Leiomyoma Of Meckel's Diverticulum Presenting As Acute Abdomen

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Citation

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Abstract

Neoplasms of Meckel's diverticulum are rare and only one percent of the cases are affected. The most common presentation of a neoplasm of Meckel's diverticulum is intussusception followed by melaena. Pre-operative diagnosis is unusual even with ultrasonography, CT scan, Barium-meal examination or angiography. Acute abdomen with features of obstruction is very unusual in neoplasms of Meckel's diverticulum when intussusception is not present. We report hereby a case of leiomyoma of Meckel's diverticulum detected after laparotomy for acute abdomen when conservative treatment was abandoned after 48 hours and exploratory laparotomy was done.

INTRODUCTION

Two percent of the general population is affected by Meckel's diverticulum.[1].Only 20 % of Meckel's diverticula undergo pathologic changes and the rest remain asymptomatic.[2] Neoplastic changes are known to occur in one percent of Meckel's diverticula.[2, 3] Leiomyoma is the commonest benign tumor of Meckel's diverticulum so far observed in world literature.[4] Despite diagnostic advances, it is unlikely to be diagnosed pre-operatively. The majority of cases are detected only after laparotomy. We performed laparotomy in a fifty-five-year-old female for acute abdomen after all basic investigations and found a tumor of Meckel's diverticulum causing obstruction. It was treated by resection of 10 cm ileum containing Meckel's diverticulum and end-to-end anastomosis. Histopathology of the resected specimen revealed a leiomyoma of Meckel's diverticulum.

CASE REPORT

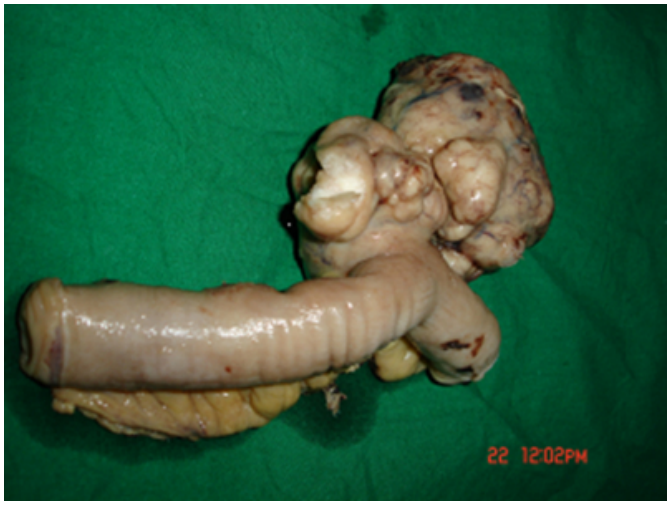
A 55-year-old female presented with abdominal pain for 3 days. The pain was generalized, but initially it was centered over the periumbilical region. The patient was not passing flatus and faeces for 2 days. Nausea was present and 2 episodes of vomiting were present. She was afebrile. On physical examination, blood pressure was 120/70mmHg, pulse 96/min. and respiration rate 22/min. Her abdomen was rigid with tenderness present in the lower abdomen. Rebound tenderness was not present. Liver dullness was not masked. No shifting dullness or succussion splash was present. Slight distension of the abdomen was noticed.

Investigations revealed: Hb 9.1 gm/dl, TLC 13.1 x 10^9/L, DLC N_{76}, L_{20}, E_4, B, Urea 36mg/dl, blood sugar (F) 78mg/dl, serum creatininine 0.8 mg/dl, sodium 135 meq/L, potassium 3.6meq/L, chloride 106 meq/L. Abdominal X-ray and ultrasound were inconclusive. The patient was kept on conservative treatment with nasogastric aspiration, nil orally, intravenous fluid, antibiotics, proton pump inhibitors and analgesics. After 48 hours of conservative treatment the patient was not improving, so exploratory laparotomy was planned.

At operation, a mass of 8cm x 4cm (Figure1) at the anti-mesenteric border of the ileum 60cm proximal to the ileo-caecal junction was found. The mass was excised along with a 10cm segment of the ileum and continuity was re-established by end-to-end anastomosis. There was no ascites or mesenteric lymphadenopathy. No evidence of metastasis was detected intra-abdominally. Intra-operative diagnosis of Meckel's diverticulum with a neoplasm likely to be benign in nature was considered.

Figure 1

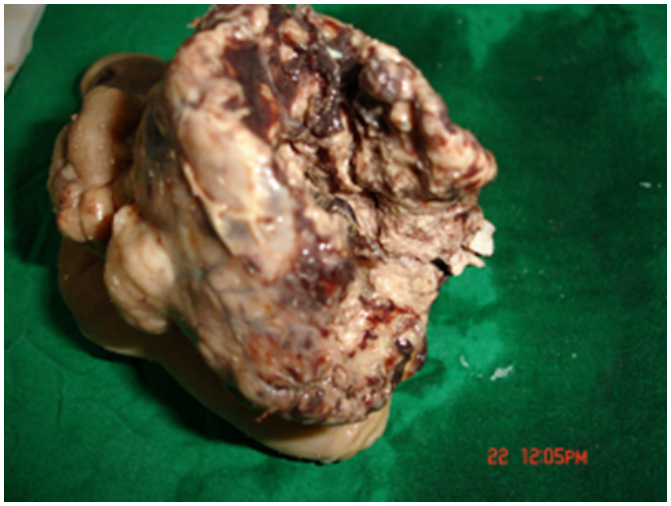
Figure 1: Leiomyoma of Meckel's diverticulum with resected ileum.



On gross pathology, the tumor was globular and nodular measuring approximately 4cm in diameter (Figure 1). On cross-section, a central cavity was noticed filled with liquid contents (Figure 2). The cavity was communicating with the intestine through a narrow opening 0.4cm in diameter. The wall of the tumor was thick and measured 1.5cm. On cutting through it several areas of calcification were recognized

Figure 2

Figure 2: Cross-section of a leiomyoma of Meckel's diverticulum showing central necrosis.



On microscopy, the solid part of the tumor was composed of interlaced bundles of closely packed spindle cells with large elongated oval nuclei. In some areas, the cells formed a palisade arrangement. Mitotic figures were absent. The tumor was capsulated. The histological diagnosis was leiomyoma arising in the wall of Meckel's diverticulum. The patient was discharged on day 8 after stitch removal. She was doing well during a follow-up of 6 months.

DISCUSSION

Pre-operative diagnosis of leiomyoma of Meckel's diverticulum is nearly impossible despite radiological means of barium studies, ultrasound, CT scan and angiography. Clinical presentation is quite variable with features of intussusception, melaena, or peritonitis. Acute abdomen may be the presenting feature in extremely rare cases of leiomyoma of Meckel's diverticulum. Large sized leiomyomas can be detected by CT scan. Barium meal examination may reveal a filling defect if a wide base Meckel's diverticulum is present. The usual presentation of a neoplasm of Meckel's diverticulum is intussusception.[5] Some cases may present with chronic and recurrent melaena.[6] Meckel's diverticulitis may mimick appendicitis, but only periumbilical pain and tenderness are found. Guarding and rigidity may be features in Meckel's diverticulitis.

Intra-operative diagnosis of leiomyoma of Meckel's diverticulum is considered when no evidence of metastasis is found. Pseudodiverticulum may be a differential diagnosis, but cross-sectional examination rules out a pseudodiverticulum[7,8]. A hard mass detected in Meckel's diverticulum and gross examination with cross-sectional view confirmed benign neoplasm of Meckel's diverticulum in our case. As it was encapsulated, a possible intraoperative diagnosis of leiomyoma was supposed. This was confirmed on histopathology.

In conclusion, leiomyoma of Meckel's diverticulum is detected usually after laparotomy. It may mimick acute abdomen and advanced diagnostic tools may be fruitless to settle the diagnosis and exploratory laparotomy is the final solution in terms of diagnosis and treatment.

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