

Appendix Duplication: A Rare Presentation

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ABSTRACT

Appendiceal duplications are among the rare congenital anomalies of the gastrointestinal tract. Laparotomy was applied to a nineteen-year-old male patient due to an injury caused by a piercing-cutting tool, during operation exploration, omental adhesions were present on the appendix and appendectomy was performed to the patient. The histopathological examination of the specimen showed that there was luminal duplication all over the appendiceal wall at the distal 4 cm. portion of the appendix. Appendiceal duplication should definitely be kept in mind in patients with a history of appendectomy and clinical complaints compatible of appendicitis.

Key words: Appendix, duplication, appendicitis

Apendiks Duplikasyonu

ÖZET

Apendiks duplikasyonu gastrointestinal traktın ender görülen konjenital anomalilerindedir. On dokuz yaşında erkek hasta delici-kesici alet yaralanması nedeniyle laparotomi yapıldı , eksplorasyonda apendiks üzerinde omental yapışıklar mevcuttu, hastaya apendektomi yapıldı. Spesmenin histopatolojik incelemesinde apendiksin distal 4 cm lik kısmında tüm apendiks duvarını içeren luminal duplikasyon saptandı. Apendektomi hikayesi olan ve apendisit benzeri klinik şikayetlerle başvuran hastalarda AD mutlaka akılda tutulmalıdır.

Anahtar kelimeler: Apendiks, duplikasyon, apendisit

INTRODUCTION

Appendectomy due to acute appendicitis is one of the most common surgeries performed at the general surgical clinics. Appendiceal duplications (AD) are among the rare congenital anomalies of the gastrointestinal tract, among the appendectomy specimens, their rate is between 0.004 and 0.009 (1,2). These cases may be diagnosed incidentally during laparotomies performed for acute appendicitis or other reasons.

CASE

A 19-year-old man was admitted to the emergency room because of an injury caused by a piercing-cutting tool,

about 3 hours ago. He had a history of substance abuse since about 2 years ago. His physical examination revealed blood pressure of 100-80 mm Hg, pulse of 94 beats/minute, respiration of 20 breaths/minute, body temperature of 37°C and an entrance hole at approximately 2 cm left lateral to the umbilicus, penetrating into the abdominal cavity. The patient was urgently taken to operation. Upon making a midline laparotomy incision, there was hemorrhage in the abdomen, originating from the rectus abdominis muscle but it was soon stopped. On exploration there were omental adhesions on the appendix and when the adhesions were dissected, the appendix was found to be edematous and hyperemic, then appendectomy was performed, and a rubber drain was placed, and as no problems were seen during the postoperative period

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Table 1. Cave -Wallbridge Classification

Type A	Single cecum and incomplete duplication
Type B1	Symmetric duplication at both sides of the ileocecal valve
Type B2	Duplication, one normal and the other at a different localization
Type C	Duplication occurring with Cecum duplication

the patient was discharged after 5 days. Upon histopathologic examination of the specimen, a luminal duplication containing of the appendix walls was detected at the 4 cm distal portion of the appendix that was 7 cm long (Figure 1).

DISCUSSION

Gastrointestinal system duplications are among the rare congenital anomalies, presenting before 2 years of age in more than 80% of the patients. It often presents with acute abdomen or bowel obstruction (3). ADs were first classified by Cave (4) in 1936 and modified by Wallbridge (5) in 1963 (Table 1). In this case there was a single cecum and partial duplication and it was type A according to the Cave-Wallbridge classification. Intestinal duplications may also be accompanied by urogenital system abnormalities; in this case no other abnormalities were observed during the post-operative scans (ultrasound, double-contrast computed Tomography, intravenous pyelography). Duplication of the appendix must be distinguished from solitary diverticulum of the cecum, and from appendiceal diverticulosis. This distinction can be best made histopathologically (5-6). In Figure 1 of our case, histopathological findings specific related to the appendix are observed. AD is usually found incidentally in laparotomies performed for other purposes but complications may arise(7). AD may present as a constricting lesion of the ascending colon and mimic a colonic adenocarcinoma(8). It may also present with features of appendicitis in patients with or without prior appendectomy. AD cases treated by appendectomy due to acute appendicitis, and performed a second appendectomy after 2.5 years, are reported in the literature (9). Consequently, although it is seen quite rarely, in patients with a history of appendectomy and

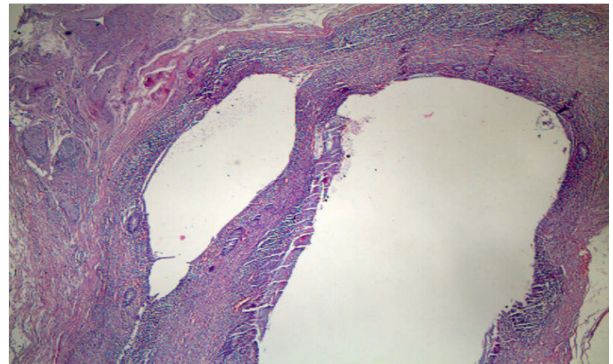


Figure 1. Histopathologically, typical lymph follicles and smooth muscle cells are seen on the appendiceal wall. (HE-Point X-40)

clinical complaints suspicious of appendicitis, AD must be kept in mind; and ultrasonography, computed tomography and when required diagnostic laparoscopy should be performed. This is important for patient health and medicolegal problems

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