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CASE REPORT | PEDIATRICS

Omental Infarction: An Unusual Cause of Left-Sided Abdominal Pain

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Abstract

Left-sided omental infarction (OI) is rare in both the adult and pediatric patients. To our knowledge, only 2 pediatric cases of a left-sided OI have been reported in the literature. We report a case of an obese 13-year-old male who presented with a 6-day history of intermittent, colicky, left upper quadrant abdominal pain.

Introduction

Omental infarction (OI) is an uncommon but increasingly recognized cause of right-sided abdominal pain in pediatric patients.[1] However, left-sided OI is rare in both adults and children. To date, only 2 pediatric cases of left-sided OI have been described in the literature.[2,3] Of the 400 reported cases of OI, only 50 involved pediatric patients, with the majority presenting as right lower quadrant abdominal pain.[1]

Case Report

An obese 13-year-old male presented with a 6-day history of intermittent, colicky, left upper quadrant abdominal pain. There was no history of trauma, anorexia, nausea, vomiting, or diarrhea. His weight was greater than the 95th percentile, and his body mass index (BMI) was 31 kg/m^2. He had left upper quadrant tenderness to palpation with no signs of rebound tenderness, guarding, or rigidity. Routine labs, including complete blood count, metabolic panel, and coagulation profile, were normal. The erythrocyte sedimentation rate was increased at 17 seconds. Stool for occult blood and calprotectin were normal. Computed tomography (CT) revealed a hypodense, homogeneous mass with fat stranding in the left upper quadrant (Figure 1).

Based on radiological findings, he was diagnosed with OI. The patient was conservatively managed with pain control, intravenous fluid hydration, and antibiotics. The patient was discharged 48 hours later with improvement in symptoms. To our knowledge, the patient has remained asymptomatic.

Discussion

Predilection of OI to the right side may be attributed to the longer length and increased mobility of the greater omentum. The right half of the omentum consists of anatomically altered vasculature, which is less tolerant of spontaneous venous stasis and is prone to thrombosis secondary to stretching of omental veins.[4] Given the location and nonspecific symptoms, patients are often misdiagnosed with other right-sided diseases such as acute appendicitis, epiploic appendagitis, intussusception, malrotation, and acute cholecysitis.[3,5] More than 0.1–0.5%

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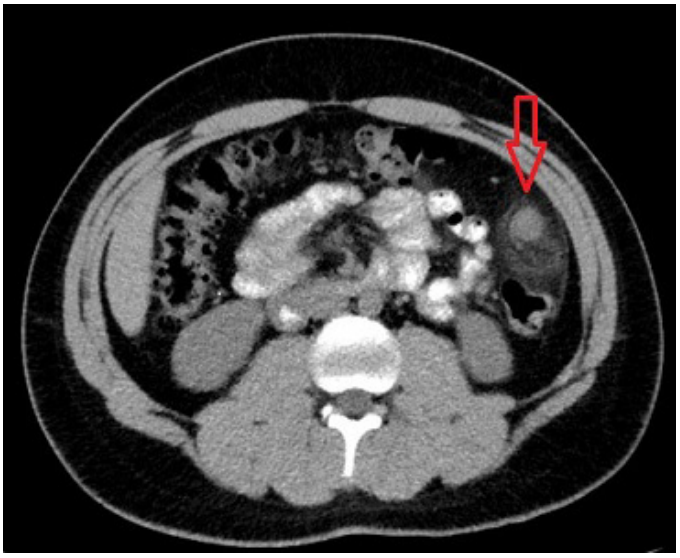

Figure 1. Abdominal CT showing a hypodense, homogeneous mass with fat stranding in the left upper quadrant.

of patients admitted with appendicitis are diagnosed with OI on laparoscopy.[1,5] However, with the emergence of newer, sophisticated imaging techniques and increased awareness among health care providers, more children are being diagnosed with OI earlier in the disease course, preventing misdiagnosis and subsequent complications.[5]

It is possible that, combined with changes in the epidemiology of known risk factors such as pediatric obesity, the advent of these improved diagnostic tools may have led to an increase in the prevalence of OI in children.[5] Park et al reported a prevalence of OI of 32.6%, a two-fold increase among all patients over the past decade.[4,5] Most of the children were younger than 15 years and presented with right lower quadrant abdominal pain.[5] Male sex has also been reported as a common risk factor for the development of OI; the likelihood of greater omental fat accumulation in males compared with females may explain the male predilection.[6] Local trauma, heavy food intake, coughing, sudden body movements, laxative use, and hyperperistalsis are other reported risk factors.[6]

CT scan demonstrating a heterogeneous fatty mass can help differentiate OI from other lesions. Abdominal ultrasound is less specific, as imaging findings for this entity can be subtle on sonography and recognition is operator-dependent. CT offers a distinct advantage over sonography in the evaluation of OI, as the mass is reliably identified in the characteristic location between the anterior abdominal wall and the colon.[7] In the largest pediatric case series of 19 children reported by Rimon et al, the sensitivity of ultrasound to detect OI was 64% compared to the 90% sensitivity of abdominal CT.[8] Various case reports advocate a conservative management approach.[8] Rimon et al reported success from a conservative approach in 14 of 19 pediatric patients treated with IV antibiotics, hydration, and pain control.[8] Symptoms resolved without any complications. Surgical exploration in 5 patients was performed due to a clinical suspicion of appendicitis.[8] OI is now described as a self-limiting condition supported by CT imaging data at 1–3 years follow-up. The comparative risks of leaving the necrotic tissue within the peritoneal cavity versus the risks of surgery are unknown, so long-term follow-up studies in children comparing conservative versus operative treatment for OI are required.

Disclosures

Author contributions: R. Walia researched and drafted the article and is the article guarantor. All authors contributed to writing the article. R. Verma and S. Pabby led revision of the article.

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