ACUTE RETENTION OF URINE COMPLICATED BY PERFORATION OF A DUODENAL ULCER.

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THE case described below presents several interesting points. It seems especially worthy of record because it affords an example of strain being the actual cause of rupture of a duodenal ulcer. An interesting question arises as to what is the best line of treatment of retention of urine under such circumstances. If I had again to deal with such complications, I would empty the bladder prior to opening the abdomen. This done, I would again do a suprapubic cystotomy on account of the general gravity of the condition and the marked urinary infection—providing ample prevesical drainage—rather than attempt any form of external urethrotomy.

Clinical History of the Case.

The patient was a man, 34 years of age, who for the past few years had had increasing difficulty in micturition, and for the past two months had noticed that his urine was very thick and offensive. There was also a history of somewhat indefinite indigestion, without, however, any vomiting, haematemesis, or melaena.

On March 25th, 1920, the patient, being unable to pass water, consulted a doctor. An attempt at catheterization proved unsuccessful, and, as it led to considerable haemorrhage from the urethra, was abandoned. The patient was sent home and advised to take a hot bath, which failed to afford any relief.

At 12.30 a.m. on the morning of March 26th, when violently straining to pass water, the patient was seized with an agonizing pain in the upper abdomen which felt as if "something had given way." When eventually the patient was able to attract attention, and medical aid was summoned, the practitioner called in discovered the patient in a collapsed condition, and almost unable to give any account of himself. The abdomen was found to be rigid and tender all over. A hypodermic injection of morphine gr. 1/3 was given, which afforded some relief. On being called to see the patient I found him in great pain, but obviously somewhat recovered from his shock.

On examination it was found that the abdomen was distended, universally rigid, and tender, the liver dullness being absent. Palpation of the bladder was impossible owing to the rigidity of the overlying muscles, but on percussion it was estimated that it reached fully an inch above the umbilicus. On consideration I came to the conclusion that in addition to retention of urine the patient was suffering from the perforation of a gastric or duodenal ulcer. He was accordingly moved at once to a nursing home. On trying to pass a catheter an impermeable stricture was found lying immediately in front of the triangular ligament. Under these circumstances it was decided to open the abdomen at once, and to deal with the bladder condition at the end of the operation.

First Operation.

A general anaesthetic was given, and a small incision was made through the lower right rectus segment, with the idea of confirming the diagnosis, and for future drainage. On opening the abdomen, free gas and a fair amount of turbid fluid was discovered, the intestines were injected, and the bladder was seen to reach above the umbilicus. No attempt was made to find the appendix. The abdomen was next opened by a second incision over the right upper rectus segment. The stomach and intestines generally were found greatly distended and the latter loaded with faecal matter. On further investigation, gas and fluid were found welling up from the region of the second part of the duodenum, where an indurated perforated ulcer could be felt. At this juncture the condition of the patient was so bad, and the difficulties of manipulation caused by the distension of the intestines and bladder so great, that it was deemed inadvisable to make any prolonged attempt at closing the perforation—a proceeding which would have been difficult under the most favourable circumstances. A large drainage tube was therefore passed to the seat of perforation, and another through the lower incision into Douglas's pouch, and after a brief attempt to cleanse the peritoneum, the abdominal cavity was closed. A suprapubic incision was next made and the bladder opened. A drainage tube was introduced and fixed in the bladder by means of a soft catgut stitch, and the suprapubic wound was partially closed. The urine was found to be phosphatic and very foul-smelling.

The patient, whose condition improved slightly when the abdomen was closed, was put back to bed in the Fowler position. Rectal salines and eserine sulphate gr. 1/50 were given every four hours. The morning after the operation the patient's condition was fair, considering the gravity of the case; but towards evening vomiting started, and for the next three days there was hiccough, absolute constipation, and gradually increasing distension.

On the fourth day the bowels were eventually opened after the administration of eserine sulphate, calomel, pifutrin, and various enemata, and the condition of the patient greatly improved. All drainage tubes discharged freely, the urine being

collected from the suprapubic wound in a Hamilton-Irving apparatus. From this point onwards the abdominal condition progressed favourably, and the upper incision healed without the formation of a duodenal fistula. On the eleventh day after the operation the stitches were removed. This was at once followed by the opening up of the suprapubic wound, which discharged a large quantity of pus, the drainage of the pre-vesical space having evidently proved unsatisfactory. On account of the discomfort caused by the escape of urine over the excoriated skin it was decided to deal with the urethral stricture at once.

Second Operation.

Accordingly on the twelfth day after the first operation a general anaesthetic was again given. At this second operation a No. 2 (French size) bougie after considerable difficulty was passed into the bladder. This bougie was withdrawn, and an attempt made to pass the guide of Thomson Walker's urethrotome. This was, however, found impossible owing to the tip of the instrument always catching in a small crypt, or false passage. The bougie was again passed, and the guide of the urethrotome tied to it with a short length of silk. The distal end of the bougie was then caught with forceps in the bladder, through the suprapubic wound, and the guide pulled through into position. The urethrotome was attached, passed into the bladder, and the stricture divided. A No. 14 (English) metal sound was then passed, following this a No. 12 (English) gum-elastic catheter was tied into the urethra, and finally a large drainage tube was placed in the pre-vesical space.

The vesical condition gradually improved under treatment. Three weeks after the second operation, the suprapubic wound being dry and the urine free from gross infection, the patient was allowed to get up. Subsequently a No. 12 (English) sound was passed at intervals. It is gratifying to be able to add that the patient has had an uninterrupted convalescence.

Notes by E. B. TURNER, F.R.C.S.

On being called to this case, which I then saw for the first time, at 1.30 a.m., I found the patient exceedingly collapsed and suffering intense pain. The only history I could obtain at that time was one of retention of urine, becoming acute in the afternoon, and an attempt at catheterism, which failed. After this failure the patient was advised to return home and sit in a hot bath. This was done, without relief. Soon after, when straining hard, on attempting to pass water, he felt "something give way" in the abdomen, and was at once in acute agony. I found the bladder tense and distended, the abdominal walls retracted, tenderness in the epigastric region, a small weak and flickering pulse. The patient was sweating profusely, and his expression was "pinched" and anxious. I came to the conclusion that probably a duodenal ulcer had given way, and that operation as soon as possible was necessary. The bachelor flat in which the patient was living was quite unfitted for a laparotomy, and his collapsed condition precluded immediate removal. Under these circumstances I decided to break the rule which I have always observed, not to give morphine in early abdominal cases lest the symptoms be masked, and I injected that drug for two reasons: first, that by relieving the pain he might become less collapsed, and second, that if there were a perforation the paralysis of the intestinal muscles and consequent distension of the bowel might to some extent plug the perforation and hinder further leakage. At 7.30 a.m. I found him better and much less collapsed. No other change. I got Mr. Ewart to see the case, and the subsequent developments are recorded above.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CALCIUM IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

For the last two years I have been giving calcium lactate to a majority of the 94 patients in the Ayrshire Sanatorium, and I am convinced of the benefit accruing. After considering certain facts as to calcium metabolism, and bearing in mind certain clinical manifestations of tuberculosis, I came to the conclusion that if calcium could be absorbed it might prove of great value in the treatment of tuberculosis.

The female loses a great deal of calcium with the menstrual blood; hence in cases of excessive ovarian activity calcium may become deficient. In many girls and young women, and in some women at the menopause