SUCCESSFUL EARLY OPERATION IN WOUND OF SMALL INTESTINE.

BY CAPTAIN JOHN H. STEPHEN, R.A.M.C.,
89TH FIELD AMBULANCE (1ST HIGHLAND).

ON August 13th Private S. was admitted to our dressing station, situated in a gully, a small branch of the famous ravine running from the Gallipole coast up to Achi Bahr. Half an hour before a shell had blown in the trench in which he was; it killed two men at his side, and he himself sustained a penetrating wound of the abdomen.

From the wound, which was only about an inch long and just above McBurney's point, was protruding a small lobule of bowel; this I intended to wash well with saline and replace in the abdomen, then inserting a small drain. Something prompted me to insert my finger in the wound after replacing the bowel, and I found a small particle of shell, about half an inch long, firmly embedded in the omentum. I hooked it out along with the omentum, which I then tied off preparatory to replacing it. Lieutenant Thompson was assisting me, he having previously put the man under chloroform, when suddenly, owing to the light anaesthesia, the patient attempted to vomit; the effort brought forth from the wound a coil of ileum, at least six inches of which was entirely riddled by shell and really hardly existed as bowel. Two things only could be done—either to put it back or resect. I resolved on the latter, and there and then, although with very limited means and much unsuitable material to work with, I did an end-to-end anastomosis with the quickest possible speed, replacing the bowel through the slightly enlarged wound after washing well with saline, putting in a gauze drain and closing the aperture as necessary.

The patient, who was suffering considerably from shock upon admission, was placed under a tarpaulin on a stretcher in Fowler's position, a large saline was administered by the rectum, and an immediate improvement became visible in spite of the flies and dust. Throughout the day he was given sips of water with occasionally a few drops of brandy; throughout the night when not sleeping he had a teaspoonful of milk and water every hour. A small hypodermic injection of morphine was given to relieve restlessness. Next morning the pulse had improved very much; it never rose above 80, but as it was still soft a continuous saline apparatus was erected, and during the day many pints were given and retained.

One small mouthful of green bilious fluid was brought up, but generally speaking the patient was improving and feeling well and wanting nourishment. At night beef-tea and milk and water, one dessertspoonful of each alternately, was ordered; all was retained. In addition one-third of a grain of calomel was given every two hours, the order being that it was to be continued until the bowel moved. On the afternoon of the third day flatus was passed, and the patient felt very much better. He looked almost normal; all signs of shock had disappeared, and he slept well all night. Next morning (August 16th) I removed the gauze drain, which was perfectly dry and sweet, and put in a smaller one.

At 11 a.m. we had orders to evacuate immediately, and I handed the patient over to another field ambulance in another gully 100 yards away. I heard no more of him until August 23rd, when at Suvla Bay I was attending to Lieutenant C. of a field ambulance, who had been shot in the knee at the battle of Chocolate Hill, and there he told me that the case had done splendidly, the bowels had moved well, and the man was feeling very fit and eating well. The patient had been evacuated by the ambulance to which we had sent him shortly after we had gone, and he had a long journey down the gully to a casualty clearing station; yet no harm had been done.

I consider this case worth noting, first, for the fact of the rough and ready material at our hands for an operation of this kind; secondly, for the fact that the case was tackled within an hour of the injury, instead of undergoing operation after a long and exhausting journey down country to the beach, with an added burden in the way of a long sea trip on a lighter or a trawler before reaching a hospital ship, with perhaps the delay of many hours in a casualty clearing station. It is a proof that many cases of abdominal injury might be saved if dealt with on the spot by the field ambulances,

provided always that the right case is chosen for operation. It is interesting to read in the JOURNAL of July 31st that the German military surgeons now incline to the idea of operating early and on nearly all abdominal cases coming into field hospitals, and that their statistics show that the mortality in these cases is in direct proportion to the length of time elapsing between the wounding and the operation and to the length of journey that the patient has to undergo before treatment.

SOME CASES OF HEAD WOUNDS.

BY
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THE following cases of head injury show some features of interest.

CASE I.

Private T. H., aged 26 years, was struck on May 11th by a shrapnel bullet on the head. He was unconscious for a few minutes, and then walked back to the dressing station. On admission to hospital there was a small septic wound just to the right of the middle line above the ear; the bone was exposed; there were no signs of intracranial mischief; x rays showed small pieces of metal in the outer table and depression of the inner table. The metal was removed, the wound in the outer table enlarged, and about one square inch of depressed and broken-up inner table removed. The dura mater was intact. He made an uninterrupted recovery.

CASE II.

Private A. L., aged 21 years, was hit on May 9th by a bullet. He was unconscious for a short time, and then walked back to the dressing station. He had no symptoms of intracranial mischief.

On admission on May 15th there was a healed wound of the scalp just to the right of the middle line, and in a line with the posterior edge of the ear; x rays showed depression of the inner table. On cutting down to the bone a round opening about 4 mm. in diameter was found. This was enlarged, and several small fragments of the inner table were removed. The dura mater was uninjured. He made a rapid recovery.

In both these cases the optic discs were very much injected, but there was no swelling.

CASE III.

Private T. S., aged 19 years, received a bullet wound when attacking on May 9th. He was knocked down, but not rendered unconscious, and walked back to the dressing station. He suffered from continuous headache and frequent vomiting.

When admitted, on May 17th, there was a transverse wound about three inches long just below the upper border of the occipital bone; it was septic, and exposed bone could be felt with the probe. After admission he complained of considerable headache, and at first he vomited on several days. He was in a very dull condition. The retinal veins were enlarged in both eyes, with very considerable swelling of the discs. The vomiting and headache soon ceased, and his mental condition improved. The x rays showed no injury to the skull. In spite of this, as the signs of pressure were so marked, it was decided to cut down on to the bone. After careful examination, as no fissure could be found, nothing further was done. He made a good recovery, and went to a convalescent home. The discs when he left the hospital, although improved, were still swollen.

The first two cases illustrate well what is now well recognized—that when the outer table is injured, however slightly, there is nearly sure to be some injury to the inner table, and hence thorough exploration is necessary.

The third case is difficult to understand. There was no apparent intracranial injury, and yet the symptoms and signs of such were well marked. It would be interesting to know whether similar cases have been met with.

CASE IV.

Private H. B., aged 27 years, when attacking on August 9th, 1915, was struck on the head by shrapnel bullet. He did not become unconscious and walked back to the dressing station. He forgets whether he had any headache, but he did not vomit. Just over the motor area on the left side was a ragged septic wound nearly healed. There was very marked hesitancy in speech, and slow cerebration, but no headache or sickness. The pupils were equal and active, and the discs were normal. There was no definite alteration in face muscles. The grasp was perhaps weaker on the right side; the knee-jerks active and equal on both sides. X rays showed no injury to bone. He remained in this condition for two or three days and then gradually improved. In about a week his mental condition cleared up and his speech became normal. He was sent to a convalescent hospital apparently quite well.

As the x rays showed no signs of injury to the bone, and there were no definite signs of pressure, it was concluded

that the mental condition was due to shock; and this view appears to have been correct. I saw him three months after he left the hospital, and he appeared then quite well.

THE MANUFACTURE OF ASEPTIC HOSPITAL FURNITURE.

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ALTHOUGH hospital furniture has been improved during the last twenty years, it is still far from perfect from an aseptic point of view. A considerable proportion of it has been made in Germany, and now that this source of supply

Fig. 1.—An operating-room table.

The angles A, A are all rounded and scalloped out. The socket carrying the castor is continuous with the table leg, so that no joint is visible, B. The rabbet holding the upper glass shelf C is scalloped out, though this is not seen in the photograph. The rounded and scalloped inside of the angles is seen at D.

is cut off, there is some difficulty in meeting the present increased demand.

At such a juncture I feel that it may be an advantage if I describe some of the articles which I have invented.

On examining some specimens of hospital furniture it will be seen that the manufacturers have left angles and depressions which act as receptacles for dirt and germs. It is difficult, and in some instances impossible, to clean them. I have endeavoured to guide some of the makers from their erroneous ways into the right direction. Hitherto my efforts have been without result; even when I have submitted models these have sometimes been incorrectly copied.

Fig. 2.—A ward wagon.

This is somewhat similar to the table, Fig. 1, but is of larger size and is provided with a metal rail, which has rounded angles at A, A. The feet are so constructed that they fit into the wagon, leaving a scooped-out edge, as shown in Fig. B.

Manufacturers appear to have adopted a stereotyped method of employing cornices, panels and ornamentation, and to be unable to avoid such adornment. Furthermore, they are not surgeons; they do not fully understand what we require, and they are consequently incapable of attending to the necessary details. It is equally true that surgeons are not furniture makers. If a perfect article is to be produced, combined effort is essential.

I have been fortunate in finding a local cabinet-maker able and willing to work with me and carry out my views. The drawings illustrate furniture he has recently con-

Fig. 3.—An instrument cabinet.

There is an entire absence of ornamentation. The angles are all rounded at A, A, A, and the same applies to all the inside angles. The bottom, C, is made to open flush, without any ledge to catch the dust and dirt, and the corners are all rounded as at D. The catch and striking plates are let in flush, and there is a spring stop in the striking plate to prevent a hole, which would contain dirt. The door is rounded at the corners to avoid angles, as at B, and it is bevelled down to the glass inside and outside. The edge is rounded, and fits into a scalloped rabbet. The glass shelves are supported by rounded metal plugs, which can easily be removed and inserted.

structed under my supervision. These show my methods of construction, which it is difficult to explain clearly in an article.

Briefly, my object is to avoid any depression or angle—to make the furniture in such a way that the most

Fig. 4.—An operating-table.

The angles A, A, A are all rounded and scalloped. Where the cross pieces join, B, B, B, it is also scalloped. There are wheels on the feet of the table at the head, so that it is easy to move it about if the foot end is raised. The rack allows the head to be raised or lowered.

perfunctory dusting cannot fail to clean every portion of it.

To attain this end it is necessary to apply the above principles to the parts hidden at the back and underneath, as well as to those which are in full view. So far as I can judge, it is possible to obtain perfection in this respect—that is, to construct a piece of furniture without any receptacle for dirt.