An omental abscess mimicking an intra-abdominal tumor

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Abstract

Here, we report the case of a 12-year-old boy who presented with intermittent lower abdominal pain; subsequently, an intra-abdominal mass found by abdominal ultrasound. Initially, an intra-abdominal tumor was suspected according to the results of the physical examinations, laboratory data, and imaging studies. A surgical excision was performed, and pathological examination revealed an omental abscess without evidence of intestinal perforation or a residual foreign body. The patient’s history consisted solely of receiving an open appendectomy for a ruptured appendix 2 years prior. This is an extremely rare case of a post-appendectomy omental abscess forming after such a long interval, but no evidence of residual appendiceal tissue or foreign bodies could be identified.

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1. Introduction

A primary omental abscess is a rarely reported disease. Abdominal exploration is essential for correct diagnosis and treatment because the clinical presentation often mimics other acute abdominal diseases, such as appendicitis, peritonitis, and intra-abdominal masses. Here, we report a rare case of a delayed-onset omental abscess that formed after previous appendectomy.

2. Case report

A 12-year-old boy came to our clinic suffering from intermittent lower abdominal pain for 8 days. The pain was dull, persistent, and exaggerated, with a bladder-filling sensation in the supine position, but it could be relieved by bending forward. The patient had undergone an appendectomy for ruptured appendicitis 2 years prior at another hospital and denied any recent abdominal trauma. After receiving the appendectomy, he occasionally suffered from the same symptoms, which would eventually subside. There was no fever, diarrhea, constipation, nausea, or vomiting. Physical examination revealed a visible, palpable, and fixed abdominal mass, measuring about 60 × 60 mm in size, over the infraumbilical area with local tenderness, but there was no peritoneal sign. Laboratory data indicated left-shifted leukocytosis (WBC: 15,300/mm³; 79% neutrophils) and a mild elevation in the serum C-reactive protein level (19.2 mg/dL). Tumor markers, such as AFP and HCG, were within normal limits. Abdominal ultrasonography showed a hypoechoic lesion over the pelvis. An abdominal computed tomography (CT) scan showed a slight enhancement and ill-defined necrotic lesion, about 65 mm in its greatest dimension, over the anterior aspect of the lower abdomen (Fig. 1).

An intra-abdominal tumor of unknown etiology was suspected, and an exploratory laparotomy was performed. The operative findings revealed that a 60 × 60-mm irregular and encapsulated mass that had originated from the greater omentum and adhered to the terminal ileum, containing both pus and necrotic tissue. The tumor was totally excised, including portions of the greater omentum to which it had adhered, by ligation of the collateral vessels without bowel...
resection (Fig. 2). The final pathological results confirmed a mixed inflammatory cell infiltration composed of neutrophils, plasma cells, histiocytes, and eosinophils, without malignant tumor cells. Gram-positive bacillus was identified in the abscess cavity, and ampicillin and gentamicin antibiotics were administered. The patient recovered uneventfully and was discharged home on the 4th postoperative day.

3. Discussion

Abdominal masses in children usually present with pain and are difficult to detect in the early stages because of their nonspecific symptoms. Wilms’ tumor and neuroblastoma are the most common intra-abdominal tumors in children, followed by leukemia, lymphoma, hepatic tumors, and ovarian tumors and soft tissue sarcomas. Pelvic masses or inflammatory diseases in children most often originate from the gonads in female patients. Our patient presented with lower abdominal pain and irritation during urination. A definitive diagnosis could only be reached through pathological histology because the results of the physical examinations, laboratory data, and imaging studies indicated an intra-abdominal tumor.

Several diseases, including an idiopathic abscesses, omental infarction, tumors, and omental torsion, can result in the formation of an omental abscess, but this has been rarely

Fig. 1. (A) Abdominal ultrasound showing an approximately 3.6 × 3.5-cm hypoechoic mass (arrow) lesion behind the urinary bladder (UB). (B) Abdominal CT revealing an ill-defined heterogeneous lesion with contrast enhancement over the lower abdomen (arrow).

Fig. 2. (A) The mass originated from the greater omentum and adhered to the appendiceal stump site with some pus (white arrow). (B) Cut-surface of the mass showing thick necrotic tissue contents (arrow).
The presence of foreign bodies in the omental abscess, such as suture materials or fragments of gauze, have also been reported. Acute appendicitis with perforation presents in the range of 16–30%, and delayed diagnosis is usually seen in especially young and old patients or those with atypical presentations. The preferred treatment is a prompt appendectomy, and possible postoperative complications include wound infection, bleeding, intra-abdominal abscess (5%), intestinal obstruction, and, rarely, stump appendicitis. In this patient, no foreign bodies or residual surgical materials associated with the antecedent surgery were found in the abscess during the operation. The abscess originated from the greater omentum and was located near the terminal ileum. Therefore, it was most likely associated with inadequate clearance of the ruptured appendiceal tissue or abscess over the omentum. An omental abscess is rarely considered in the differential diagnosis of patients who have undergone an appendectomy, especially after so much time as elapsed, but it should be considered as a possibility.

References