Case 10669

Ileal lipoma causing intussusception in an adult patient
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Section: Abdominal imaging
Area of Interest: Abdomen Gastrointestinal tract Small bowel
Procedure: Diagnostic procedure
Imaging Technique: Ultrasound
Imaging Technique: CT
Special Focus: Obstruction / Occlusion Neoplasia
Case Type: Clinical Cases
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Patient: 55 years, female

Clinical History:
A 55-year-old female patient was admitted with several months’ history of abdominal pain which had recently worsened. A tender mass was palpable in the right lower quadrant. Laboratory and abdominal plain film findings were unremarkable.

Imaging Findings:
Abdominal ultrasound (US) was performed, which revealed a multilayered thickening of the bowel in the right lower quadrant, in keeping with the “target”/“doughnut” sign; on longitudinal images a “bowel-within-bowel” appearance was visible (Fig. 1). Contrast-enhanced computed tomography (CT) confirmed the diagnosis of ileo-ileal intussusception (Fig. 2). The lead point was found to be a 2.5 cm homogeneous hypodense mass lesion consistent with a lipoma (Fig. 3). There was also a small amount of free fluid.
Laparoscopic resection of the involved small bowel was performed. Histopathological examination disclosed a submucosal ileal lipoma, with no evidence of dysplasia or malignancy. The postoperative period was uneventful and the patient was discharged 7 days after surgery.

Discussion:
Intussusception is the telescoping of one segment of bowel into the lumen of an adjacent one. Adult intussusception represents only 5% of all intussusceptions and accounts for 1% of adult intestinal obstructions [1-4]. It differs from childhood intussusception in its presentation, aetiology, and treatment. In adults, the majority is associated with an underlying organic lesion, mostly neoplastic [1-4]. Intussusception has also been noted in adult patients with tropical sprue/coeliac disease, abdominal trauma, during the post-operative period, among patients with AIDS-related gut disease, and it may also be idiopathic [3].
In the small bowel, the lead point is usually a benign lesion, including lipoma, Meckel’s diverticulum, postoperative adhesion, adenoma and inflammatory fibrous polyps; metastases and lymphoma account for most cases of malignant causes (30%). In the large bowel, however, 60-70% of the cases develop due to malignant lesions, including adenocarcinoma and lymphoma [1, 2, 4].
Gastrointestinal lipomas are uncommon benign fatty tumours that can occur anywhere along the gut, most often in the colon. Only 20-25% are found in the small bowel. Most lipomas are submucosal and asymptomatic, but they can
become symptomatic, particularly when they exceed 2 cm in diameter [1-2]. The presenting signs and symptoms in adult patients with intussusception are non-specific, intermittent and long-standing, and include colicky abdominal pain, nausea, vomiting, bleeding, and a palpable mass [1-4]. The diagnosis is therefore difficult and delayed, and is frequently only made at emergency laparotomy. Imaging techniques have an important role in achieving preoperative diagnosis. Classic features on US include the “target”, “doughnut” signs or “pseudokidney” appearance, but air may preclude their identification [4]. CT is considered the most reliable investigation for diagnosing intussusceptions and determining the underlying cause [1-4]; typical findings include a “target” or a “sausage-shaped” mass lesion with different layers of attenuation. As in this case, lipomas appear as homogeneous intraluminal masses with fat attenuation (-80 to -120 Hounsfield Units) [1-3]. Partial bowel resection, either by laparotomy or laparoscopy, with or without previous reduction of the intussusception, is the treatment of choice for symptomatic cases [2].

**Differential Diagnosis List:** Ileo-ileal intussusception induced by an ileal lipoma, A lead point intussusception involving the small bowel in an adult patient is generally due to a benign lesion, including lipoma, Meckel’s diverticulum, postoperative adhesion, adenoma and inflammatory fibrous polyps. Less frequently, small-bowel intussusception may develop due to malignant lesions, the most common being metastases and lymphoma.

**Final Diagnosis:** Ileo-ileal intussusception induced by an ileal lipoma

**References:**


Figure 1

Description: Transverse (a) and longitudinal (b) US images show the typical “doughnut”/“target” signs (a) and the “bowel-within-bowel” appearance of intestinal intussusception (arrows). Origin: Department of Radiology, Hospitais da Universidade de Coimbra - Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal
Description: Transverse (a) and longitudinal (b) US images show the typical “doughnut”/“target” signs (a) and the “bowel-within-bowel” appearance of intestinal intussusception (arrows). Origin: Department of Radiology, Hospitais da Universidade de Coimbra - Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal
Figure 2

Description: Axial (a) and coronal reformatted (b) contrast-enhanced CT images demonstrate the ileo-ileal intussusceptions (arrow) and a small amount of peritoneal free fluid (arrowhead). Origin: Department of Radiology, Hospitais da Universidade de Coimbra - Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal
Description: Axial (a) and coronal reformatted (b) contrast-enhanced CT images demonstrate the ileo-ileal intussusceptions (arrow) and a small amount of peritoneal free fluid (arrowhead). 

Origin: Department of Radiology, Hospital da Universidade de Coimbra - Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal
Figure 3

Description: Axial contrast-enhanced CT image depicts a 2.5 cm ileal lipoma as the leading point for intussusception (curved arrow). Peritoneal effusion is also seen (arrowhead). Origin: Department of Radiology, Hospitais da Universidade de Coimbra - Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal.