Case study

Acute Adult Ileo-Ileal Intussusceptions

**A case report

Abstract

We relate here the case of a 47 year old patient with no particular history, admitted in the emergency department for an occlusive syndrome which had developed gradually. The onset of symptoms was marked by moderate abdominal pain with bilious vomiting. The symptomatic treatment had no effect; the pain became intense and diffused to the entire abdomen accompanied by uncontrollable vomiting and the passage of gas and stool were stopped.Ultrasonography of abdomen showed target signs in cross section and sandwich sign in longitudinal section which are characteristic of intussusceptions. The abdominal computed tomography (CT) allows diagnostic certainty of discovering the possible etiology. It showed the presence of an intestinal occlusion. The laparotomy revealed an ileo-ileal intussusception caused by an ileal tumor. We performed a segmental small bowel resection with anastomosis. Histological study confirmed the benign nature of the tumor evoking an aspect in favor of an inflammatory pseudotumor of the small intestine.

Keywords: Acute intussusception, ileo-ileal, adult

Introduction

Intussusception or invagination of the bowel is defined as the telescoping of one portion of the bowel into an immediately adjacent portion of the bowel. Intussusception is more common in the pediatric population than in adults. The intussusception in adults is rare accounting for 5% of all cases of intussusceptions and almost 1%-5% of bowel obstruction [2,8,9]. It is an epiphenomenon revealing in 80% of cases a particular tumor organic lesion[1]. In pediatric population, the diagnosis and management are different from those of adult populations

The observation

A 47 year old patient with no particular history was admitted in emergency for an intestinal obstruction which had developed gradually. He presented an abdominal colic without severe pain and presented with bilious vomiting. The onset of these symptoms was marked by intestinal obstruction. The pain became intense in spite of taking symptomatic treatment and diffused to the entire abdomen accompanied by uncontrollable vomiting. The gas and stool passage were stopped. On physical examination, the abdomen was slightly distended with tenderness in the left flank. Laboratory tests were normal. The abdominal X-ray showed the image of many bright arches with air-fluid levels projecting the left flank (Figure 1).

Figure 1. The abdominal X-ray: bright arches with air-fluid levels.

Moreover, ultrasonography of abdomen showed target signs in cross section and sandwich sign in longitudinal section which are characteristic of intussusception (Figure 2)

Figure 2. Ultrasonographic image in transverse section “target” signs.

The diagnosis is confirmed by the abdominal computed tomography scan showing ileo-ileal intussusception (Figure 3).

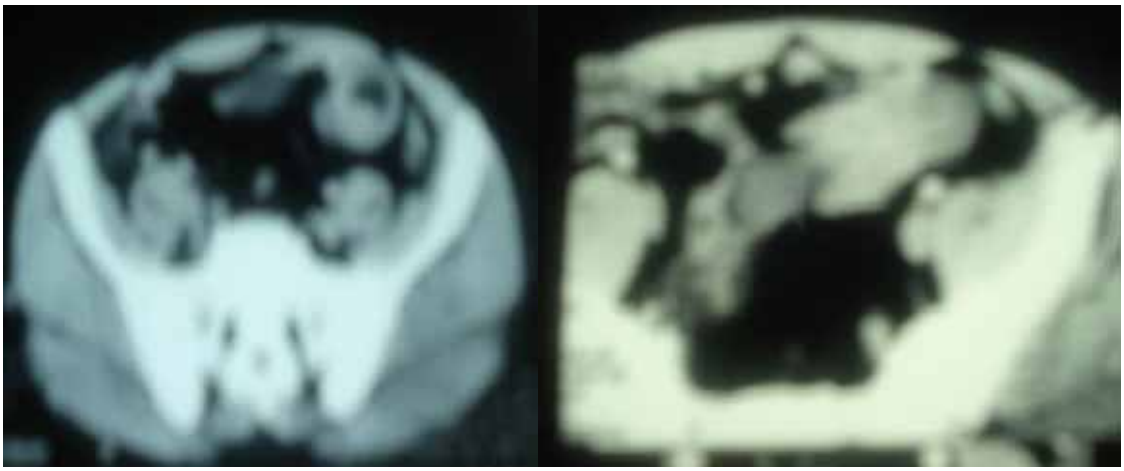

Figure 3. Abdominal computed tomography in adult intussusception.

The laparotomy also revealed an ileo-ileal intussusception (Figure 4) with a dilated proximal small intestine.

The intussusception was due to an ileal homogeneous well circumscribed solid mass with exophytic growth into intestinal lumen (Figures 5,6). The mass was measuring 5 × 5 × 4.5 cm

in the location mentioned above. It was reduced and a segmental small bowel resection was performed.

Histological study confirmed the benign nature of the tumor and revealed proliferation of spindle-shaped cells with infiltration of plasma cells and lymphocytes evoking an aspect in favor of an inflammatory pseudotumor of the small intestine. Immunohistochemstry was not carried out.

Figure 4: Intraoperative findings**:** a solid, well-defined mass as lead point of intussusceptum.

Figure 5. The surgical specimen after resection of the small bowel.

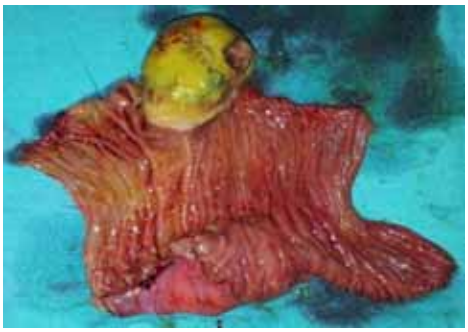

Figure 6. Specimen showed a firm, circumscribed endoluminal tumor.

Discussion

The acute intussusception is a rare cause of abdominal pain and represents 1-5% of intestinal obstruction in adults. It is most often in the small bowel (48% -70%). Unlike in children where it is often idiopathic, in adults it is often secondary to an organic lesion in nearly 85% of cases [5]. In 90% of adult cases, predisposing lesions can be found, but in the paediatric population, organic lesions are found in only 10% of the cases [1], whereas in 58% of cases of large bowel intussusceptions, a malignant aetiology is to be expected [2,10,13]. Some studies showed that approximately 30% of all small bowel intussusceptions are caused by malignancy, whereas the remainder is caused by benign lesions (60%) or are idiopathic (10%) [9,11,16].

The classic pediatric presentation of acute intussusception (a triad of cramping abdominal pain, bloody diarrhea and a palpable tender mass) is rare in adults [2]. The diagnosis is often difficult as the symptomatology evolves spontaneous resolve by pushing at least at the beginning and is usually manifested as chronic abdominal pain [10,16]. Nausea, vomiting, abdominal fullness sensation, diarrhea, constipation occur usually. Bowel obstruction outset can also be observed. As for the small bowel tumor diagnosis is difficult outside the complications of intussusception or bowel obstruction. More rarely, gastrointestinal bleeding or Melena can dominate in case of tumor ulceration.

Plain abdominal films are typically the first diagnostic tool, since in most cases the obstructive symptoms dominate and the clinical picture demonstrates signs of intestinal obstruction and may provide information regarding the site of obstruction.

Ultrasonography is a useful tool for intussusception diagnosis, both in children and in adults, though variable appreciation, depending on the operator [5,16,17].The classic appearance of an intussuscepted bowel in a transverse plane is called the ‘target sign’ and in the longitudinal appearance it is usually viewed as multiple parallel lines, which is termed as the ‘sandwich appearance [9,12,16,17].

Computed tomography for adult Abdominal is the reference imaging technique. It allows conducting indisputably diagnostic certainty and discovering the possible etiology. It shows the presence of an intestinal occlusion, the topography and the morphological characteristics of any causal lesion [14,15]. The computed tomography sensitivity varies between 58 and 100%. This test is currently considered as the most sensitive radiologic method to confirm

intussusception and distinguishes the presence or absence of a lead point [4,6,9,14,15]. Adult intussusception secondary to inflammatory tumor can be demonstrated by MRI [15]. But the laparoscopy has also been used successfully in selected cases [7]. Among adults 70 to 90% of cases of intussusception require definite treatment, of which surgical resection is, most often, the treatment of choice [2].

The term “inflammatory pseudotumor” has been used for any macroscopic or microscopic tumor [1]. Different terms have been used:Vanek’s tumour, Inflammatory myofibroblastic tumor (IMFT), inflammatory fibroid polyps, plasma cell pseudotumour, inflammatory myofibro histiocytic proliferation, and omental mesenteric myxoidhamartoma [3,12,13]. It was first described as polypoid fibroma by Konjetzny in 1920, then by Vanek in 1949. It was so called Vanek’sTumour. Finally it was named as inflammatory fibroid polyps in 1953 by Helwig and Rainer, indicating that its nature was probably inflammatory [13]. The etiology is still unknown. Authors think that development of this tumor occurs after trauma surgery or infection, such as Epstein-Barr virus and human herpesvirus, related with reactive cytokine production. Histologically, it is characterized by a cellular spindle cell proliferation in a myxoid to collagenous stroma with a prominent inflammatory infiltrate composed primarily of plasma cells and lymphocytes, with occasional admixed eosinophils and neutrophils [12].

Conclusion

The acute intestinal obstruction by intussusception secondary to a small tumor is rarely seen in adults. Its symptoms are not specific. The diagnosis is facilitated by the computed tomography scan. Surgical excision is the treatment of choice.

Consent Disclaimer:

As per international standard or university standard, patient’s consent was collected and is preserved by the authors.

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