quietly broke open, and a large mass of distended small intestines protruded. The distended intestine was followed downwards until a point was found where the gut was acutely bent on itself. Its approximated surfaces were glued together by lymph. The intestine above the point of flexion was dilated, inflamed, and much thickened, below this point normal and collapsed. The adhesions were separated and the intestine straightened; as it was impossible to return the distended intestines into the abdomen, I aspirated them at a dozen or more points, using a fine needle, and thus emptied them very satisfactorily of their contained flatus. The peritoneal cavity was then washed out with water at a temperature of 115°, and the parietal wound closed with silver wire.

The subsequent history of the case, briefly, is that within twenty-four hours the bowels acted freely of themselves, and there was no further trouble from this source. The abdominal wound suppurated at its lower end, causing a slight rise of temperature for a few days. The patient's left leg, from the time of the first operation, was carefully enveloped in cotton wool and kept warm, and gave us no trouble. His aneurysm was permanently cured. He was seen in 1895, when he was quite well.

Three points to my mind are worthy of comment in the foregoing case: (1) The transperitoneal method of ligature of the iliac arteries, especially in cases of aneurysm of the same; (2) the occurrence of intestinal obstruction after abdominal section; (3) aspiration of the intestines as a thoroughly safe procedure where indicated.

Most abdominal surgeons will, I think, agree with me that the ligation of the iliac arteries, particularly in such a case as narrated, by means of abdominal section, is the most desirable method. By the old operation it would have been impossible to have placed a ligature on the external iliac in this case; it would have been necessary to tie the common iliac with the greater proportionate risk of this procedure. Again, in doing the ordinary operation for ligature of the iliac vessels on the cadaver, it will be found that the peritoneum, which has to be stripped up, varies considerably in thickness. In some cases its separation is simply and easily effected, as it is a substantial and tough membrane; in others I have found it so thin and frail that, with all possible care, I have got into the peritoneal cavity. Those who do much abdominal work are aware of such variations. With proper precautions, the opening of the peritoneal cavity *per se* is devoid of risk. A median incision gives the freest possible access to the vessels in question; they can be examined from end to end by the eye and by touch, and the most desirable point selected for the application of ligature. These reasons, in my opinion, make this method the operation of election.

As regards the second point, the occurrence of intestinal obstruction after abdominal section, no doubt many lives have been lost through this unfortunate occurrence. In many cases it may be unavoidable; in the majority I think it is caused by faulty methods. I think it was so in my own case. In my practice, intestinal obstruction has occurred only in this instance. If all unnecessary handling and displacement of intestines, except *en masse*, be avoided as much as possible, such an accident will be very rare. My own practice in almost all cases of operation on the contents of the lower abdomen is, after making the parietal incision, to at once place the patient in the Trendelenburg position and gently empty the pelvis of the intestines, passing them up into the upper abdomen, where I cover them again with a large flat sponge, and seldom touch or see them again until the major part of the operation is completed. When the patient is placed on the level again, the intestines slide back into their normal position, the relation of the different coils having been disturbed as little as possible. When obstruction does occur, reopening of the abdominal cavity at the earliest possible moment a diagnosis can be made, is the only reasonable treatment. The obstruction in the case narrated was not complete, in that flatus was voided by the rectum unmistakably several times, and in considerable quantity—such flatus having passed the point of flexion in the gut. This caused delay in a positive diagnosis; though vomiting came on after its causation by the anæsthetic was out of the question, its continuance, despite absolute non-administration of liquid or solid by the mouth, taken with

the abdominal extension and subnormal temperature, make up a pretty clear picture of obstruction. The fecal character of the vomiting on the evening of January 14th made the diagnosis of obstruction beyond doubt.

As regards aspiration of the intestines as a safe means of treatment where they are distended by flatus to such an extent as to make their return in the distended condition dangerous or impossible, I am of opinion that this should supersede any other plan. It is commonly recommended to make an incision lengthwise in the gut to effect this purpose, and having emptied the intestines to sew it up; I contend that one cannot empty the intestines satisfactorily through a single incision, and the practice of making a number will hardly commend itself to anyone. An incised wound of the intestine is not a desirable addition to any abdominal operation. On the other hand, to take a fine aspirating needle and pass it obliquely into the gut, avoiding any blood vessels, to aspirate out the flatus, carefully withdraw the needle, and wipe the punctured point with a piece of gauze wrung out of bichloride solution, is in my opinion an ideal method. One can puncture as many coils as necessary; indeed, the more thoroughly the intestines are emptied the safer the treatment appears to me. One has only to watch the behaviour of the punctured point for a few seconds after this little operation to be convinced of its safety. No doubt many surgeons have adopted the same plan. At the time I used it I had seen no mention of it anywhere. In many cases one can picture it would be a matter of no small importance to have a ready and safe means of relieving great intestinal distension by flatus.

SUCCESSFUL CASE OF TREPHINING FOR MENINGEAL HÆMORRHAGE: LIGATURE OF THE CAROTID.

By FRANCIS J. SHEPHERD, M.D., C.M.,

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THE following case is one that presented so many difficulties and was of such a serious nature that it seems to me worthy of being placed on record. It is not often the surgeon has an opportunity to trephine successfully for meningeal hæmorrhage, because usually these cases are seen too late for the operation to be of any service. In the present case the hæmorrhage was not very severe at first, and pressure symptoms from the slowly spreading clot were not marked until the following day, due, I believe, to the circumstance that the rupture of the artery was low down, where the dura mater was closely attached to the base of the skull, and where it needed considerable force to separate it from the bone. In most cases of meningeal hæmorrhage the artery is injured higher up, and a clot more readily forms where the dura mater is not so closely adherent to the bone.

O. C., a clerk, aged 30, was admitted into the Montreal General Hospital on August 4th, 1895, suffering from injuries received by being thrown off his bicycle whilst coasting down a very steep hill. Within forty-five minutes of the accident he was brought to the hospital, and on admission he was unconscious. The pulse was 84, regular, but not very full; the respirations 25, full, and regular; the temperature 100.2° F. Immediately after entrance he vomited a large quantity of bilious matter, and after this he slowly regained consciousness. He had a large wound on the left side of the head, behind the coronal suture and over the anterior superior portion of the parietal bone; the wound extended downward and forward for 3 inches; the bone was laid bare, and a fissured fracture was seen running downward. At the upper end of the wound a slight depression was noticed. The left ear and the left eyelid were almost torn off. The side of the nose and the cheek were much contused and ecchymosed, and there was slight ptosis; the left eye also showed subconjunctival hæmorrhage, and the left pupil was more dilated than the right. Sensation, motion, and the reflexes were unimpaired on both sides of the body. He was admitted at 7.45 P.M., and at 10 P.M. he was quite conscious, and his speech was normal. The wound was cleansed and dressed in the usual way, and whilst this was being done he twice vomited bilious matter

mixed with red blood. After the dressing the patient expressed himself as feeling comfortable. He passed a fairly good night but towards morning became very restless, and his speech was slightly affected; he was less responsive and appeared stupid; everything was said with great difficulty, and there was partial loss of power on the right side. The reflexes and sensation were impaired on the right side and exaggerated on the left. This loss of power gradually increased accompanied by progressive stupidity, the breathing became quick and shallow, and the pulse 125 and small.

I saw him for the first time on August 5th, the day after the accident. With the history as above given of first, unconsciousness, then recovery almost to a normal condition, followed by one-sided paralysis and increasing stupor, I at once came to the conclusion that the case was one of meningeal hæmorrhage, and that the sooner relief was attempted the better.

The head having been shaved and the usual procedures for rendering the parts aseptic having been practised the patient was etherised. At the upper end of the incision where the depression existed, a piece of bone was taken away with a large trephine, and between the skull and dura mater a thin clot was seen, which seemed to extend over the vertex. As there was free bleeding another trephine opening was made a couple of inches lower, and in the line of the fissured fracture. Here a very thick clot was met with, and on cleaning this away the empty meningeal artery could be seen ramifying on the dura mater and blood freely welling up from below. The incision was extended down as far as the zygoma, the temporal muscle and periosteum pulled aside, and a piece of bone 2 inches wide by 3 inches long was chiselled away in the hope of reaching the bleeding point. After removing a large quantity of blood clot the artery could still be seen quite empty on the dura mater. As soon as the clot was removed there was furious bleeding from below. The brain and its membranes were held aside by broad retractors, and now the fracture was seen to run through the foramen spinosum and then across the body of the sphenoid. The artery was evidently torn in the foramen and bleeding furiously. As the man had lost and was losing a considerable amount of blood, to stop the hæmorrhage I decided to tie the common carotid of that side. This was done very quickly, the artery being divided between two ligatures; immediately the free hæmorrhage was arrested, though there was still some venous oozing. All the blood clot was washed out, and the space at the base of the skull packed with moist iodoform gauze. The gauze was brought out at the lower end of the wound, and the rest of the wound closed with silkworm-gut sutures. There was a spot at the upper end, however, where the first trephine hole was made, which had no skin to cover it, this having been torn away at the time of injury; this also was packed with iodoform gauze. Over all was placed sterilised gauze and a firm bandage. On leaving the table the condition of the patient was not good; the pulse was 180 to 198, the respirations 30 to 40, and shallow. A large enema of hot saline solution was administered, which had the immediate effect of lowering the pulse to 140. By the evening the patient regained consciousness, and could converse intelligently.

Next day his condition was much improved; the pulse was 120, and the respirations 20. There was some paresis of the left side, and the patient's articulation was unimpaired. There was much oozing of bloody serum through the dressings.

On August 7th the patient continued to improve; the temperature was normal, the pulse 84, and the respirations 20. In the afternoon the gauze was carefully removed, and, as the last piece came away, there was a tremendous spurt of red blood; the wound was therefore again packed quickly with iodoform gauze, and the hæmorrhage was arrested. Almost immediately the patient complained of severe pain in the head and over the left eye; the pain was so severe that a hypodermic injection of morphine had to be administered.

On August 9th, although the patient's general health remained good, he seemed dull. Cheyne-Stokes respiration was noticed for two hours in the afternoon, with an interval of 20 seconds. On August 10th he had a chill, followed by a temperature of 102.5°; he was decidedly stupid and drowsy, and answered with difficulty and very slowly. The tongue when protruded deviated to the right side, and there was

paresis of the right side. Next day there was slight right-sided facial paralysis, articulation was thick and indistinct, and by night complete motor aphasia had set in, but the stupor was not so marked as on the previous day. The stitches were removed from the wound in the neck, made by the ligature of the carotid; healing had taken place by primary union.

On August 13th his condition was much improved, stupor had entirely disappeared and also the paralysis. He could say "Yes" and "No." Sensation was normal. The temperature was 98°, the pulse 72, and respirations 20.

From this time the patient rapidly improved, the aphasia completely disappearing by August 15th. The gauze was cautiously removed day by day until the last piece came away on August 17th, and there was no hæmorrhage. The wound was repacked lightly. By September 1st he was walking about, and he was discharged on September 7th apparently perfectly well, with two small granulating surfaces at the upper and lower end of the wound.

He was shown to the Montreal Medico-Chirurgical Society on October 18th, and was then perfectly well; he has been attending to his business ever since. I saw him in December, when he showed but little trace of his accident, the wound was soundly healed, and where the bone had been taken away was a firm non-pulsating cicatrix. His intelligence was normal. He had forgotten or rather remembered nothing of the accident. He said he did not believe he was ever foolish enough to coast down such a steep hill. He remembered taking his bicycle out for a run that Sunday, but could not even recollect being near the vicinity of the hill where the accident occurred. That afternoon and the next night were completely blotted out from his memory.

The case is interesting because of the situation of the hæmorrhage at a spot where a ligature could not be applied. Ligature of the carotid seemed to me at the time to be the only rapid means by which the hæmorrhage could be arrested and the man's life saved. I tied the common carotid because it was easier, and also because after the ligature anastomosis would be more slowly established. What the source of the hæmorrhage was which took place on the removal of the gauze two days after operation I know not; probably it was the cavernous sinus.

The paresis and aphasia were probably due to the compression of the large quantity of firmly packed iodoform gauze, and not to ligature of the carotid, for they came on only after the second and voluminous packing, and were very temporary in duration. The brain was still further compressed when the gauze got soaked with blood. The efficacy of saline injection *per rectum* was well exemplified in this case. Throughout the case there was no sepsis, and with the exception of the seventh day the temperature never went above 100° F. Instead of tying the carotid I might have plugged the foramen spinosum, but I feared to separate the fracture in the base of the skull; still further, the blood oozed out all along the line of fracture.

A CASE OF ALCOHOLIC NEURITIS WITH PROMINENT MENTAL SYMPTOMS.¹

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THE patient was a middle-aged widow, who had acquired the habit of secret drinking from the medical prescription of whisky for the relief of facial neuralgia.

After the lapse of several years numbness began to be felt in the soles of the feet, causing the act of walking to be insecure. There were also sensations of "pins and needles" in the feet. Then numbness was noticed in the hands and fingers. Soon after the appearance of these insidious symptoms she had two severe falls, the second one causing such prostration that she kept her bed for three weeks. Urgent symptoms now rapidly developed, and, until the true history of the case became known, were attributed to the shock of the fall. Mental derangement was so active that treatment with a special view to it had to be adopted. The following is a summary of the symptoms as they then existed:

¹ Abridged from notes read before the Oxford Medical Society.