AN UNUSUAL CASE OF ACUTE INTESTINAL OBSTRUCTION

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The following case has so many unusual features that it is worthy of putting on record.

In July 1955, Daniel Kapp, a boy aged 14, was admitted to the Provincial Hospital, in a very critical state. He had been under medical care for 4 days before admission and he was sent in with a diagnosis of 'obstruction, possibly due to round-worms' and the following history from his medical attendant: 'D.K., European male aged 14 years, had an accident 4 days ago when he fell onto a stick which, according to his parents, pierced the perineum and went 6 inches into his body and had faeces on the tip when withdrawn. On examination there appeared to be only a superficial injury of the perineum and possibly the stick went directly into the rectum, which it may have pierced. It is particularly difficult in this type of patient to coordinate the history with the signs, for it is difficult to know how many inches were added to give a better impression. He complained of severe abdominal pain and passed blood-stained faeces, then became constipated, with abdominal distension and tenderness, vomiting and signs of intestinal obstruction. He also has a round-worm infection, which may be the cause of obstruction. Peritonitis was considered a possible diagnosis, but the temperature was not typical, only going up to 99·4° F. It was only after 4 days that the pain became so severe that it was necessary to prescribe Pethedine. On the following morning there was a definite change in the boy's condition and a diagnosis of obstruction was made.'

On admission the boy was extremely ill, the abdomen was greatly distended and tender, the temperature was sub-normal, the pulse was rapid and feeble, and he was vomiting copiously; the eyes and cheeks were sunken, the face was flushed, and the tongue was dry and covered with foul fur; in fact he looked typical of acute generalized peritonitis in the last stages. A tentative diagnosis was made of acute generalized peritonitis, secondary to traumatic rupture of the rectum by a stick, and it was decided that in spite of his condition an operation should be done, though the chances of survival appeared to be slender.

After preliminary preparation, including intravenous saline and gastric suction drainage, he was taken to the theatre and was operated on. The abdomen was opened in the middle line below the umbilicus and enormously distended coils of small intestine immediately protruded from the wound but, contrary to expectations, there was very little free fluid and no pus in the abdomen.

A hand was passed into the pelvis and the first thing noticed was that the bladder appeared to be full. On immediate enquiry being made he was said to have emptied the bladder before coming to the operating table. A loop of small intestine which was picked out of the pelvis showed a sealed and almost healed perforation, which had obviously been caused by the stick. Next a small piece of bark from a tree was found and removed. The rectum and sigmoid colon were now examined, but no sign of a perforation was found. Further exploration showed a loop of small intestine at first thought to be adherent to the back of the bladder, but when this was closely examined it was seen to pass into the bladder through a circular hole with a diameter of about 1½ inches. The edges of the hole in the bladder were thickened and gripped the bowel firmly. A definite lump could now be made out inside the bladder. An attempt was made to reduce the loop of small intestine out of the bladder, but this was not possible until the hole in the bladder had been enlarged by incision. After delivering the bowel from the bladder it was seen that a volvulus of this loop had occurred through a complete circle. The loop was black, thick and soggy and appeared to be completely dead, and it was thought that the only possible treatment would be resection and anastomosis.

While intestinal clamps were being prepared it was decided to deal with the bladder and in the meantime the affected loop was placed under warm moist towels. A Foley's catheter was inserted into the bladder and the rent in the bladder was closed with two layers of chromic catgut. As soon as this was completed the towels were removed from around the strangulated loop of intestine and, surprisingly in view of its previous appearance, it showed signs of recovering and of the circulation being restored.

While waiting to make sure that recovery would, in fact, take place and because there were now numerous vastly-distended coils of small intestine outside the abdomen which it would have been almost impossible to replace, it was decided to empty the small intestine of its contained fluid. At this stage the boy's condition was extremely bad. A small incision was made in the lowest loop of small intestine above the strangulation, a sucker was inserted, and a large quantity of foul fluid was sucked out. It was amazing to see the immediate change in the boy's condition, which improved so markedly that all need for undue haste fell away. As the suction proceeded 2 round-worms were felt at the end of the sucker and when the fluid had been removed these round-worms were also removed with the aid of forceps. The hole in the intestine was then closed, the strangulated loop was once more examined and found to be obviously recovering and now out of danger. The abdomen was closed in layers with catgut sutures. A drain was inserted down to the pelvis and was removed after 48 hours. The bladder was drained continuously for 7 days, and thereafter tidal drainage was carried out for 2 more days.

The boy began to run an irregular temperature on the 5th day after the operation and as no local cause was found in the abdomen or the pelvis it appeared probable that this rise of temperature might be caused by round-worms. Medical treatment was accordingly given for removing round-worms; this was successful in bringing

several away, after which his temperature immediately settled and his further progress was uninterrupted.

SUMMARY AND OBSERVATIONS

The case described showed several extraordinary features.

1. There is the long delay that occurred before urgent symptoms arose; it was only 24 hours before operation that danger signs appeared, namely 4 days after the injury.

2. There were 2 perforations of the bowel without general peritonitis occurring.

3. There was a large rupture of the bladder, which was apparently rapidly sealed by plugging of the hole by small intestine, thus preventing extravasation of urine into the peritoneal cavity. When the boy was questioned after the operation no history could be obtained of any difficulty in passing urine, even shortly after the accident.

4. An internal hernia into the bladder with the onset of acute symptoms precipitated by a volvulus must be extremely rare.

5. It is also of interest that a diagnosis was made of intestinal obstruction possibly due to round-worms.