



More than a Clinical Diagnosis: Meckel's Diverticulum with Inflammatory Polyp and Adenomyomatosis of Gallbladder

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Abstract

Appendicitis has been one of the main differential diagnoses in clinical correlation to right iliac fossa pain for surgeons and radiologists. Presenting here a case, which makes one to re think about approach to right iliac fossa pain. A middle-aged man diagnosed and operated for acute appendicitis 5 months before. He still had pain in right hypochondrium, paraumbilical region and in right iliac fossa. Ultrasound of the abdomen reported adenomyomatosis of the gallbladder. A CT scan of the abdomen with contrast reported as a Meckel's diverticulum with a polypoidal mass and adenomyomatosis of the gallbladder. The patient underwent laparoscopic segmental bowel resection with anastomosis, and laparoscopic cholecystectomy. The patient had a smooth recovery with no abdominal symptoms in follow up. The association of inflammatory polyp in Meckel's diverticulum, and adenomyomatosis of gallbladder is a rare combination presented in this patient.

Keywords: Meckel's Diverticulum; Inflammatory polyp; Adenomyomatosis gallbladder

Introduction

Meckel's diverticulum is a common congenital malformation, present in 2% to 4% of the population. This is rarely symptomatic in adults. This happens due to persisting congenital vitello intestinal duct [1]. The complications in adults include, obstruction, intussusception, ulceration, hemorrhage, tumor and rarely, a vesico-diverticular fistula [1]. Risk factors that increase the likelihood of developing symptoms include age less than 50 years, male gender, diverticulum greater than 2 cm in length, presence of ectopic tissue, broad based diverticulum, and the attachment of fibrous bands to the diverticulum [2].

We are presenting a case of 40 years old male, who underwent laparoscopic appendicectomy 5 months before. The patient continued to have pain in right iliac fossa, para umbilical region, and right hypochondrium. He was diagnosed to have Meckel's diverticulum with polypoidal mass, and adenomyomatosis of gallbladder. The association of inflammatory polyp in Meckel's diverticulum, and adenomyomatosis of gallbladder is a rare combination presented in this patient.

Case Presentation

Presenting here, is a case of Meckel's diverticulum with suspected tumor, and adenomyomatosis of gallbladder. This 40 years old patient underwent laparoscopic appendicectomy for acute appendicitis 5 months before in another hospital. The patient did not achieve considerable relief of pain after the surgery, which increased to an extent that the patient lost weight and appetite. The patient came for second opinion. The patient also had pain in epigastrium and right hypochondrium after intake of fatty meal. On examination his Heart rate was 88/min, 100% saturation, Blood pressure 140/90 mm of mercury, afebrile, well hydrated. His abdomen was soft, with tenderness in para umbilical region and right hypochondrium.

Ultrasound abdomen showed adenomyomatosis of gallbladder. CT scan abdomen with Contrast was reported as, 5 cm × 2 cm Meckel's diverticulum from antimesenteric border of ileal loop with wall thickening and a bi-lobe intraluminal polypoidal mass measuring approximately 2 cm × 1 cm,

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Figure 1: CT scan showing Meckel's diverticulum with polypoidal mass.



Figure 2: Meckel's diverticulum.

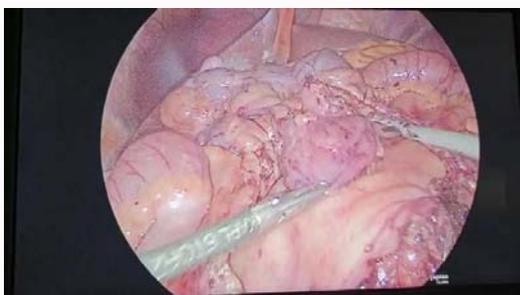


Figure 3: Enlarged mesenteric lymph node.

suggestive of Meckel's diverticulitis with a mass lesion suspected tumor. There were enlarged mesenteric lymph nodes adjacent to Meckel's diverticulum (Figure 1).

The patient was planned for surgery after informed consent. Diagnostic laparoscopy showed Meckel's diverticulum about 50 cm to 60 cm from ileocecal junction, with enlarged mesenteric lymph nodes adjacent to diverticulum. Meckel's diverticulum with 5 cm ileum on both sides of the diverticulum was resected with stapler. A side-to-side anastomosis with endostapler was done. The adjacent mesentery with enlarged lymph nodes was resected, and defect in the mesentery was closed. Laparoscopic cholecystectomy was done (Figure 2, 3).

Postoperative recovery of the patient was smooth. On 1st postoperative day, he was started on clear oral fluids, which he tolerated well. He was mobilized. On 2nd postoperative day, the patient tolerated full liquid diet. The patient was progressed to soft diet on the following day. The patient was discharged in a stable condition. The patient was followed up in surgical clinic after 1 week. He was fine,

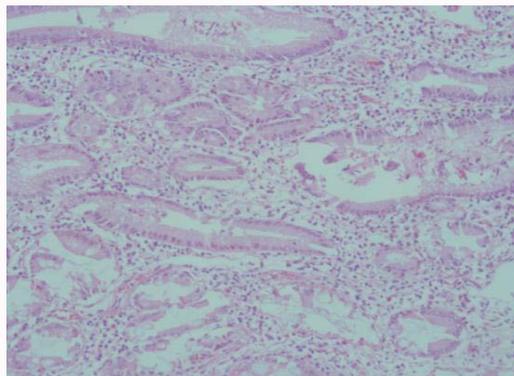


Figure 4: Histopathology showing inflammatory polyp in Meckel's diverticulum.

tolerating food, and he had no abdominal pain.

Histopathology was reported as inflammatory polyp with mild reactive epithelial atypia in a background of chronic erosive inflammation with pyloric gland metaplasia and reactive lymphoid follicles. IHC markers, including Synaptophysin, CGA, Ki67, CK20, p53, CD34, were immunoreactive, suggestive of inflammatory polyp (Figure 4).

Histopathology of gallbladder was reported as adenomyomatosis of gallbladder with chronic cholecystitis.

Discussion

In the developing fetus, vitelline duct communicates between the yolk sac and the midgut of the fetus. This duct usually obliterates up to 10th week of gestation. Meckel's diverticulum results from incomplete closure of the vitelline duct [3]. This is more common in pediatric age group, and rarely becomes symptomatic in adults [4]. Meckel's diverticulum is commonly described as 2 inch long, located at 2 feet from ileocecal junction. Its length varies from a small outpouching to 1 meter [5].

This is a true diverticulum. This is composed of all the layers of the gastrointestinal tract. This may contain ectopic tissues, such as gastric, duodenal, colonic and pancreatic tissues. This patient had presence of pyloric glands in the diverticulum. Meckel's diverticulum may contain residual food and bacteria, which may lead to chronic inflammation. The ectopic tissues may cause inflammation by secreting digestive juices. This long-term inflammation may lead to complications such as, hemorrhage, ulceration, perforation and formation of inflammatory polyps [6]. Our patient has developed inflammatory polyp in the diverticulum.

Surgical resection is the only definitive treatment for Meckel's diverticulum. The surgical options include, resection with linear stapling, wedge resection and segmental resection. There is risk of leaving residual tissue of diverticulum after linear stapling. Segmental bowel resection and anastomosis is better option, even for treating the complications, such as bleeding, or perforation [7].

A retrospective analysis showed that among patients, who underwent appendectomy, 2.9% were found to have Meckel's diverticulum. Some of the diverticuli were removed at the same time [8]. Patients undergoing appendectomy require evaluation for the presence of Meckel's diverticulum. Meckel's diverticulum with obvious pathology or having risk factors for complications require

resection.

Adenomyomatosis of gallbladder is distinguished by mural thickening and forming of Rokitsansky-Aschoff sinuses. Its incidence is about 1% to 9% of cholecystectomy specimens [9]. There are three types of adenomyomatosis of gallbladder, segmental, fundal and diffuse type [10]. Our patient had diffuse adenomyomatosis. The muscle hypertrophy, impaired gallbladder drainage and increase pressure in the lumen, may cause intermittent abdominal pain. This can be associated with cholecystitis [8]. This patient had adenomyomatosis of gallbladder associated with chronic cholecystitis. Its association with carcinoma is not very clear. Some studies suggest association of carcinoma with segmental type of adenomyomatosis. Radiological evaluation with ultrasound, and, if required a CT scan or MRI is important in such cases [11].

The association of adenomyomatosis of gallbladder with inflammatory polyp in Meckel's diverticulum has not been clearly mentioned in literature. Patients diagnosed for inflammatory polyps of intestine and in Meckel's diverticulum need to be evaluated for the presence of adenomyomatosis of gallbladder.

Conclusion

Patients undergoing laparoscopic appendicectomy require evaluation for the presence of Meckel's diverticulum. Patients with inflammatory polyps of intestine and in Meckel's diverticulum require evaluation for adenomyomatosis of gallbladder. Segmental resection is better surgical procedure for Meckel's diverticulum.

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