Laparoscopic excision of an ascending colon duplication cyst in an adolescent

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ABSTRACT

Colonic intestinal duplications are infrequent and rarely present past early childhood. We present the case of a large, ascending colon duplication in a 17-year-old boy resected using minimally invasive techniques. This appears to be the first reported case of a laparoscopic en-bloc ascending colon duplication resection in an adolescent. The diagnosis and management of colonic duplications are discussed.

1. Introduction

Intestinal duplications are mucosa lined structures that share a common wall with an adjacent portion of the gastrointestinal tract, but may or may not have a communication with the bowel lumen [1,2]. They are generally described as tubular, cystic, or spherical and can occur at any level of the gastrointestinal tract. Sixty percent are found in the small intestine most commonly in the ileum [3], while colonic duplications are comparatively rare, representing only 6–15% of all duplications [4]. Most frequently seen in white males, the incidence at autopsy is approximately one of every 4500 individuals [5]. While typically a benign entity, duplications have been known to undergo malignant transformation [4].

Despite variances in location, the vast majority (80%) of intestinal duplications are symptomatic and are discovered within the first two years of life with rare presentations beyond early childhood [6]. Patients presenting later in life may have any combination of the following sequelae: abdominal pain, vomiting, abdominal distension, gastrointestinal hemorrhage, intussusception, volvulus, or obstruction [7].

2. Case report

A 17-year-old previously healthy Caucasian boy presented with a two day history of right lower quadrant pain associated with decreased oral intake. He reported no nausea, vomiting, nor sick contacts, and recalled no similar episodes in the past. On physical examination, the abdomen was soft with right lower quadrant fullness accompanied by tenderness, mild guarding, and hyperactive bowel sounds. A computerized tomography (CT) scan demonstrated a 15 by 7 cm inflammatory, cystic mass in the right lower quadrant with oral contrast in the colon but not within the lesion (Fig. 1).

Due to the concern for an intraperitoneal abscess versus an infected duplication cyst, the patient was taken to the operating room for a diagnostic laparoscopy. An umbilical 12 mm Step port (Covidien, Mansfield, MA) was placed followed by two additional 5 mm ports in the left lower quadrant. The mass was removed en-bloc via a 15 mm
specimen bag through the umbilical port site (Fig. 2). Fluid from the cyst was sent for cytology. A stapled side-to-side anastomosis of the ileum and transverse colon was performed extra-corporeally through a small extension of the port site. An umbilicoplasty was performed for cosmesis. Pathological examination revealed an acutely and chronically inflamed small intestine and colon duplication cyst. Cyst fluid cytology was negative for malignancy.

3. Discussion

Very few incidences of intestinal duplications have been reported in patients greater than two years old and even fewer related to duplications of the colon. A literature search revealed merely a few case reports of colonic duplications arising in patients outside of early childhood: Reiser-Erkan et al. and Ho described two separate cases of 25-year-old males with intussusception caused by colon duplications [8,9]. Colon duplications causing rectal bleeding were reported by Fotiadis et al. in two adult cases [10].

References


