streamed down the upper arm from the axilla, and fell in rapid drops from the elbow to the ground; while the hairy scalp smoked from the warm moisture. Men showing this phenomenon were usually wasted, and a light tap on the pectorals provoked a strong idio-muscular contraction. These symptoms were seen in men going forwards, prepared to do their duty; the higher faculties still retained control of the machine, although the emotional strain of war had clearly produced a disturbance of the sympathetic system with its associated perversion of the internal secretions. The sweating, wasting, and muscular mechanical hyperexcitability thus produced are precisely the prominent symptoms in physiopathic paralysis.

Explanation of Symptoms.

The emotional strain of war induces an increased suggestibility (of which the exact process, conscious or subconscious, is outside the scope of this paper), so that a wound of the upper extremity is readily followed by hysterical paralysis of the hand. If the emotional strain has also brought about the profound disturbance of the sympathetic and internal secretions described above, these will specially affect the paralysed member, the nutrition of which is already lowered by immobilization. Further, since local sweating of the affected hand may be produced by emotion, it is reasonable to assume that other sympathetic impulses governing nutrition may be similarly affected.

In neurasthenia, morbid emotional states are generally credited with the power of causing functional disorders which may ultimately result in organic changes, as for example, in the abdomen. In physiopathic paralysis this process may be watched; and it is of special interest to observe its localization in the member towards which the patient's attention is directed, and which is the focal point of his emotions.

The physiopathic condition may thus be regarded as forming a link between hysteria and neurasthenia. The frequency of its occurrence in war is well explained by the depth of the emotional disturbance which war produces.

Relation to Nerve Lesions.

An irritative nerve lesion, owing to the pain and discomfort it causes, is not infrequently the provoking agent of a physiopathic condition; thus different areas of the same hand may show physiopathic changes side by side with the results of an organic nerve lesion. Such cases are often misunderstood; careful examination, however, readily discriminates the two conditions, the organic irritative lesion being distinguished by such features as the position of the wound, group-wasting, muscular tenderness, trophic sores and desquamation. The colour of the skin in the two areas is also often different. On examining such a hand I have often noticed the physiopathic area profusely bedewed with sweat, whereas the organically affected area remained dry, doubtless owing to the obstruction of the sympathetic impulses.

Treatment.

Psychological treatment by means of explanation, strong encouragement and re-education is the essence of success in dealing with these cases. The removal of the morbid mental state cures the paralysis and simultaneously eliminates the source of the perverted sympathetic impulses which are the cause of the trophic changes, the disappearance of the latter being greatly facilitated by movement and physical therapeutics. Recovery is almost invariable, and relapse is rare. Treatment is rendered noticeably easier by the patient's demobilization from the army.

Conclusion.

The emotional strain of war causes an increased suggestibility, with consequent liability to hysterical paralysis; the same emotional strain may also induce a disturbance of the sympathetic, the circulatory and trophic effects of which show themselves specially in the tissues of the paralysed member, partly on account of its immobility and partly owing to the localizing influence of the patient's emotions. This two-fold effect of hysterical paralysis with severe trophic changes constitutes the physiopathic condition.

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SOME REMARKS UPON SYPHILIS, MORE ESPECIALLY INHERITED SYPHILIS.

BY

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SIR JONATHAN HUTCHINSON said that "thousands of men marry at or about the end of two years after having had primary syphilis, and many at much shorter periods, yet the instances of communication to their wives or children are but infrequent." With this statement I cannot agree. I have for many years watched the children of men whom I have known to have had syphilis, and in almost every case a serious defect of some kind has shown itself in their children; this is true in cases where the parents were carefully treated, some for as long as five years, and more than one by Sir Jonathan Hutchinson himself. The usual manifestations of inherited syphilis are well known, but I wish to make special mention of certain diseases which are not generally recognized as due to this cause.

Nervous Diseases.—I think the large majority of cases of epilepsy occurring in the young are due to syphilis either in the parent or in the grandparent. Epilepsy occurs most commonly in infancy and at puberty. Recurring "convulsions" in infants are usually epileptic and may be cured by a course of mercury; I usually rely on hyd. cum creta (gr. $\frac{1}{2}$ to 1 ter die), or inunction with ung. hydrargyri fort. Epilepsy beginning later is curable, provided the disease be at once treated with mercury; but when such cases are left untreated for a few years cure is less certain and treatment has often to be carried out for two years or more. For adults, and even for older children, I nearly always prescribe mercury perchloride, which I prefer to the green or red iodide, because, in contrast with the iodides, I have never known it to produce salivation, although continued for many months, or even years.

As an illustration I mention the case of a girl of 15, who suffered from large lymphadenomata on both sides of the neck, that on the left side beginning later in spite of a course of treatment by potassium iodide in large doses. This patient was given mercury perchloride gr. $\frac{1}{2}$ ter die, increased gradually to gr. $\frac{1}{2}$ ter die. The treatment lasted for over seven years without intermission, and there was never the slightest sign of salivation; the tumours almost completely disappeared. In this case the father denied having had syphilis, but he died at the age of 84 in an asylum, and had Argyll Robertson pupils. This girl at 42 is still well and has had no recurrence.

For epilepsy occurring in later life similar treatment is invaluable. The following case is instructive:

A man of 65 began to have epileptic fits, which occurred during a period of some weeks. He admitted having had syphilis when 23 years old. He was treated with mercury perchloride, and his fits soon disappeared. He died from spastic paraplegia at the age of 77.

I am acquainted with many cases in which one or more children of syphilitic fathers developed epilepsy at puberty, and were cured by courses of treatment by mercury. I know of two or three cases of optic neuritis occurring in adults whose fathers were syphilitic.

One of these was treated by an eminent oculist, but did not receive mercury. His father sent him to Pagenstecher, who took him into his house for a few weeks and cured him by rubbing in mercurial ointment.

Another youth, who had well-marked syphilitic teeth, otitis media, and interstitial keratitis, was treated by oculists for nearly two years, being given potassium iodide and ten drops of liq. hydrargyri perchloridi (that is, gr. $\frac{1}{2}$ ter die). Pagenstecher cured him in a month by mercurial inunction.

The following is a remarkable case, showing, I believe, the effects of syphilis on the third generation.

A girl of 24 consulted me for spastic paraplegia with weakness of the arms and affection of the eyesight. Her grandfather and grandmother died between 50 and 60 years of age from tabes dorsalis and apoplexy respectively. Her father, who denied having contracted syphilis, was nervous and short-sighted; he had had an attack of unconsciousness lasting for a week (he died from carcinoma of the caecum subsequently to his daughter's illness). Treatment of the patient by mercuric perchloride led to very striking recovery of the eyesight and arms; the legs did not improve.

I have traced the cause of several cases of enuresis to hereditary syphilis, and have cured them by a course of mercury.

Skin Diseases.

I have treated several cases of severe psoriasis with mercury. My first case came under observation at an early age, and showed an excellent result:

A boy of 12 or 13 had widespread psoriasis with abundant rash. Treatment with Fowler's solution in large doses caused improvement, but there were three relapses. I treated him with mercury perchloride and he made a good recovery, having no relapse during the many years in which I continued to come into contact with him. Subsequently his father consulted me for paresis of the right arm, and admitted having had a Hunterian chancre before the boy was born.

Tuberculosis of various types is not uncommon in syphilitics and their children; I mention two cases:

A lady suffered from fibroid phthisis, and died at the age of 39. Subsequently her father consulted me for severe headache, and acknowledged having had a Hunterian sore before his marriage.

A man of 35 suffered from haemoptysis, and tubercle bacilli had been found in the sputum. He admitted having had syphilis; I gave him treatment by mercuric perchloride. He took a voyage to the Cape and has remained well for ten years.

A careful study of family histories has convinced me that there is a want of stability about children of syphilitics. Among such cases I know of two who fell down dead when engaged in a paper chase, another who shot himself, and two who were rusticated from college. Of the latter, one died of phthisis and the other has a chronic suppurating sinus. I believe, also, that there is a much nearer relation between syphilis and cancer than is usually believed, and more especially between contracted syphilis in the parent and cancer in the offspring. I know of six syphilitics (acquired) who died from cancer of the gut.

Of the wives of men who have had syphilis, I find that some seem to be unaffected and live to a good age, but a certain number die young. I can recall four or five instances of such women who have died from so-called puerperal fever, and several cases who have suffered from albuminuria, convulsions, or iliac thrombosis during or after pregnancy. I am acquainted with a case of Graves's disease cured by mercury, which occurred in the wife of a syphilitic; also with a similar one in the daughter of a syphilitic. A man I know had syphilis; his first wife had one child, and died from alcoholism; his second wife died from puerperal convulsions following albuminuria and dropsy. Other instances which I have observed of diseases occurring in those whom I have known to be affected with syphilis are: Dupuytren's contracture (several cases), so-called tuberculous glands of the neck, and ulcerative keratitis. I believe that Bright's disease is usually syphilitic, and recall the striking case of a medical man who had a digital chancre, and died at the age of 44 from Bright's disease.

It is often stated that congenital syphilitics may have healthy children. With this I agree, but I believe it partly depends upon whether one or both parents are congenitally syphilitic. I am acquainted with one case in which the son of a syphilitic married the daughter of a syphilitic; they had three children, but all died young. I knew the children of a healthy mother and a father who was congenitally syphilitic; one child died suffering from marasmus and an eruption; the others were apparently healthy.

I have a strong suspicion that many chronic diseases are due to a syphilitic taint. These cases, however, are very difficult to prove, and as one meets only one or two in a lifetime I make this remark that others may be induced to follow up clues. I have been designated a "syphilophobic," but I claim to have found evidence of many unrecognized cases of this disease. It is extremely important first to inquire most carefully regarding the family history, and, secondly, to examine the teeth. In many cases of congenital syphilis, although the typical teeth as described by Sir Jonathan Hutchinson may not be present, the teeth are irregular and the lateral incisors are often small or absent. Early decay is frequent. Some hereditary syphilitics have good teeth, but are affected in other ways.

TRANSFUSION OF BLOOD IN NEPHRITIS.

BY

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IN view of the interest which will be aroused by Dr. W. Blair Bell's article in the *BRITISH MEDICAL JOURNAL* of May 8th on the treatment of eclampsia by transfusion of blood, it may not be out of place to record the notes, made at the time, of the following case, which was admitted under my care to No. 64 Casualty Clearing Station in France during the summer of 1918.

The comparative incompleteness of the notes must be excused by the fact that the casualty clearing station was extremely busy at the moment.

A private, aged 22, who had previously been healthy, suffered from headache and vague generalized pains for ten days. On admission he was slightly drowsy and had a coated tongue; the systolic pressure was 100 mm. of mercury, the diastolic 60. The urine was acid, specific gravity 1010, with much albumin present, but no sugar; the centrifuged deposit showed the presence of many casts (chiefly granular), but no blood cells were noted on this nor any subsequent occasion. Respiratory, circulatory, and other organs appeared to be normal. His vomiting continued, and he could not retain anything given per rectum. During the first and second days he passed 10½ oz. and 2 oz. of urine respectively, and on the second his blood pressure fell to 90 mm. systolic, 40 mm. diastolic; suppression of urine seemed imminent and his condition was very grave. It was decided to try the effect of blood transfusion, and I injected intravenously 1,140 c.cm. of fresh blood from a donor of the same group (IV) as the patient; the blood pressure subsequently rose to 100 mm. systolic and 50 mm. diastolic. Next day the diastolic pressure rose to 70 mm. of mercury; vomiting became much less frequent and in the ensuing twenty-four hours he excreted 24 oz. of urine. He was able to retain "rectal salines" and was given hot packs, as well as 1 c.cm. of pituitrin six-hourly. Captain J. W. McLeod, R.A.M.C., kindly examined a specimen of blood and reported marked deficiency of fixed alkali, as estimated by Sellard's method.

Next day, in spite of retention of the "salines" and diminution of vomiting, urinary excretion fell to 16½ oz.; he was given intravenously one pint of a 2 per cent. solution of sodium bicarbonate, and during the next twenty-four hours he only vomited once and passed 22 oz. of urine. A pint and a half of sodium bicarbonate solution was given intravenously next day; vomiting ceased, and he passed 27½ oz. of urine in the twenty-four hours. He was now able to retain fluids given by the mouth, and 20 grains of sodium bicarbonate were given two-hourly. The excretion of urine rose to 54, 56½, and 61 oz. during the next three days respectively; the urine still remaining acid, the dose of sodium bicarbonate was increased to 30 grains, and he was given in addition 15 grains of potassium citrate three times a day, whereupon he passed alkaline urine to the amount of 61 to 81 oz. per diem during the next five days. By this time his general condition had become excellent, and the fixed alkali in the blood, as determined by Sellard's method, was normal. He was evacuated to the base on the sixteenth day; a last specimen of urine examined contained a faint cloud of albumin, and epithelial and granular casts were still present.

From a review of this case it seems clear that the transfusion of blood, performed when the patient was so ill that recovery seemed almost impossible, was the turning point in the course of the disease. We are still in a large measure ignorant of the metabolic changes associated with nephritis; the disease may depend on a deficiency of some chemical substance in the blood or tissues, or it may be due to an infective process the nature of which has not yet been determined. In either case, and in view of the low blood pressure, to introduce blood from a healthy donor of the same group appeared a rational procedure. It is important to point out, however, that there is no evidence that a solution of sodium bicarbonate given in the first instance would not have produced an equally satisfactory result; in the next similar case which comes under my care I shall give the bicarbonate first and the blood afterwards, if necessary. Everyone who has kept a careful record of blood pressure in nephritis will agree that the prognosis is worse on the whole in cases having a low systolic pressure; in such cases the above method of treatment seems to offer a hope of success. It would interest me to know if this was the first time that transfusion of blood was used in the treatment of nephritis.

THE physicians and surgeons of Madrid have adopted a resolution expressing determination to refuse to serve in hospitals unless well-to-do persons are forbidden to take advantage of free consultations. They declare their readiness to treat the poor without fee at hospital and dispensary consultations.