Southern Hospital by Dr. Humphreys in October, 1919. I ordered compound mercurial ointment to be rubbed well into the affected region, and probably it is due to the vigorous rubbing that she states she is much better, and has freer movement. The disease, at any rate, has made no progress during the last six weeks as far as I can judge.

In conclusion, I can but regret the futility of every medicament that has been used. It would have added greatly to the interest had I been in a position to say how the disease can be ameliorated, let alone cured.

MENINGITIS TREATED BY INTRATHECAL INJECTIONS OF THE PATIENT'S BLOOD SERUM.*

BY

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The clinical features and the characters of the cerebro-spinal fluid in the following case leave little room for doubt that the patient was suffering from cerebro-spinal fever. The cerebro-spinal fluid was not examined until the eighth day of illness, and absence of meningococci so late in the disease does not, I think, invalidate the diagnosis.

The patient, a man aged 30, had always enjoyed good health except that two years ago, whilst serving with the heavy artillery in France, he suffered from "boils." In his last camp, before demobilization many of his comrades suffered from influenza, but he escaped. He was demobilized about the middle of April, and on April 28th entered a gentleman's service as valet. At this time he seemed somewhat dull and lacking in energy compared with his former self, but had no definite illness until May 30th, when he shivered and complained of headache. The headache was accompanied by fever (103° F.) and photophobia, and for the next few days was so severe as to require morphine for its relief. On June 4th he complained of stiffness of the neck, and on June 6th a crop of herpes appeared about the nose and lips.

On the following day he was admitted to the Royal United Hospital. At this time there was slight retraction of the head, the posterior cervical muscles were very stiff, and the head could not be bent forward. With the thighs flexed at a right angle to the trunk the legs could be extended only to an angle of 135 degrees with the thighs. All the reflexes were normal except that the right abdominal reflex was much brisker than the left. The plantar reflexes were of the flexor type. The temperature was 102.2° F., the pulse 100, and the respirations 22. There was no optic neuritis, and the membrana tympani were normal.

The cerebro-spinal fluid was under considerably increased pressure and about 50 c.cm. were removed by lumbar puncture without difficulty. The fluid was turbid, clotted on standing, and contained 3,000 leucocytes (91 per cent. polymorphonuclear) to the cubic millimetre. Exhaustive search failed to detect any micro-organisms in stained smears. The urine was alkaline, turbid from the presence of bacteria, and showed a white deposit consisting of phosphatic crystals, leucocytes, epithelial cells, and a few erythrocytes; the bacteria present comprised Gram-negative coliform bacilli, encapsulated Gram-positive diplococci, and a short Gram-positive bacillus.

On the following day culture tubes of human blood serum, agar and of Loeffler's blood serum inoculated the day previous with the cerebro-spinal fluid were found to have remained sterile, and as the patient's condition showed no sign of

* A paper read to the Bath and Bristol Branch of the British Medical Association.

amelioration but rather the reverse, the headache, Kernig's sign, and retraction of the head all being more pronounced, it was decided to try the effect of intrathecal injections of the man's own blood serum, in the hope that antibacterial substances might be present in sufficient quantity favourably to influence the supposed infection of the meninges.

Accordingly about 50 c.cm. of blood were removed from a vein in the arm into a bottle which was then allowed to stand overnight in ice-cold water; 20 c.cm. of the resulting serum, after being warmed by placing the container in warm water, were then slowly injected into the subarachnoid space by lumbar puncture after removal of the same quantity of cerebro-spinal fluid. This proceeding was repeated on the three following days; only 12 c.cm. of serum, however, was injected each day as the cerebro-spinal fluid was under less tension and no more could be conveniently abstracted. A further 5 c.cm. were injected two days later (June 14th). From June 9th 10 grains of helmitol were given every four hours until June 14th, when the appearance of a considerable quantity of blood in the urine led to its being reduced to 5 grains every four hours. This haematuria quickly cleared up, and though the urine contained a trace of albumin until June 21st it was subsequently free; there was no evidence to the naked eye of bacteriuria, and the reaction was acid.

On admission to hospital the patient gave the impression of being desperately ill, and for the next two days the symptoms increased in severity. Headache was intense, there was delirium at night, the retraction of the head and Kernig's sign became more pronounced, and flesh was lost at a truly astounding rate. Improvement set in from the time of the first intrathecal injection, though headache was still sufficiently severe to require morphine hypodermically on the nights of June 9th, 11th, and 13th, and he continued to lose flesh. On June 15th and 16th there was incontinence of urine. From this time a striking feature of the case was the rapidity of convalescence.

After admission to hospital the temperature kept between about 100° and 102° until June 14th, when it fell by lysis, becoming normal on June 18th. There was a rise the following day, June 19th, to 101°, but subsequently, except for an evening rise to 99° on June 25th, 26th, and 27th, it remained normal till his discharge from hospital on August 3rd. In September he resumed work as a valet and has since remained perfectly well.

The failure to find micro-organisms in the fluid withdrawn by the first lumbar puncture was repeated in examinations, both by smears and cultures, of that withdrawn on subsequent occasions.

Had cultures been available of the four different groups into which the meningococci most commonly met with have been divided by Gordon, it would, perhaps, have been possible by the agglutinative reactions of the patient's blood serum to have determined which particular group was responsible for his illness and to have administered the appropriate antiserum. As they were not available, it was decided to proceed as above, and though it may be urged that the mere removal of the cerebro-spinal fluid or the administration of helmitol, which by some is claimed to exert a bactericidal action in the cerebro-spinal fluid when given by the mouth, may be factors in producing the favourable result, the recovery—and perhaps one might add the rapid recovery—of a case which at one time appeared to be hopeless is recorded in the hope that the measures adopted may be of use in similar cases where the exact nature of the infecting organism cannot be ascertained.

McKenzie and Martin¹ in 1908 reported twenty cases of cerebro spinal fever treated by intrathecal injections of the patient's own serum or of serum from other patients convalescent from the disease. Of these four were chronic cases and all died. Of the sixteen acute cases ten recovered, and of these two were treated by injections of their own serum, though in what quantity is not stated.

In conclusion, my thanks are due to our president, Dr. King Martyn, for kindly supplying me with the details of the earlier period of the patient's illness.

REFERENCE.

¹ *Journ. Path. and Bact.*, 1908, xii, 539.

ACCORDING to the *Boston Medical and Surgical Journal*, it has been established that the sum of 15 million dollars must be raised throughout the country in order to carry out the work already begun in supplying food, clothing, and medical aid in countries devastated by the war and for continuing the health campaign.

MRS. H. M. PLAYER, of Redland Park, Bristol, who died in October last, has bequeathed £500 to the Bristol General Hospital and £250 each to the Bristol Eye Hospital and the Bristol Royal Hospital for Sick Women and Children. The Bristol Royal Infirmary is to receive the remainder of her estate after the various bequests enumerated in the will have been distributed.

FORGETTING: PSYCHOLOGICAL REPRESSION.

BY

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THOSE who devote themselves to the treatment of functional nervous disorders, especially so-called neurasthenia—which term as used by the services and the pensions boards really conceals various hysterical manifestations among which anxiety states predominate—are constantly confronted by the patient with the statement that doctors have advised him to pull himself together, exercise his will power, and forget all about the incidents which proved his undoing. Such an attitude was taken up by Sir William Hale-White,¹ who stated explicitly that "talk should never be about past war experiences," but the patient should be helped to forget them by the aid of easy games of cards, light reading, croquet playing, etc. It is unfortunate that, in spite of the experience gained during the war in the special military neurological hospitals, this attitude should be so prevalent. The forgetfulness thus advised is nothing other than repression, and psychological analysis invariably reveals the fact that the patient's anxiety condition is directly attributable to it. This is due to dissociation and displacement of the affect, which then tends to attach itself to suitably associated presentations.

The more successful he is in repressing the memory of his unbearable experiences the more severe become his symptoms. Roughly, one may note three grades of repression or forgetfulness.

First, there is the degree in which the idea of the original incident is so unbearable to the ego as to be immediately and completely repressed. In this case the patient attempts to defend himself by complete amnesia for the event, which amnesia often includes, as an additional security, a considerable lapse of time in which the unbearable event is contained. For example, a patient may remember nothing after an explosion until he "comes to life again" in hospital a month or so later. Such a patient has most effectively practised the method of forgetfulness, but his condition is pitiable in the extreme.

One such case recently under my care was discharged from the army in 1916 as permanently unfit. Instead, however, of improving with lapse of time, he became progressively worse and had to give up work altogether. Recovery of the amnesia showed the unbearable incident to be that while lying semi-conscious upon a stretcher he had been robbed, and when he had offered such feeble resistance as he was capable of had been struck on the jaw and told to lie still. The recovery of the amnesia—in August, 1919—produced a remarkably steady effect upon the patient. Other apparently forgotten events were subsequently in a similar way revived and the patient's attitude towards them readjusted, with the result that he lost his anxiety symptoms and has been comfortably back on full work for the past two months.

The second degree of repression is that in which a patient remembers and is able to talk about most of the events in his military life, but has incompletely repressed certain of them on account of their highly disagreeable nature. Cases of this sort are particularly apt to deceive one and thus run a protracted course.

As an example I might mention the case of a man who had seen three years' service in France and to all outward appearance carried on satisfactorily until slightly wounded just before the armistice, after which he had to be invalided home with "neurasthenia." With a little encouragement the patient could discuss his military history apparently in detail. A good deal of perseverance was required to bring to light the pathogenic event. This proved to be the death by shooting, under tragic circumstances, of a close friend with whom he was constantly associated as a sniper.

The resistance which the analyst experiences in bringing such a repressed incident to light is considerable, as is also the emotional reaction of the patient at the moment, but the rapid recovery which follows is equally gratifying to both parties.

The third degree of repression is found among pensioners to be the most common and the most troublesome to deal with. In it there is no event of particular moment; the subjects of it deliberately try to exclude the whole of their military service from their minds, and desire to live as though the experiences contained in it had never been. In this group of patients especially one may notice a latent period intervening between the disagreeable experiences and the onset of the symptoms. Thus, a considerable