

Synchronous ectopic gastric mucosa in an infant with Meckel's diverticulum and lower gastrointestinal bleed

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ABSTRACT

A 7-months-old male child presented with severe lower gastrointestinal bleeding. His radionuclide scan showed ectopic gastric mucosa in Meckel's diverticulum as well as in distal ileum. On exploration a 5 cm indurated bleeding ulcer found in ileum but no ulcer in Meckel's diverticulum or adjacent ileum. Histopathological examination of the specimen confirmed the diagnosis of ectopic gastric mucosa in ileum causing bleeding ulcer. Resection of the segment with end-to-end anastomosis cured the child. Such a synchronous lesion with Meckel's diverticulum has the potential to be missed, unless careful evaluation is done.

KEY WORDS: Bleeding, ectopic gastric mucosa, ileum, Meckel's diverticulum

INTRODUCTION

Ectopic gastric mucosa commonly present in Meckel's diverticulum.^[1] The incidence of ectopic gastric mucosa in bleeding diverticula varies from 55 to 100%.^[2] It may also be found in intestinal duplications which may occur at any part of the gut.^[1] Though it is rare but there have been some symptomatic cases of ectopic gastric mucosa reported in English Literature.^[3-6] In these cases, ectopic gastric mucosa was present in areas other than Meckel's diverticulum. We are reporting a case of lower gastrointestinal (GI) bleeding where cause was found to be an ulcerated ectopic gastric mucosa in the ileum. This child also had Meckel's diverticulum with ectopic gastric mucosa but no ulcer was found at the base or adjacent ileum. This case draws special attention, as the cause of bleeding was synchronous ectopic gastric mucosa in the ileum, though the ectopic gastric mucosa in Meckel's diverticulum was silent. To the best of our knowledge, no such case has been published in the English literature earlier.

CASE REPORT

A 7-months-old boy presented with severe lower gastrointestinal bleed without any previous history of bleed. He had several bouts of lower abdominal pain in the past one month. No other significant history was present. His physical examination revealed mild

tenderness on the right lower abdomen and rectal examination was normal. The child was noted to be severely anemic, his Hb being 6 gm%; other biochemical investigations were normal. After stabilizing the patient, Meckel's scan was done with technetium (Tc) 99 m pertechnetate. The scan showed accumulation of isotopes in the probable Meckel's area as well as in an area between the bladder and Meckel's diverticulum [Figure 1]. Ultrasonography of the abdomen and colonoscopy were unremarkable.

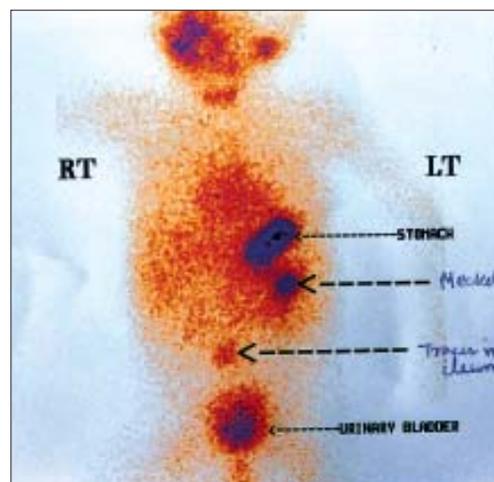


Figure 1: OTc99m-pertechnetate scintigraphy images showing abnormal tracer concentration in probable Meckel's diverticulum area and distal ileum other than normal tracer accumulation in bladder and stomach

We explored the abdomen on the next day and found Meckel's diverticulum in its usual position and an indurated area of about 5 and 20 cm distal to the diverticulum. On rubbing the serosal surface of the indurated area, bleeding spots were visible. We resected the segment from the Meckel's diverticulum to the indurated area and end-to-end anastomosis was done. No mesenteric lymphadenopathy was present.

On opening the indurated area of the specimen, we found a bleeding ulcer but no ulcer at the base of Meckel's diverticulum. Histopathological examination showed ectopic gastric mucosa in ileum as well as in Meckel's diverticulum. There was mucosal and sub-mucosal edema and bleeding points at ileal site, no granuloma was found. Biopsy from the mesenteric node was normal. The child recovered well and was allowed orally on the 6th day and is well after 4 months of follow up.

DISCUSSION

Heterotopic gastric mucosa of the intestinal tract is an occasional, incidental gross or microscopic finding at surgery or autopsy.^[8] Ectopic gastric mucosa has been found in different locations namely tongue, esophagus, larynx, lungs, gallbladder, pancreas, urinary bladder, small intestine, colon and rectum.^[9] Ectopic gastric mucosa in the gastrointestinal tract may be either congenital or acquired.^[8] Esophagus, duodenum, and Meckel's diverticulum are the most common site for congenital variety but it is rare in ileum or jejunum.^[10] Acquired variety of heterotopic gastric mucosa is common in ileum or jejunum where mucosal regeneration occurs due to inflammatory lesions such as regional enteritis.^[8] In such situations, the abnormal mucosa consists mainly of mucus secreting cells, parietal and chief cells are mainly absent. On the other hand, if the tissue consists of full thickness, completely structured gastric fundic mucosa consisting mainly chief and parietal cell, the abnormality is considered developmental or congenital in origin.^[11] This type of ectopic gastric mucosa mainly present as symptom producing lesion like severe bleeding ulcer. The cause of ulcer is due to acid pepsin secreted by the ectopic gastric mucosa and patient present with severe or recurrent chronic bleeding episodes.^[8] Radioisotopic scan is the investigation of choice to detect bleeding ectopic gastric mucosa. In Meckel's diverticulum with

ectopic gastric mucosa the sensitivity was 85%, the specificity was 95% and the accuracy was 90%.^[12] In our case, we considered the variety of ectopic gastric mucosa was congenital as it was rich in chief and parietal cells and there was no evidence of regional enteritis.

Though Meckel's diverticulitis is a known cause for lower gastro intestinal bleed in pediatric age group, ectopic gastric mucosa related ulcer could also cause this type of problem. Particularly in a child with Meckel's diverticulum, such a synchronous ectopic gastric mucosa has the potential of being missed on exploration.

REFERENCES

1. Erez I, Kovalivker M, Lew S, Lazar L, Motovic A. Ectopic gastric mucosa in a polyp causing ileo-ileal intussusception: A case report of a three month old baby. *Eur J Pediatr Surg* 1991;1:118-20.
2. Swaniker F, Soldes O, Hirschl RB. The utility of technetium 99 m pertechnetate Scintigraphy in the evaluation of patients with Meckel's Diverticulum. *J Pediatr Surg* 1999;34:760-5.
3. Blundell CR, Kanun CS, Earnest DL. Biliary obstruction by heterotopic gastric mucosa at the ampulla of Vater. *Am J Gastroenterol* 1982;77:111-4.
4. Briggs FL, Moore JP. Heterotopic gastric mucosa of the small bowel with perforated ulcer. *Am Surg* 1979;45:413-7.
5. Doberneck RC, Deane WM, Antoine JE. Ectopic gastric mucosa in ileum: A cause of intussusception. *J Pediatr Surg* 1976;11:99-100.
6. Isbiskter WH, Weedon D. Perforated jejunal ulcer and heterotopic gastric mucosa. *Br J Surg* 1976;63:954-5.
7. Lee SM, Mosenthal WT, Weismann RE. Tumorous heterotopic gastric mucosa in the small bowel. *Arch Surg* 1970;100:619-22.
8. Nawaz H, Graham GY, Fechner RE, Eiband JM. Gastric heterotopia in the ileum with ulceration and chronic bleeding. *Gastroenterology* 1974;66:113-7.
9. Picard EJ, Picard JJ, Jorissen J, Jardon M. Heterotopic gastric mucosa in the epiglottis and rectum. *Dig Dis Sci* 1978;23:217-20.
10. Taylor AL. The epithelial heterotopias of the alimentary tract. *J Pathol Bacteriol* 1927;30:415-99.
11. Wolff M. Heterotopic gastric epithelium in the rectum: A report of three new cases with a review of 87 cases of gastric heterotopia in the alimentary canal. *Am J Clin Pathol* 1971;55:604-16.
12. Sfakianakis GN, Conway JJ. Detection of Ectopic gastric mucosa in Meckel's diverticulum and in other aberrations by scintigraphy: ii. indications and methods - a 10-year experience. *J Nucl Med* 1981;22:732-8.

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