

Case no. 8 - November 2005

86-year-old female

Patient History

No particularly relevant previous events.

- May 2000: fracture of the neck of the left femur, treated with prosthetics;
- August 31, 2000: hospitalization for suspected stroke;
- September 5, 2000: hospital release with diagnosis of basal-vertebral transient ischemic attacks (TIA). Home care prescribed with enoxaprin sodium (Clexane, 2000 IU) and acetylsalicylic acid (ascriptin, 1 c/day).

Onset of current disease: September 6, 2000.

A few hours after release, the patient began to experience severe abdominal pain, nausea and vomiting. Because conditions worsened the patient was again admitted for emergency care.

Physical examination

The patient was in pain, with Hippocratic face, dehydration and tachycardia. The abdomen was distended, with evident peristaltic movements (“*ghost masses*”); it was hardly palpable due to wall tension, and was painful in all quadrants; diffuse tympanites on percussion; diffuse metallic sounding borborygmi on auscultation. Empty bowels and painfulness of Douglas’ pouch on rectal exploration.

Diagnostic examinations

Abdominal X-ray revealed numerous and diffuse air-liquid levels in the ileum;
Abdominal ultrasound showed the ileal loop with thickened walls (imaging difficult due to the presence of gas);
Routine blood tests.

Treatment measures

Venous infusion of saline and glucose solutions and ranitidine hydrochloride (Zantac); enoxaparin sodium (Clexane); nasal-gastric tube; vesical catheter.

After 24 hours (day 1 of hospitalization)

General conditions improved. Abdomen was slightly decompressed and less tender, active peristalsis still evident. Fair amount of gastric drainage, closed bowels, sufficient diuresis. Abdominal X-ray showed continued presence of air-liquid levels. X-ray with water soluble contrast agent (gastrografin) reveals closure, presumably distal, of an ileal loop.

The diagnosis of ileal occlusion is confirmed; surgical intervention is decided, and is performed after appropriate preoperative workup on the second day of hospitalization (48 hours after disease onset).

Surgery (Fig. 1)

Supra- and subumbilical midline laparotomy, which revealed:

- Noteworthy ascitic effusion (1000 ml), that was aspirated;
- Ileal-ileal intussusception, roughly in the middle section of the ileum, with dilatation above the loop.

The invaginated segment was corrected: it was relatively uncompromised from a vascular standpoint and presented a nodular formation roughly 3 cm in diameter at its distal end (head of the intussusception), which was the presumable cause of invagination. Resection of approximately 25 cm of the ileum. Control of the nutritive and vascular conditions of the stumps; end-to-end ileo-ileal anastomosis with double manual suture in absorbable material. Suture of the mesenteric breach. Toilette of the peritoneal cavity. Control of hemostasis. Suture of the abdominal wall.

Fig. 1



Examination of the resected specimen confirms the presence of the submucosal nodular formation of approximately 3 cm, projecting into the lumen and umbilicated, brown in color as if from hemorrhagic infarction.

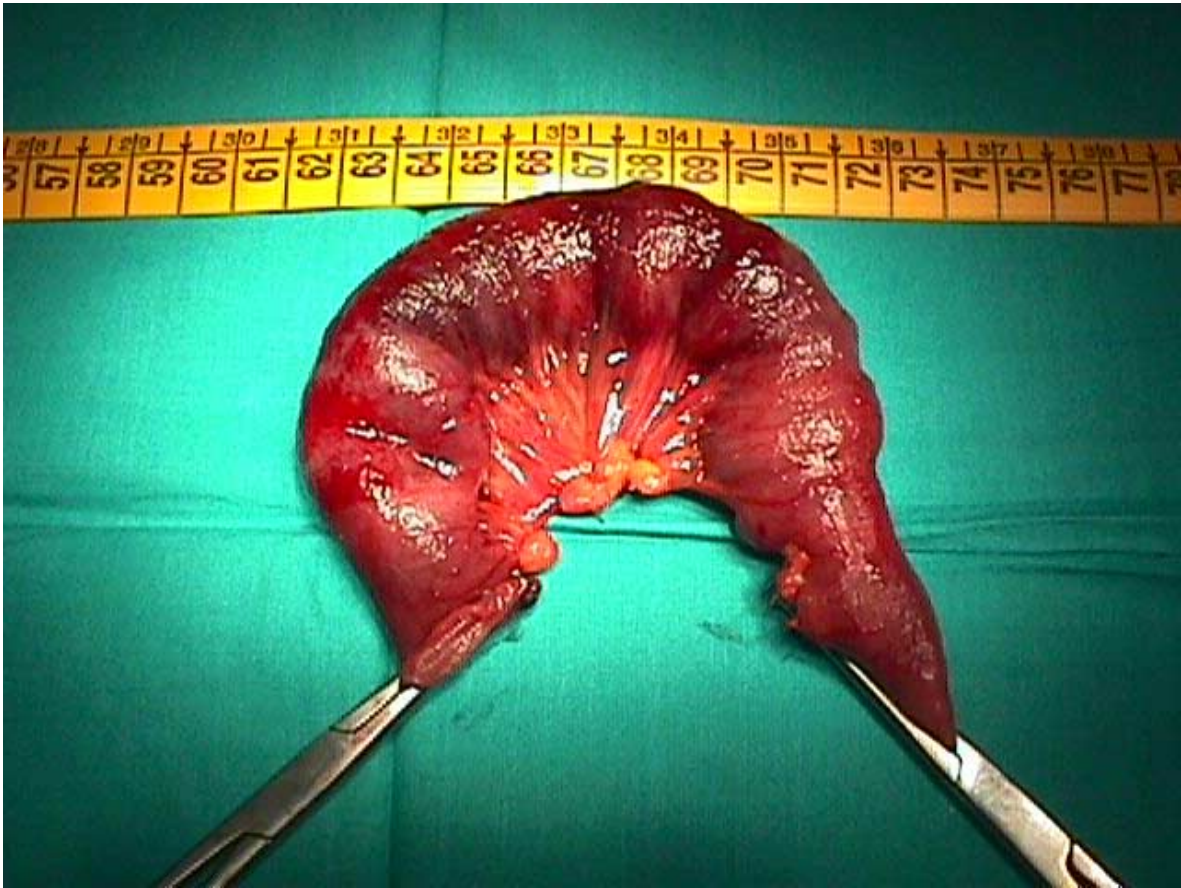


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

The last two images clearly show the nodular formation, the putative invaginating agent. Also plainly visible is the difference between the red-wine colored intussuscepted segment and the two ends of the resected segment, which in appearance and vascularization are normal.

Histological Examination

After fixing in 10% formalin solution 8 samples of the wall and of the polypoid neoplasm were taken for embedding in paraffin. Histological sections were then stained with hematoxylin and eosin.

Diffuse hemorrhagic infiltration was observed throughout the thickness of the wall, above all in the submucosa and especially in the area corresponding to the polypoid neoplasm. Mucosal necrosis was also present, as was fibrinous perivisceritis. Proximal and distal resection margins of the ileum showed undamaged tissue.

Histopathologic diagnosis

Hemorrhagic infarction of the small intestine in initial ulcerative stages of the mucosa.

Postoperative period

The postoperative period was characterized by a slow recovery that, also in view of the patient's age, was not effortless. Nevertheless, the bowels regularized on the 5th postoperative day, and the patient gradually resumed eating. The period was characterized by hemorrhagic events which began to appear on the 7th-8th postoperative day: a vast subcutaneous ecchymosis on the back, dripping from the edges of the wound, and (an easily evacuated) hematic accumulation under the laparotomic suture.

The patient, cured and in excellent general condition, was released on the 28th postoperative day. Now 92 years old, the patient continues to enjoy excellent general, physical and mental health. No further pathological signs, be it at a central or gastroenterological level, have been observed.

Remarks

The case discussed here presents some intriguing features.

Intussusceptive phenomena due to neoformations have been described: behaving like external bodies, they stimulate intestinal peristalsis to expel them, and in their oro-aboral movement they drag the intestinal cylinder from above with it. By contrast, a hematoma acting as the invaginating agent does not seem to have ever been reported.

This was, in essence, the conclusion reached by the surgeons and pathologists involved in the management of the lesion presented here. Indeed, histological examination detected no recognizable structure - be it even a surviving residue - except for the hematic material described.

The use (abuse?) of anticoagulants and the heavy (and correct) employment of antiaggregants to counteract the effects of a possible, further, development of TIA could explain the hemorrhagic event, which appeared in a rather unlikely manner in a well-localized site in the submucosa of an ileal segment.

In other words, what we are dealing with is the complication (intussusception) of a complication (submucosal hemorrhage).

This hypothesis is further upheld by the subsequent hemorrhagic episodes occurring in the postoperative period, during which antithrombotic prophylaxis nonetheless became necessary.
