into the nature and origin of his illness and is to a large extent restored to health.

By means of this series of cases an attempt has been made not only to indicate the forms of mental disturbance observed among the patients admitted to this hospital, but also to show that the term "shock" by no means explains all the conditions of mental illness occurring in those who have returned from the front. Disturbances ranging from a slight, simple shock to a serious condition with hallucinations and delusions have to be observed. The more simple cases, which are popularly spoken of as "shock," recover quickly, but in the majority of instances there remains after the manifestations of shock have disappeared a "residuum," as Wernicke expressed it.

The work which is being done here is directed towards investigating the causes which have led to the persistence of this residuum and towards endeavouring by suitable treatment to assist the patients to recover. In order to understand the conditions we have to deal with it is necessary to consider the various factors which have been active in producing the disturbance. In the first place, it is important to remember that these men have lived through a prolonged period of strain before they have broken down under some special shock, such as the death of comrades at their side, the explosion of a shell near them, or the blowing up of a trench. Incidents such as these, together with the fatigue or exhaustion produced by life in the field, have led to the lowered capacity of resistance or control which is manifest in most of those who come under our care. Owing to their condition of lowered capacity the patients feel that they are not the men they were before the war began; they recognize a change in themselves and describe it clearly. They know that they are irritable, that they are unable to interest themselves or to give a maintained attention to a given subject. Instead of being jovial and social they are solitary and morose; instead of being good-tempered and taking things as they come they are irritable and find great difficulty in controlling themselves. All this is very real to them and leads to a condition of anxiety which is increased by their not being able to understand their condition; they worry because they fear how far this sort of thing may go. As a result they live in a state of expectancy which causes them to exaggerate the trifles of everyday life. Small incidents—slight psychic or physical disturbances which would have passed unheeded before the war—now assume a quite abnormal interest and importance for them.

All the conditions referred to so far can be observed in a merely superficial examination, but a deeper investigation will in many cases demonstrate that various other causes may have participated in producing the illness. These deeper causes—for example, the repeated revival of memories of horrible incidents at the front, terrifying dreams, and also memories of incidents of their past lives—have played a large part in determining and maintaining the disturbed mental condition. Examples of the action of these causes have been given in this paper, and it is perfectly evident that the incidents which have had such a disturbing influence have been those with which an intense emotional state has been associated. Dejerine has suggested that in all cases of hysteria and neurasthenia the cause must be sought in some antecedent emotional condition. The results of the investigations among these patients demonstrate that this principle is capable of a much wider application.

It is the strong emotional factor which so compels the attention of the patient. The normal freedom of their mental activity is interfered with, and in some instances the attention is so fixed on the disturbing influences that the offending memories and their accompanying emotional states cannot be expelled. Then may follow the appearance of hallucinations and the development of delusions which the patient employs to explain his condition to himself, and the repeated dwelling on these delusions leads to a habit of mind which becomes more fixed as time goes on unless some active and suitable treatment is adopted.

While in this state the patient is to a large extent incapable of reasoning about his condition; he is unable to make use of the sum total of his past experiences; he gives way to the emotional states in which he may find himself, or he dwells on the explanation he may have accepted. His difficulty lies chiefly in the fact that he has

little or no insight into the nature and mode of origin of his mental illness. This insight can be provided by explaining to him in plain language the mechanism of simple mental processes, by enabling him to understand that every incident is accompanied by its own special emotional state and that this emotional state can be reawakened by the revival of the incident in memory. The patient will thus be led to see that it has been no gross disease and no supernatural agency which has disturbed him; he will be able to recognize the relation of cause and effect in the origin and development of his illness.

When this relation is appreciated both the patient and the physician will begin to realize that they have some ground in common. And this stage being reached, the mystery of the illness will be swept away and the physician will be able to explain to some extent the reason and the mechanism of his loss of control, of his disturbed attention and of his lack of interest, and also to show him how he can educate himself to regain that which was lost. The patient will understand that it will not be possible for him to banish the memory completely. But he can be induced to face the trouble, to reason about it, and to recognize it simply as a memory of the past instead of allowing the emotional tone connected with it to dominate him until the condition of anxiety had been produced. The excessive emotional tone will thus be stripped away and the patient will become able to appreciate the real value of the incident, and this will assist him to recover from the condition of confusion, disturbed attention, and anxiety, which, if neglected, may lead to serious results. Further, just as in each case the disturbance can be traced to a specific incident or series of incidents, so the re-education must vary with each in order to overcome the difficulties connected with the specific cause which has been discovered.

The difficulties in the processes of investigation and treatment of these cases are often considerable, and it must be recognized that recovery will not take place in every instance. But the results obtained demonstrate that many mental illnesses recover in a most satisfactory manner under a well-directed and sympathetic treatment. The confidence of the patient must be obtained in order that he may be induced to co-operate in the treatment of his illness. This co-operation is indispensable, and it is extremely interesting to find how readily it can be obtained from patients in whom the illness has lasted only a short time. And when the difficulties, often insurmountable, which are encountered among those in whom the mental disorder has become fixed and systematized are considered, the value of the early treatment of mental disturbances in a hospital by an efficient staff who devote their whole time to the work, at once becomes manifest. The physician should be prepared to give at least an hour for an interview and in most instances several interviews will be necessary. Short cuts may be attempted; they rarely lead to success. A prolonged study of each separate case will not only provide a means of treatment for the individual, but will also collect a mass of evidence which will help to develop a new and enlarged view of psychological medicine.

MENTAL SYMPTOMS COMPLICATING A CASE OF ACUTE TETANUS DURING TREATMENT BY CARBOLIC INJECTIONS.

BY

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THANKS to the valuable prophylactic effect obtained by prompt injections of specific antitoxin, cases of tetanus occurring among the wounded in the present war are quite infrequent. Consequently I offer no apology for publishing notes of the following case:

On November 11th, 1915, while unloading an ammunition wagon on the lines of communication, Gunner C. was struck by fragments of a high-explosive shell, which exploded close to him. He was severely and extensively wounded in the right buttock, right thigh, and right foot, as well as in the left leg. The wound of the right foot was very severe, the fragment of

shell having torn most of the extensor tendons and laid open the ankle-joint.

Earlier in the war it was the custom to make careful inquiries as to whether or not a wounded patient had received a prophylactic injection of antitetanic serum. The administration of these injections has become so much the invariable practice at the front that in the base hospitals one has ceased to ask the question.

Thus it happened that it was not until the occurrence in this case of subsequent events that one was led to investigate the question. The patient did not remember having received an injection; but it is possible that it was given while under an anaesthetic at the time of his first operation in France, or, on the other hand, it may have been that, wounded as he was far behind the firing line, he missed receiving treatment at a field ambulance or at a clearing station.

He came under my care at the 4th London General Hospital on November 16th, 1915, five days after he was wounded. For some days the wounds, which were extremely septic, were treated by peroxide irrigation and boric fomentations.

Six days later—on November 22nd—some trismus and a definite risus sardonius were noted. He was at once given 4,000 U.S.A. units of antitetanic serum, and 1 c.cm. of 1 in 20 carbolic acid was injected subcutaneously every four hours. He received a further 1,500 units of serum the same evening.

Had it been possible to localize the focus of infection as being in the wound of the foot, it would have been an easy matter to amputate immediately, especially as the foot was so severely injured that the prognosis was not hopeful. But in the presence of other septic wounds, any one of which might be equally the source of infection, it seemed to me wiser to secure efficient drainage everywhere by means of opening and irrigating thoroughly the wounds of the thigh and buttocks, and by an astragalectomy on the foot.

After the initial symptoms the march of events was rapid. The muscles of the abdomen and back were strongly contracted, and convulsions occurred frequently. On the evening of November 23rd he was given 1,500 units, as well as a quarter of a grain of morphine and 2 drachms of chloral. The pain in the back and leg was severe. On November 24th he had a further 1,500 units of serum, chloral, and bromide every six hours and morphine in the evening. The same course of treatment was pursued on November 25th. On November 26th and 27th the patient remained in a semi-comatose state from the effects of the chloral and bromide. Whenever he was allowed to come round at all the spasms became intense; on November 28th they were less severe, and on November 30th he was treated less energetically with hypnotics. The mental condition now began to show a marked change. He became extremely restless and passed into a state of low, muttering delirium, with visions and hallucinations—a condition closely resembling delirium tremens. From time to time he attempted to get out of bed, and had to be forcibly restrained. This lasted for five days, during which time he had incontinence of urine and faeces. Chloral and bromide, which had previously quieted him, had now no effect. After four four-hourly doses of half a drachm of paraldehyde, however, he settled down into a quiet sleep.

On December 7th incontinence had ceased and he had regained a more normal mental state. Paraldehyde was continued every four hours until December 8th, as well as occasional injections of morphine and atropine and draughts of chloral. On December 9th the mental condition appeared normal, but on December 10th there was a bad relapse with more incontinence. This lasted acutely for three days, but it was not until December 20th that the mental state again became normal and he was able to recognize those around him.

With the exception of the single shell explosion noted above, the man had never been under fire. This fact, as well as the delay in onset of the mental symptoms, tends to show that they were not due to shell shock. On the other hand, I am not familiar with the occurrence of such a form of delirium as being a symptom of tetanus itself. This is also the experience of those of my colleagues with whom I have consulted. I have thought it possible that the carbolic acid injections may be not unassociated with the condition.

Injections of 1 c.cm. of 1 in 20 carbolic acid were given at four-hourly intervals from November 22nd till December 4th. At no time, however, were there any other symptoms of carbolic acid poisoning.

The patient's general health is now (February) perfect, and there is no trace of mental instability. The movements at the ankle are quite good, and with his remaining extensors he is able to carry out a fair degree of dorsiflexion.

THE Secretary of the United States Treasury, Mr. W. G. McAdoo, has transmitted to the House of Representatives, on behalf of the Public Health Service, a recommendation for an emergency appropriation of £20,000 for the promotion of rural sanitation with the object of checking the spread of pellagra and typhoid fever.

A CASE OF ACUTE GANGRENOUS CHOLECYSTITIS WITH SPREADING PERITONITIS OCCURRING IN THE EPIDEMIC OF JAUNDICE, GALLIPOLI, 1915.

BY

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*With Observations on the Pathological Findings in
their Relation to the "Epidemic" Jaundice
of the Dardanelles.*

BY

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Cases of ascending infection of the bile ducts, liver, and gall bladder became extremely common during October, 1915, amongst our troops on the Gallipoli peninsula. The cases, as we met with them in the early days of their illness, may be grouped clinically into three categories:

1. Jaundice, associated with a variable degree of pyrexia, and usually enlarged and tender liver.
2. Acute cholecystitis without jaundice.
3. A combination of the first two types, with jaundice accompanied by acute cholecystitis.

According to our observation, the three classes occur with a relative frequency that corresponds with the order given above, though the patients with cholecystitis may well develop jaundice at a later stage. The following case is reported in order to draw attention to the danger of an acute gangrenous inflammation of the gall bladder—a condition which is in any event of extreme gravity, and, apart from prompt surgical intervention, is almost inevitably fatal from general peritonitis.

Case.

Pte. S., R.A.M.C.(T.), aged 22, reported to one of us (F. B. S.) on sick parade on October 5th, 1915, complaining of the following symptoms: (1) Pain in the epigastrium that had been constant, slight, and aching in character for four or five days; (2) a cough that was worse at night, aggravating the pain; (3) general malaise, anorexia, and slight headache for the same period. There was no history of vomiting, though there had been occasional nausea and retching after food. There was nothing irregular in the frequency and character of the urine or faeces, though he had suffered from diarrhoea a few weeks before. He had been inoculated against typhoid (two doses) about twelve months before.

On examination the temperature was normal. There were no abnormal physical signs in the chest. The tongue was not quite clean, and there was indefinite epigastric tenderness. He was treated as a case of simple indigestion.

On the following day the symptoms were the same, and the temperature still normal. On the morning of October 7th he complained of pain across the lower chest on respiration. The temperature was 99.2°. The chest was quite clear. The epigastric tenderness was more marked but not definitely localized. The tongue was coated yellow, and there was a left follicular tonsillitis. That evening the man complained that his pain was worse, and he was admitted to the dressing station tent with a temperature of 102° F. During the night the pain grew worse, and the patient vomited several times.

On the morning of October 8th he was evidently very ill indeed. The temperature was 102.8°, pulse 120, and he was flushed and showed a marked "abdominal facies." On