



A SINUS OF SORROW

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Abstract

Abdominal wall sinuses occurring in the wounds that fail to heal are heard off. The most common causes have been retained sutures, foreign bodies or congenital causes. Various cases have been reported with the above being the causes. Here we have come across a case of sinus which was a diagnostic dilemma.

A 25-year-old lady with no comorbidities presented to the outpatient department with history of small opening on the anterior abdominal wall, on and off since 4 years associated with scanty serous intermittent discharge. A sinogram was performed which showed the sinus to be superficial. Patient was planned for exploratory laparotomy and proceed. Intraoperatively the sinus was extending into the small bowel with a small out-pouching which histopathologically turned out to be Meckel's diverticulum.

This case was indeed a diagnostic dilemma and some new differential diagnosis that needs to be kept in mind when we come across abdominal wall sinus.

Keywords: Post-operative scar, sinus, bowel anastomosis, Meckel's diverticulum, case report.

INTRODUCTION

Abdominal wall sinuses occur due to the failure of a wound to heal. They are mainly due to the presence of a foreign body¹⁻⁴ Superficial suture-related abscesses are often seen in surgical practice and may occur within weeks or months of placement. Chronic sinuses and fibrosis may arise from forgotten rubber drains or other surgical and non-surgical implants.^{3,5} More uncommon are foreign body induced complications from non-surgical materials such as gallstones and food matter.

The most common site for the abdominal wall sinus is the umbilicus, presenting as the umbilical sinus. the most common being the patent vitello intestinal duct and patent urachus. These present to us as intestinal fistulas. If only a small portion near the umbilicus may remain patent, it forms a discharging umbilical sinus and if the Intestinal end may remain patent forming Meckel's diverticulum, which may be attached to

umbilicus with a fibrous band. Though the umbilicus is the commonest site for these discharging sinuses, discharge from any other site has not been reported yet.

We are reporting an unusual and exceedingly rare presentation of a young female with Meckel's diverticulum presenting with a discharging sinus in a post-operative scar.

CASE REPORT

A 25-year-old lady with no comorbidities presented to the outpatient department with history of small opening on the anterior abdominal wall, on and off since 4 years associated with scanty serous intermittent discharge. There was no history of pain, fever or redness around the opening. There was no history of bowel related complaints. Past history was suggestive of a surgical procedure that the patient had

undergone during her infancy, details of which were not known at the time of presentation.

Clinical examination revealed a transversely placed scar spanning from the right hypochondrium to the midline with a discharging sinus measuring 0.5 cm at the lateral end of the scar. Rest of the general physical examination was unremarkable. Abdominal ultrasonography was normal. Sinogram depicted a sinus extending deep down into the parities with no obvious communication with the bowel wall.

The patient was planned for excision of sinus tract. Intraoperatively, it was noted that the sinus was communicating with the small bowel. On releasing the

dense adhesions, it was noted that the sinus was in communication with a small outpouching about 3cms across with a perforation in the terminal ileum. The patient underwent resection and anastomosis of the involved segment. The entire colon was not visualized, suggesting that the patient may have undergone total colectomy with ileo-rectal pouch anastomosis during her first procedure. Histological examination revealed Meckel's diverticulum measuring 2.5 cm with gastric heterotopia comprising of the gastric mucosal lining with muscularis propria and serosa. The cut ends of the resected specimen showed normal intestinal epithelium. The post-operative period was uneventful.



Fig 1: Abdominal wall sinus in a post-operative scar



Fig 2: Sinogram showing the abdominal wall sinus

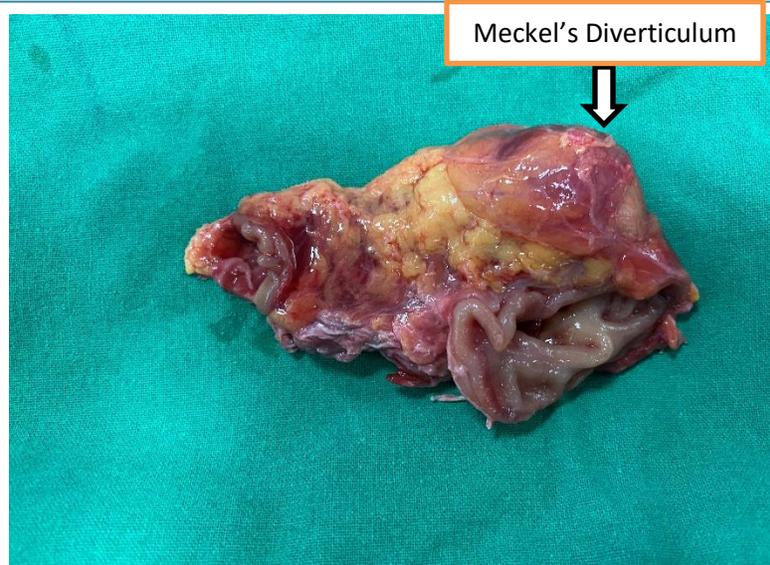


Fig 3: Resected specimen showing the Meckel's diverticulum

DISCUSSION

Meckel's diverticulum (MD) is an outpouching or bulge of the small intestine that develops as a result of incompletely obliterated vitelline duct or omphalomesenteric duct between the 7th and 8th weeks of gestation. Johann Friedrich Meckel's first described and established the embryological origin in 1809. Patent vitelline duct (PVD) is similar in etiology to MD, but it is characterized by an intact ductal structure and persistent umbilical discharge. MD is the most prevalent congenital anomaly of the alimentary tract. The rule of two traditionally describes its characteristics, such as a prevalence rate of 2% in the general population, a male-to-female ratio of 2:1, an incidence rate of 2% for symptomatic MD, presence of symptoms before age 2 years, a location at a distance of 2 feet to the ileocecal valve, a diverticular length of 2 inches, and two types of common ectopic tissues. Meckel's diverticulum is usually lined by intestinal mucosa. Sometimes it may be lined by heterotopic gastric or pancreatic tissue and less commonly colonic or endometrial or hepatobiliary tissue. Most patients are asymptomatic and the life time risk of the developing complications is 4-6%. Hemorrhage is the most common complication in adults and the second most in children; it is due to presence of heterotopic gastric or pancreatic mucosa causing ulceration of adjacent ileal mucosa. Obstruction due to Meckel's diverticulum is the most common complication in children and second most common complication in adults. Obstruction is due to volvulus or intussusception or Littre's hernia or

adhesion and kinking or due to stricture secondary to chronic diverticulitis.

The preoperative diagnosis of Meckel's diverticulum is still an outstanding challenge. We do often come across cases that are misdiagnosed or not diagnosed preoperatively. In doubtful cases, laparoscopy is a preferred diagnostic modality. However, technetium-99m pertechnetate scan is the most common and accurate non-invasive investigation performed for these cases. Harper et al. introduced the scan in 1962 as a method of diagnosing Meckel's diverticulum because of tracers propensity to concentrate in ectopic gastric mucosa; but Jewett et al. were the first to apply it clinically. Pre-operative diagnosis is rare in uncomplicated cases, and the diverticulum is usually observed incidentally, during other procedures for various reasons.

The management of symptomatic Meckel's diverticulum comprises surgical resection. A wedge resection of the Meckel's diverticulum is generally carried out, and occasionally some ileum is resected with end-to-end anastomosis. Diverticulectomy for Meckel's diverticulum found incidentally has been criticized. The results of surgical excision are generally excellent.

This patient had a heterotopic gastric mucosa in the Meckel diverticulum which resulted in the formation of a fistula but at an unusual anatomical site- post operative scar which was indeed a diagnostic dilemma.

Conclusion

Sinuses in and around the umbilicus are well known and well documented. Any other sinuses in an unusual site, post-operative scar leads to diagnostic dilemma and require a detailed evaluation which will aide in appropriate management.

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