Notes of surgical cases : penetrating wound of the stomach and transverse meso-colon successfully treated by abdominal suture : case of traumatic aphasia successfully treated by the removal of a blood-clot from the interior of the cerebrum / by Charles B. Ball.

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CASE OF TRAUMATIC APHASIA SUCCESSFULLY TREATED BY THE REMOVAL OF A BLOOD-CLOT FROM THE INTERIOR OF THE CEREBRUM.

BY

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NOTES OF SURGICAL CASES.

PENETRATING WOUND OF THE STOMACH AND TRANSVERSE MESO-COLON SUCCESSFULLY TREATED BY ABDOMINAL SECTION.[a]

Cases of penetrating wound of the abdomen, for the treatment of which abdominal section has been performed, are of considerable interest to the surgeon; and the number of instances in which this operation has been performed, although it has increased considerably during the past few years, is still small; it is therefore of importance that individual cases should be put on record. This must be my apology for narrating a single case that came under my care:—

H. R., a lad of fifteen years of age, a carpenter by trade, was admitted into Sir Patrick Dun's Hospital on March 29, 1887, immediately after having stabbed himself in the abdomen with a half-inch chisel. The accident was stated to have occurred in the following manner:—He was putting the chisel into a handle, and for this purpose he held the blade with both hands, with the cutting edge towards his abdomen, and firmly pressed the handle against a wall; his hands suddenly slipped, and the chisel perforated his abdomen about half way between the tip of the ensiform cartilage and the umbilicus, a quarter of an inch to the right side of the linea alba, the direction of the wound being vertical.

Upon his admission to hospital it was not at first thought that he had sustained any grave internal injury. Collapse, however, became more marked, and two and a half hours after the injury he vomited part of the contents of his stomach stained with blood. The vomiting became frequent, and the quantity of blood considerable. I saw him four hours after the injury; he was then

[a] Read in the Surgical Section, March 28, 1888.

profoundly collapsed; he vomited blood at frequent intervals, and at each effort to vomit, a stream of blood spurted out at the abdominal wound. The whole abdomen was dull upon percussion, apparently due to the peritoneum being filled with blood; it was evident that some large abdominal vessel had been perforated, and also some of the hollow viscera, and that unless the bleeding could be stopped the boy would die in a very short time. I therefore decided upon opening the abdomen immediately, as affording the only possible, although slight, chance of saving life.

An incision about three inches in length was made in the middle line between the ensiform cartilage and the umbilicus and the chisel wound connected with it. As soon as the peritoneum was opened a large quantity of blood gushed out; a search for the extent of the internal lesions was now instituted, and the stomach was found to be wounded. A clean cut existed in the greater curvature, about half an inch in length; it was not bleeding to any extent, the mucous membrane was not prolapsed, and none of the contents of the stomach were found extravasated. Some extravasation may, however, have taken place, but was not observed owing to the quantity of blood about. The wound in the stomach was now sutured up, the needle being passed through the serous membrane only, after the method of Lembert, but the suture was a continuous one, the ends being knotted together.

As the bleeding still continued freely, I looked for other wounds. The great omentum was reflected upwards, and a systematic search instituted. Upon passing my finger along the under-surface of the transverse meso-colon, I was able to *feel* a wound in it, and as soon as the blood was sponged away it was found that a large vein had been wounded, and that it was bleeding very freely. With the assistance of my colleague, Prof. Bennett, this vessel was secured, and further careful search failed to discover any other injuries. The peritoneum was carefully sponged out and the wound closed in the usual manner; the patient during the performance of the operation was greatly collapsed, so much so that it was feared he would die on the table. Shortly after being removed to bed he vomited, but the ejected matter was free from blood. All food by the mouth was absolutely interdicted, but he was allowed small pieces of ice to suck occasionally. He was nourished by zyminised meat suppositories and by nutrient enemata, made according to the following prescriptions:—

℞. Tinct. opii, ♏. x.
Potassæ bicarb., gr. x.
Liq. pancreaticus, ʒi.

M. Add half an ounce of brandy, the yolks of two eggs, and cream to 4 ounces.

℞. Tinct. opii, ♏. x.
Acid hydrochlor., dil., ♏. x.
Liq. pepticus, ʒi.

M. Add half an ounce of brandy, the whites of two eggs, and beef essence to 4 ounces. One of the above enemata to be given alternately every four hours.

He passed a good night, and the day following his pulse was somewhat stronger, and he did not appear to be quite so blanched.

On the third day he vomited some pieces of onion quite unchanged, which he stated he had eaten shortly before the accident.

On the sixth day he was, for the first time, allowed fluid nourishment by the mouth, small quantities of strained beef-tea being given him, and the day following milk was added to his diet.

On the 9th day the enemata were stopped, as he was able to take by the mouth sufficient fluid nourishment. He was not allowed solid food until the 14th day, when he appeared to be quite convalescent. His temperature remained afebrile during the entire course.

In the case that I have thus briefly endeavoured to detail there are several points of interest. When I found the wound in the stomach I expected that the chisel had transfixed that viscus, but a most careful search failed to find more than a single opening, and yet we had a wound of the transverse meso-colon at a level below and behind the stomach. I think that the explanation of this fact is, that the stomach was incised by the angle and not by the full cutting edge of the chisel, and that the blade passed through the great omentum between the stomach and transverse colon, and then through the transverse meso-colon from above. The aperture in the stomach was not blocked by a prolapse of mucous membrane such as is usually stated to be the case when any of the hollow abdominal viscera are wounded; and although it was free enough to allow the escape of blood from the general peritoneal cavity into the stomach, it did not permit of any exten-

sive extravasation of the contents of that viscus. Another point of interest in the case was the way in which I was able to localise the lesion of the transverse meso-colon at the bottom of a pool of blood by the sense of touch alone; as the finger glided over the smooth peritoneum it readily recognised the cut surface, which was gaping somewhat.

The form of suture employed had the effect of completely closing the opening, and at the same time puckered up the peritoneum around the aperture in the stomach; this, I take it, is a matter of small importance where the wound is of trivial length, but I should hesitate to apply it to the small intestine for any but the very smallest wound.

The history of wounds of the stomach affords but few examples of recovery. Sir William M'Cormac, in his recent valuable work on abdominal section for the treatment of intra-peritoneal injury, when speaking of wounds of the stomach, says:—"The injury is occasionally but very rarely recovered from, and we may set down the mortality at 99 per cent. where no operation is performed."

Recovery can only take place where the wound is extremely small, and where no extravasation has taken place; or again, in a few very rare cases, by the establishment of a gastric fistula, as in the classical case of Alexis St. Martin.

In these cases the correct treatment unquestionably is to perform abdominal section; if the wound is very extensive the question may arise as to whether it would not be better to stitch the stomach wound to the abdominal wall, and advisedly form a gastric fistula in the first instance; but most surgeons appear to prefer closing the wound completely and returning it into the abdominal cavity.

From the carefully-compiled table of cases given by Sir W. M'Cormac, it appears that laparotomy for stab wound involving the stomach has hitherto been performed twice only—once by Tiling, of St. Petersburg, in which, in addition to the wound in the stomach, there was a wound one and a half inches long in the intestines; and a second by Wunderlich; the former recovered but the latter died. And in five cases in which abdominal section

was performed for gunshot wound of the stomach, but one case—that recorded by Prof. Kocher of Berne—recovered.

In my own case the danger which immediately threatened life was the copious bleeding from the wounded vein, and which I have no doubt must have proved fatal in an hour or two but for the intervention of surgery.

CASE OF TRAUMATIC APHASIA SUCCESSFULLY TREATED BY THE REMOVAL OF A BLOOD-CLOT FROM THE INTERIOR OF THE CEREBRUM.[a]

F. B., aged twenty-six years, was admitted into Sir Patrick Dun's Hospital, September 1st, 1888. He stated that during a drunken squabble, ten days previously, his father had struck him on the head with a penknife. I was unable to get any reliable account of his condition immediately subsequent to the injury, but the following day he presented himself at another hospital and had his wound dressed. He said that at that time he had difficulty in speaking correctly, and that this difficulty had increased somewhat during the last few days, and that pain in the left side of his head, which had been present all the time, had lately increased considerably.

Upon examination a small scar was found adherent to the scalp over the squamous portion of the left temporal bone. The exact position of this wound was as follows:—Two and a half inches from the back of the mastoid process; two inches from the external angle of the orbit, and three-quarter inch above the zygoma on the left side. The scab, when detached, showed a cicatrix apparently extending deeply through the temporal muscle, but the wound was quite healed.

Classifying the symptoms presented by this man during his stay in hospital, we found that his aphasia was of a somewhat complex character, and that both forms of motor and sensory aphasia were to a certain extent present.

Motor Aphasia (speaking).—He used wrong words in sentences which he originated himself—*e.g.*, he said he had a "man" in his ear when he meant "pain;" and although he sometimes spoke so

[a] Read before the Section of Surgery, February 24, 1888.

as to be intelligible, yet at others he introduced such a number of wrong words that it was impossible to understand what he desired to communicate. He was unable to name correctly common objects, such as a watch, a ring, a chain, a bottle, &c. Although he called a watch a "pin" or a "stone," or some name of that kind, he was usually able to tell the time. When shown a coin of any kind he invariably at once said "money," and appeared highly satisfied with his sagacity, but was unable to name the coins shown him, with the exception of sixpence, which he always called a "tanner." (Writing)—He was able to write his name with ease and in a good hand, and was able to copy writing, but was absolutely unable to write words which he originated himself or from dictation; his attempts to do so did not show a single properly-formed character.

Sensory Aphasia (word blindness).—When given a book to read he said the words ran into one another and he was unable to make them out. When he attempted to name printed words he was nearly always wrong. (Word deafness)—When asked questions his answers were sometimes so irrelevant as to suggest that he had not appreciated the meaning of the query correctly. When asked if he would like some dinner, he said, "I am a bit better." When told to put out his tongue he opened his mouth only, but when he was set an example he at once protruded his tongue; this was frequently tried with the same result.

There was no paralysis whatsoever to be detected of any of the voluntary muscles when he came under my observation, and, judging from the fact that the day after the injury his case was not considered sufficiently grave for admission into another hospital, there could not at that time have been any overt paralysis. Hearing and sight were good on both sides, and ophthalmoscopic examination revealed nothing. Sensation was everywhere normal.

Five days after his admission his symptoms had so much increased that it was determined to operate. A flap was turned down, including portion of the temporal muscle, and containing in its centre the cicatrix; this disclosed a wound of the squamous portion of the temporal bone of a size and shape likely to be produced by the small blade of an ordinary penknife, held horizontally, with

the back of the knife towards the patient's back, and the edge looking directly forwards. A medium-sized trephine was now applied, and a circle cut out, containing in its centre the cut in the bone; this was attended with some difficulty, as the lower part of the circumference was exceedingly thin, while the upper portion was tolerably thick; the piece was, however, removed without injury to the dura mater by the trephine. It was found that the knife had perforated the dura mater and brain. The wound in the dura mater was enlarged, in doing which the large posterior branch of the middle meningeal artery was divided, and gave some little difficulty to control; this vessel had very narrowly escaped injury by the penetrating knife. A sinus forceps was gently passed along the brain wound, and the blades separated, when a dark-coloured blood-clot presented, and was gradually extruded by the internal brain pressure. Some more fragments of clot were removed by the sinus forceps, and by a stream of weak perchloride of mercury solution from a syringe. A drainage-tube having been introduced, the flap was replaced and held in position by deep sutures, including the temporal muscle.

On the evening of the same day the patient was much more rational, and carried on a long conversation, with very few mistakes in his selection of words. Next morning he was again more aphasic, and it was found that the drain had become blocked. Upon freeing it a considerable quantity of fluid, containing broken-down blood-clot, was removed, and his power of speech improved. He made an uninterrupted recovery, and regained completely his power of writing, reading, and speaking.

In this case I believe the knife penetrated the superior tempero-sphenoidal convolution, traversed the fissure of Sylvius, and probably injured Broca's convolution, and that his symptoms were due to a blood-clot in the fissure of Sylvius, which was breaking down, and which was evacuated by timely surgical operation.