Case Report

Lipoma lead point intussusception in an adult: A case report

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A R T I C L E   I N F O

Article history:
Received 14 September 2022
Accepted 19 September 2022

Keywords:
Intussusception
Lipoma
Small bowel obstruction

A B S T R A C T

Intussusception has been considered a rare phenomenon in adults, with most cases occurring secondary to lead points. Most adult cases of intussusception occur secondary to lead points. Lead point intussusceptions typically require surgical intervention, whereas non-lead point intussusceptions are often transient and resolve without surgery. Therefore, accurate identification of the etiology of the intussusception guides subsequent treatment. Lipomas are an uncommon type of lead point. We present a case of intussusception secondary to a lipomatous lead point and describe the radiological diagnosis and surgical management.

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Introduction

Intussusception is the invagination of a bowel loop segment into an adjacent bowel loop. Intussusceptions are more common in children and are uncommon in adults [1]. Intussusceptions may occur with or without a lead point. The majority of adult intussusceptions are caused by lead points, while the majority of childhood intussusceptions are not due to lead points [1]. Intussusceptions secondary to lead points are not likely to reduce on their own and typically require surgical intervention. If no lead point is present, the intussusception is likely transient and resolves on its own without surgical intervention. Thus, radiological identification of a lead point guides subsequent management. We present the case of an intussusception secondary to a lead point lipoma, a rare type of end point.

Case report

A 62-year-old female presented to the emergency department with complaints of nausea, vomiting and persistent, severe right upper quadrant pain. Prior medical history included celiac disease. Physical exam revealed a soft abdomen with right upper quadrant tenderness; all other findings were neg-

[^a] Competing Interests: The authors report no conflict of interest.
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https://doi.org/10.1016/j.radcr.2022.09.068
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There increased adults, cally present jejunojejunal vomiting. bowel lipomatous other arrow). Fig. 1 – (A) Contrast-enhanced CT: axial view demonstrating dilated proximal jejunum with central increased density intussusceptum (white arrow) surrounded by mesenteric fat (yellow arrow) encased by higher intensity bowel wall of the intussuscipiens (blue arrow), creating a target appearance. (B) Contrast-enhanced CT: axial view demonstrating dilated proximal jejunum with central increased density intussusceptum (white arrow) surrounded by mesenteric fat (yellow arrow) encased by higher intensity bowel wall of the intussuscipiens (blue arrow). (C) Contrast-enhanced CT: axial view demonstrating dilated proximal jejunum with central increased density intussusceptum (white arrow) surrounded by mesenteric fat (yellow arrow) encased by higher intensity bowel wall of the intussuscipiens (blue arrow), creating a target appearance. (D) Contrast-enhanced CT: axial view demonstrating fat density lead point representing a jejunal lipoma (white arrow). (E) Contrast-enhanced CT: axial view demonstrating fat density lead point representing a jejunal lipoma (white arrow).

Computed tomographic (CT) imaging revealed long segment jejunojejunal intussusception secondary to a 3.4 cm lipomatous lead point (Figs. 1-3). No dilated proximal small bowel loops were present, likely corresponding to the reported vomiting. All other imaging findings were within normal limits.

The patient underwent a laparoscopic reduction of the jejunojejunal intussusception. No vascular compromise was identified. The intramural lipoma was subsequently identified and resected. The patient underwent an uneventful postoperative course without complications.

Discussion

Intussusception is the invagination of a bowel loop and adjacent mesentery (intussusceptum) into the lumen of adjacent distal bowel (intussuscipiens) due to peristalsis. It may present as enteroenteric, ileocecal, ileocolic or colocolic. Intussusception commonly occurs in pediatric patients, typically under the age of 5 [2]. It has been considered rare in adults, and is usually secondary to a lead point. With the increased use of CT, it has been detected more commonly. There is often no lead point; this type of intussusception is usually transient and of no clinical significance. When a lead point is present, intussusception is more likely to persist and cause small bowel obstruction that requires surgical intervention. Patients commonly present with non-specific abdominal symptoms such as nausea, vomiting, abdominal pain, constipation, and hematochezia [3]. Common sources of lead points for adult intussusception include neoplasms, polyps, postoperative adhesions, or meckel’s diverticulum [3,4]. The most common locations of intussusception are the junction at which mobile intestinal segments meet fixed segments [2]. Lipomas are benign tumors comprised of fat cells and are commonly found on the neck and arms. Intestinal lipomas only have a reported incidence of between 0.15% and 4.4% making them relatively rare [5]. The classifications of intestinal lipomas are intramuscular, subserosal, or submucosal with subserosal and submucosal lipomas being the most common sources for adult intussusception [5].

Abdominal CT has been the “gold standard” imaging modality for intussusception with a reported accuracy between 58% and 100% [2]. CT will typically demonstrate a soft tissue mass composed of an outer intussuscipiens and an inner intussusceptum [6]. In cross section, there is a target appearance with central increased density due to collapsed, invaginated small bowel (intussusceptum) surrounded by low density mesenteric fat that is in turn surrounded by increased density bowel wall (intussuscipiens) [6]. This presents longitudinally with a sausage like appearance [3]. Transient intussusceptions lack a lead point and usually do not cause proximal
obstruction. When a lead point is present there is more often proximal obstruction. When a mass is identified separate from the intussusception, the diagnosis of a lead point is easily made; however, this may be difficult due to the presence of adjacent collapsed bowel and inflammation. A lipoma will present as an avascular hypodense fat density [6].

Alternatives to CT imaging that may assist in the diagnosis include abdominal radiography and ultrasound [2]. Abdominal x-ray can provide insight into possible bowel obstruction and location, and are often the first line of imaging ordered. US of intussusception typically has a “target” shape in the transverse view with edematous wall thickening of the intussusciens, and a hyperechoic ring presenting between the intussusciens and intussusceptum [2,4]. Longitudinal US imaging commonly depicts a “pseudokidney sign” [4]. A disadvantage of sonography is that bowel gas may obscure the affected loops of bowel [6]. However, within children being evaluated for intussusception sonography has been a sufficient imaging modality for diagnosis of intussusception [4].

Treatment of enterointeric intussusception may conservative or operative depending upon the presence or absence of a lead point and proximal obstruction. If there is no lead point the intussusception is usually transient and no treatment is required. However, for patients with a lead point there is often proximal obstruction that requires surgical intervention [2]. In addition, any ischemic bowel tissue resulting from the obstruction is also resected [5]. Following early intervention,
the chance of intussusception recurrence is quite rare and patients typically respond favorably [4].

Intussusceptions are rare occurrences in adults. Intussusceptions secondary to lipoma lead points are very rare occurrences that should be treated surgically. We presented the radiological diagnosis and surgical management of an adult intussusception secondary to a lipoma lead point.

Patient consent

Informed consent was obtained from the patient for publication of this case report.

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