

Meckel's Diverticulum as Bleeding Per Rectum in Adult Male: A Rare Presentation

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Abstract

Meckel's diverticulum results from an incomplete closure of the vitello-intestinal duct and generally arises from the antimesenteric border of the ileum. It is present in 2% of the population, 2 inches long and 2 feet proximal from the ileocecal junction. Meckel's diverticulum was named after a German anatomist in 1809. A 24-year-old male presented with a history of bleeding per rectum for the last 15 days to Goyal Surgical, Lapro, and Endoscopic Research Center, Kota, Rajasthan, India. The bleeding was sudden in onset. Each episode had around 250-300 ml of blood loss. It was bright red in color mixed with stools initially and later with clots. No symptom of vomiting in blood, fever, loose stool, history of abdominal trauma, no history of analgesic or any other drugs taken. No previous history of such bleeding. The patient had pallor and was in shock. Resection of Meckel's diverticulum and part of the ileum was done with end-to-end anastomosis. The patient had uneventful recovery.

Key words: Bleeding per rectum, Meckel's diverticulum, Vitello-intestinal duct

INTRODUCTION

Meckel's diverticulum results from an incomplete closure of the vitello-intestinal (omphalo-mesenteric duct).^{1,2} It arises from the antimesenteric border of the ileum. It is present in 2% of the population, 2 inches long and 2 feet proximal from the ileocecal valve.³ Meckel's diverticulum was named after a German anatomist in 1809. Some time it may be asymptomatic and found as incidental finding in cadaveric dissection. Common complications due to Meckel's diverticulum are inflammation, intestinal obstruction, intussusception, hernia, torsion, umbilical sinus or fistula, neoplasm and hemorrhage.⁴⁻¹¹

Meckel's diverticulum is often overlooked as a possible cause of lower gastrointestinal (GI) bleed in adults.^{3,4,5,9} Painless GI bleed is a common symptom of Meckel's diverticulum in children, and it is relatively rare in adults.^{3,9}

Hemorrhage from a Meckel's diverticulum is a very rare in the adult age group.^{4,5,9} The bleeding is almost always associated with peptic ulceration from the heterotopic gastric mucosa located within the diverticulum.⁷ The hemorrhage can be slow and occult or massive. Mucosa is found in almost 100% of patients with GI bleeding due to Meckel's diverticulum.³ We report a rare case of Meckel's diverticulum presenting as massive bleeding per rectum in an adult male.

CASE REPORT

A 24-year-old male presented with history of bleeding per rectum for the last 15 days to Goyal Surgery, Endoscopic and Research Medical Center, Kota, Rajasthan, India. The bleeding was sudden in onset. Each episode had around 250-300 ml of blood loss. It was bright red in color mixed with stools initially and later with clots. No symptom of blood in vomiting, fever, loose stool, history of abdominal trauma, intake of analgesic or any other drugs in the last few days.^{5,12} No previous history of such bleeding or bleeding disorder.

On general examination, he had pallor, with a pulse of 124/min, respiratory rate of 26/min and blood pressure of 90/60 mmHg at admission.^{4,5,10,11}

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www.ijss-sn.com

Month of Submission : 12-2015
Month of Peer Review : 01-2016
Month of Acceptance : 01-2016
Month of Publishing : 02-2016

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His abdomen was soft with mild tenderness in the umbilical region. No mass was palpable in the abdomen. Per rectal and proctoscopy were normal. All investigation was within normal limit.

In view of hemodynamic instability, he was admitted to the ICU and resuscitation done. Investigations were done. Few hours later, the patient passed about 200-250 ml of blood mixed with clots per rectally. An urgent colonoscopy was done to identify the cause of the bleeding as his upper GI endoscopy was normal. Colonoscopy revealed active GI bleeding proximal to the ileocecal junction with fresh blood and clots in the colon.

His hemoglobin was 5 g%, total count 8000; platelets 145,000, all the other investigation were with normal limit. Five units were transfused and patient taken for emergency exploratory laparotomy.

On exploration of abdomen, the entire jejunum was collapsed, and distal ileum was distended with blood in it. Enterostomy was done proximal to ileocecal junction and endoscope passed proximally to see the site of bleeding. There was no external finding except Meckel's diverticulum found on the external surface of gut. Active bleeding about 2 inches proximal to ileocecal junction at Meckel's diverticulum site (Figure 1) was seen. We confirmed that Meckel's diverticulum was the source of the bleed. Resection of Meckel's diverticulum and part of the ileum was done with end-to-end anastomosis. The patient recovered uneventfully. He was discharged on 10 post-operative days after removing the sutures.

Histopathology revealed heterotropic gastric mucosa in Meckel's diverticulum (Figure 2).

DISCUSSION

The anatomic variant was initially identified by Fabricius Hildanus in 1598; however, Johann Meckel was the first to publish a detailed description of this not uncommon finding.¹ Meckel's diverticulum results from an incomplete closure of the vitello-intestinal duct (Omphalomesenteric duct) and arises from the antimesenteric border of the ileum.² It is present in 2% of the population, 2 inches long and 2 feet from the ileocecal valve.² Meckel's diverticulum is often overlooked as a possible cause of lower GI hemorrhage in adults.¹⁰⁻¹² Hemorrhage from a Meckel's diverticulum is very rare in the adult age group.^{10,11} The hemorrhage can be slow and occult or massive. Gastric mucosa is found in almost 100% of patients with GI bleeding due to Meckel's diverticulum.⁷

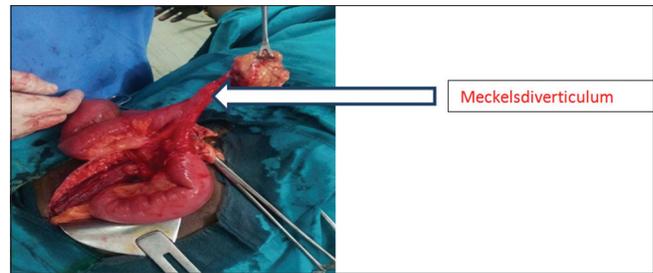


Figure 1: Resected specimen showing Meckel's diverticulum

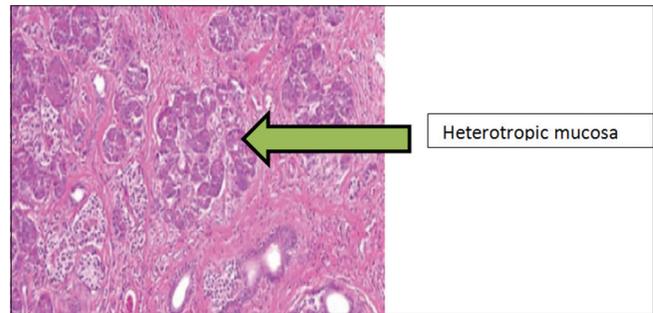


Figure 2: Heterotropic mucosa

Meckel's diverticula are lined with heterotropic mucosa in up to 60% of cases with 62% with gastric mucosa, 6% pancreatic, 2% jejunal, 2% Brunner's glands, 5% have both gastric and pancreatic and 2% have both gastric and duodenal.^{8,11} Tc-99m pertechnetate scanning is known to be the most useful diagnostic method for the diagnosis of Meckel's diverticulum, with heterotropic gastric mucosa with diagnostic accuracy in more than 90% in children and 50-65% in adults.¹³ This, however, cannot be done in emergency situations, as in this case. This was emergency case, so Tc-99m could not be performed. Upper GI endoscopy cannot diagnose the bleeding from Meckel's diverticulum. Colonoscopy will show only bleeding until ileocecal junction.

In this case, after laparotomy scope was passed through enterostomy proximal to ileocecal junction and directed proximally to see the site of bleeding. Active bleeding was seen at Meckel's diverticulum mucosa. Surgical resection of Meckel's diverticulum with part of ileum is the treatment of choice for symptomatic Meckel's diverticulum.¹²

CONCLUSION

Massive bleeding from Meckel's diverticulum is rare in adult patients. Possibility of Meckel's diverticulum should be kept in mind. Resection of Meckel's diverticulum and part of the ileum is the treatment of choice.

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How to cite this article: Rathore KB, Masih WF, Goyal SK. Meckel's Diverticulum as Bleeding Per Rectum in Adult Male: A Rare Presentation. *Int J Sci Stud* 2016;3(11):293-295.

Source of Support: Nil, **Conflict of Interest:** None declared.