Case report

Jejunojenulal intussusception due to an intraluminal lipoma

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SUMMARY

Jejunojejunal intussusception is a rare clinical entity and among several causing factors, lipomas seem to be the most common. The present case report describes this event in an adult patient with severe episodes of heamatohesia and colicky abdominal pain. The diagnosis of intussusception was made preoperatively with CT and upper gastrointestinal series, but none of these modalities could reveal its' exact leading cause. Since the possibility of malignancy could not be ruled out, exploratory laparotomy was mandatory. At surgery the jejunojejunal intussusception was found to be secondary to an intraluminal lipoma and primary reanastomosis was performed in the presence of bowel ischemia.

Key words: Lipoma, jejunojejunal, intussusception, bowel ischemia

INTRODUCTION

Lipomas make up 15% of small bowel tumours, accounting also for one fourth of all gastrointestinal tract neoplasms.[1] Most of them are asymptomatic and only one third of these patients have symptoms which are directly related to the tumour size. Less than 33% of lipomas are found at operations for bowel obstruction[2] or as the leading cause of an intussusception. It is well documented that they account for 44% of all instances of intussusception[3] and not rarely, may also cause rectal bleeding as a result of ulceration of the underlying mucosa. The treatment of choice is local excision of the lipoma when there are no signs of bowel ischemia, while resection should be reserved for complicated cases.

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CASE REPORT

A 55-year-old man presented in our department with a 3-month history of intermittent colicky abdominal pain located in the upper abdomen and a recent episode of severe heamatohesia. Past medical history for peptic ulcer disease, alteration in bowel habits, melena or weight loss was negative. A complete review of his systems plus endoscopic examination revealed no special pathology. In addition, further diagnostic procedures including barium enema, angiography and tumour markers were normal. Nevertheless, a comparison with previous laboratory tests revealed a decrease of the hemoglobin values from 14 to 12 gm/dl. Blood transfusion was not administrated, and as the bleeding had stopped he discharged a few days later. Four days later the patient was readmitted with similar but more severe symptoms: the pain had become more constant and hemoglobin had dropped to 8,8gm/dl. Conventional radiographs showed dilatation of the jejunum and enteroclysis with gastrografin demonstrating an obstructing lesion causing intussusception. Repetitive endoscopy was not performed since CT findings confirmed the diagnosis of bowel obstruction, showing evidence of a target-like mass and a bowel wall thickening (Figure 1). Nevertheless, the nature of the obstructing lesion was not demonstrated and the possibility of malignancy could not be excluded. An exploratory laparotomy was performed and 40 cm distally to the ligament of Treitz a jejunojejunal intussusception was found. Enterotomy following manual reduction of the inussusception revealed a 4x4 cm pedicled lipoma which was excised with a portion of lateral jejunal wall. However, the persistence of bowel ischemia and the absence of vital signs in a small portion of intussusceptum indicated segmental resection and primary

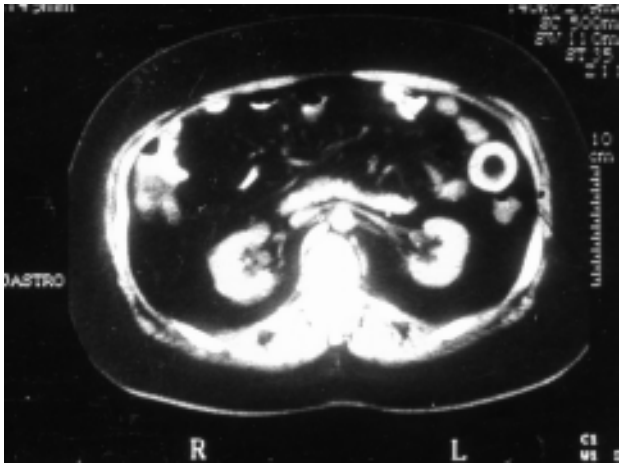

Figure 1. Target-like mass and bowel wall thickening.

reanastomosis as the procedure of choice (Figure 2). Both frozen and permanent sections confirmed the diagnosis. The postoperative period progressed uneventfully and the patient was discharged on the seventh postoperative day. At three years following surgery he is free of any kind of symptoms.

DISCUSSION

Approximately 1.5 to 6% of all gastrointestinal tumours occur as primary tumours of the small intestine.[4] The frequency of benign and malignant tumours is reported to be equal in surgical series, whereas benign neoplasms far exceed carcinomas in autopsy series.

Figure 2. Surgical specimen.

Lipomas are benign mesenchymal tumours that arise from the submucosa in ninety percent of cases, while the remainders are subserosal.[5,6] Their location and size vary widely,[7,8] and in extreme cases they may contain locus of malignancy; a possibility that is straight fold to the tumour dimensions.[9] In the gastrointestinal tract, the colon and the small bowel are afflicted in 70% and 25% of cases respectively[10]. They are found in ileum, duodenum and jejunum in decreasing order of frequency and they are multiple in 18% of patients.[11]

Most intestinal lipomas are asymptomatic and only 33% of them cause symptoms that are always related to the size of the tumour. Tumours less than 1 cm are asymptomatic, while lesions greater than 4 cm may result in intermittent crampy abdominal pain, melena or hematohesia from ulceration of the underlying mucosa and more rarely intussusception. In relation to the small bowel, it has been reported that lipomas account for 44% of all cases of intussusception.[2]

Preoperative diagnosis of the leading cause of intussusception, although desirable in facilitating the plan of surgery, is not always feasible. Nevertheless many investigations suggest that the CT findings in intussusception are usually pathognomonic.[12,13] The CT features include: a) A target like mass in which the inner central area represents the invaginated intussusceptum that is surrounded by the thick wall intussusceptiens. b) Oral contrast material trapped between the opposing walls of intussusceptum and intussusceptiens. c) A soft tissue mass secondary to the intussusception, which is possibly the accompanying leading telescoping point into the intussusceptiens. d) Bowel wall thickening or intramural air may be seen in cases of restriction of blood supply. Additionally, the presence of a lipoma can be diagnosed if a smooth mass of fat attenuation (from 50 to 100 HU) is identified within the lumen of intussusceptiens. Furthermore, upper gastrointestinal series can reveal the presence of an intraluminal mass with the classic "coiled spring" appearance of barium between the intussusceptiens and the entering intussusceptum.[14]

Endoscopic examination is usually performed in the early setting of gastrointestinal bleeding. Although this modality has little to offer when the lesion is located in the small bowel, it is very useful when the tumour is located in the colon.[15] In such cases, tumours may lie in the submucosa presenting the typical endoscopic appearance of a smooth, hemispherical polypoid lesion with wide base, whereas in other cases they are pedunculated with a short, thick stalk. Multiple biopsy specimens should be taken from the same site to denude the overlying

mucosa and thereby expose the underlying fat. This manifestation has been described as the "naked sign" and is pathognomonic of a lipoma.

Endoscopic removal of lipomas has been described with snare cattery, but this is a difficult procedure with a 43% colon perforation rate in one recent series and is also inadvisable if the nature of the lesion is uncertain.[9,16]

Spontaneous elimination of gastrointestinal lipomas has been described since 1757.[17] In reviewing these cases, the probable origin site is the colon and the small intestine in 72% and 24% of cases respectively, while in 4% the origin site was unknown.[18] To the best of our knowledge, only one case of spontaneous small bowel lipoma expulsion, complicated with intussusception, has been described in the world literature.[18]

The treatment of symptomatic small bowel lipomas is surgical.[19] Local excision, where feasible, should be performed in uncomplicated cases. If the tumour has caused intussusception and local excision is impossible in the presence of bowel ischemia, segmental resection and primary reanastomosis is the procedure of choice. Frozen section of the specimen is always advisable to exclude a possible malignant locus inside the lesion.

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