

adherent to one another, but could be separated by a probe. The ligature was still found upon the wall. The distal portion of the vessel was found occluded by a red thrombus.

The clavicle, first rib, and sternum were intimately connected with the wall of the aneurism, with a moderate degree of erosion of all, especially of the sternum.

REMARKS BY DR. WARREN.

The narrow neck of the aneurism situated at the bifurcation of the subclavian and innominate seemed to offer special advantages for the operation of simultaneous ligature of the carotid and subclavian, but the position of the sac beneath the clavicle would have made it impossible to reach the subclavian at the date of the operation even had it been known that this vessel was not involved. The reappearance of pulsation in the radial a few days after the operation was probably due to collateral circulation, the aneurismal dilatation at the point of ligature of the axillary not showing itself until many weeks later. Unfortunately, the carotid was injured in removal. This artery would otherwise have afforded an admirable specimen of the process of repair three months after ligature. The ligature of this vessel did not materially affect the pulsations in the aneurism, as the sac, pressing firmly against that vessel, had already greatly diminished the circulation in it. Although in this operation asepsis had been complete, it is worth noting that a thrombus of considerable size existed in the distal portion of the vessel. The ligature, a silk one, was still to be seen encircling the vessel, although the thread was very friable. The presence or absence of a callous was not noted, but I saw no sign of one at the point of ligature, absorption of the slight callous which probably existed having taken place some time previously.

CASES OF LAPAROTOMY FOR ACCIDENTS OCCURRING IN THE REDUCTION OF HERNIA.¹

BY A. T. CABOT, A.M., M.D.

In a paper read about a year ago I reported cases illustrating some of the accidents which may attend the return of a strangulated loop of bowel to the abdominal cavity, and pointed out the importance of at once performing laparotomy when serious symptoms follow or persist after the reduction of a hernia.

During the past summer I have had two cases which still further emphasize the importance of this practice, and which I will briefly report.

CASE I. Patrick H., aged about sixty, entered the Massachusetts General Hospital with the following history.

The patient had suffered many years with a right femoral hernia which he had always been able to reduce himself. Two days before entrance at the hospital the hernia came down, and his efforts to reduce it that day were unavailing. During that night he had a good deal of pain, and the following day, after several unsuccessful and rather violent attempts, he finally succeeded in returning the hernia to the abdomen. He was at once seized with

abdominal pain, much more severe than what he had felt previously, and this persisted up to the time of entrance.

When he arrived at the hospital, twenty-four hours after the reduction of the hernia, he was in a much collapsed condition, with pinched, gray face and anxious expression. He had no severe vomiting, but occasionally gulped up a little bitter fluid. He was suffering much general pain through the abdomen, which was considerably distended, tympanitic, and universally sensitive to pressure. His pulse was rapid, irregular, and thready, and his respirations were forty in the minute. There was no tumor at the site of the old hernia.

The diagnosis made was of rupture of the intestine during efforts at reduction, and a consequent general peritonitis. Laparotomy was advised as a last attempt to save his life. This was agreed to and at once carried out.

The incision was made directly upwards from over the sac on to the abdominal wall. The sac was found empty and the peritoneum was quickly opened up. At once there was an escape of much fluid, containing great clumps and masses of purulent fibrin, but having no fecal or unpleasant odor.

The patient did not bear the ether well, and although but a few minutes had been occupied, he was becoming rapidly more and more collapsed.

Under these circumstances it was thought unwise to prolong the operation by hunting for a perforation, which, from the absence of fecal constituents or odor in the effused fluid, was presumably small.

The abdomen was irrigated with hot water, which washed up several handfuls of clotted and purulent fibrin from the pelvic cavity. A large drainage tube was introduced to the bottom of the pelvis, and the wound was closed.

In spite of every effort to overcome the condition of collapse, the patient did not rally, and died about three hours after the operation.

A partial autopsy was allowed. After a long search a minute perforation was found in a little congested coil of small intestine which lay at the bottom of the pelvis. The purple color of this bit of intestine showed that it was the part which had lain in the hernial sac, and the opening was so placed that the drainage-tube might have been expected to have furnished a sufficient outlet for any intestinal contents subsequently escaping, had the patient rallied from the collapsed state into which he had fallen.

This case is a good illustration of the rapidity with which a fatal issue may follow peritoneal injury and inflammation. The intestinal lesion was of a kind that could have probably been remedied, had the operation been reached at a time when the patient still retained a fair degree of strength. The result shows that in these cases a delay even of a few hours may change a remediable condition into a fatal one.

This patient is also an example of the bad effects of violent and ill-advised efforts at taxis even in a reducible hernia.

CASE II. Undescended testicle with left inguinal hernia: reduction *en bloc*; laparotomy; recovery.

Charles R., aged twenty-seven, entered the Mas-

¹ Read before the Boston Society for Medical Improvement, March 25, 1889.

sachusetts General Hospital July 17th, 1888, with the following history:—

The patient had always had an undescended testicle on the left side, the organ having been arrested in its descent just outside of the inguinal ring in the groin. For many years he had also had a hernial protrusion through the same ring, and this had troubled him several times by being for a time irreducible.

On July 14th (three days before entrance) the hernia was down and caused discomfort. It did not go back easily, and was finally reduced with some difficulty under ether.

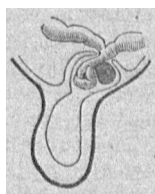
When he recovered from etherization, it was found, however, that his symptoms were rather aggravated than relieved. He still had abdominal pain, especially in the left side; and the vomiting continued persistently and presently became fecal in character.

When he entered the hospital there was nothing to be felt in the abdomen or in the inguinal region, and the left testicle could not be found.

The continuance of symptoms of strangulation made it clear that constriction of the bowels still existed somewhere, and a laparotomy was advised.

This being agreed to an incision was made from over the sac of the hernia, upwards onto the abdomen. On laying open the sac it was found empty, but following it up through the inguinal ring, a dilatation of the upper part of the sac was found inside the abdominal wall; and this contained a purple loop of intestine.

The neck between the upper part of this hour-glass-shaped sac and the peritoneal cavity was formed by a thick band of fibrous tissue which represented the true neck of the sac and which would easily admit the end of the finger. It would have been amply large to allow of the return of the hernia, had it not been blocked by the testicle, which lay across the opening and closed it as by a valve.



The more the intestine was pressed up from below, the more closely did it force the testicle into the ring and close it. On relaxing the parts and pulling down upon the sac so as to draw the testicle away from the orifice, the bowel slipped up quite easily.

A further examination was made of the contents of the abdomen to make sure that no other constriction or injury of the intestine existed, but nothing was found.

In closing the wound, the neck of the sac was drawn together by encircling stitches for a distance of an inch and a half to two inches, and care was taken that the uppermost stitches should be well within the abdomen, so that no depression should be left on the peritoneal side of the ring.

The patient was entirely relieved of his symptoms and made a rapid and good recovery, leaving

the hospital well on August 8th, twenty-two days from the time of entrance.

This man was heard from in February, 1889 (six months after the operation), and he then wrote that although he had worn no truss, there had been no return of the hernia. He says in this letter, "I sometimes feel a smarting, burning feeling if I work very hard or lift anything very heavy; this is all."

In this case we had a rather rare complication of hernia, and a good example of the difficulty that an undescended testis may cause. It adds one to the many cases illustrative of the importance of a prompt laparotomy when symptoms of strangulation persist after the seemingly complete reduction of a hernia.

One point noticed in this last case may be of practical importance in guiding us to the proper application of taxis under similar conditions.

As has been described, the testicle lay against the opening through the neck of the sac, and closed it as by a ball valve. The more the pressure from below, the more complete was this closure of the ring, so that the effort to push the bowel up made the obstacle even greater. When, on the other hand, the part of the sac which lay in the scrotum was pulled downwards it drew the testicle, which was attached to the wall of the sac, away from the opening, and the bowel easily slipped up by it.

In a similar case, during taxis, it is quite probable that by pulling forcibly down on the scrotum the testis might be held away from the ring and the return of the hernia thus be rendered possible.

From what was seen in this case, it seems a proper rule that, in a hernia complicated by a testicle retained in the region of the inguinal canal, if strangulation occurs, every effort should be made to draw down the testis by pulling on the lower part of the tunica vaginalis. And after the hernia has been restored to the abdominal cavity, the reduction shall not be considered complete until the testicle has again, by traction on the scrotum, been drawn down to its old resting-place, where it can be distinctly felt. In this way the danger of a reduction *en bloc* with the testis still occluding the neck of the sac will be made less probable, if not wholly avoided.

REDUPLICATIONS OF MUCOUS MEMBRANE IN THE UPPER PORTION OF THE TYMPANIC CAVITY, AND THEIR CLINICAL IMPORTANCE.¹

BY CLARENCE J. BLAKE, M.D., AND WILLIAM S. BRYANT, M.D.

In a large proportion of cases of suppurative inflammation of the middle ear, especially where there has been much destruction of the membrana tympani, and an opportunity is thereby afforded for a better inspection of the principal sources of the discharge, it will be found that no inconsiderable proportion of the secretion comes from the upper portion of the tympanic cavity, and that often when the affected mucous membrane of the visible portion of the middle ear has become quite healed the disease in the upper part of the tympanum is tediously prolonged. The reasons for this are to be found in the irregularity of the

¹ Read before the Boston Society for Medical Improvement, March 25, 1889.