

Malignancy in Meckel's diverticulum

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Meckel's diverticulum is the most common congenital malformation of the gastrointestinal tract, that arises from the antimesenteric border of the ileum. We present a case of Meckel's diverticulum with malignancy. A 45-year-old male presented in the surgical OPD with a history of blood in stools and abdominal pain. On examination, there was no palpable lesion. On routine blood investigation, the counts were in range. A stool examination revealed blood in the stools. Endoscopy revealed a normal gastrointestinal tract. However, an inflamed Meckel's diverticulum filled with black tarry stools, was reported on colonoscopy. In the supine abdominal X-ray, the bowel gas pattern was non-specific and there was no free intraperitoneal gas. A computed tomography (CT) scan of the abdomen and pelvis showed a blind tubular structure with a gut signature seen in the pelvis along the antimesenteric border of the ileum with an enhancing lesion measuring 3.4 x 3 cm at the tip.

Surgery revealed a dilated small bowel distal to the ileum, with hemorrhagic patches on the serosa. In the middle of the ileum, there was an outpouching of Meckel's diverticulum. The tip of the diverticulum was thickened and firm. Diverticulectomy with segmental resection of the ileum was done and end-to-end anastomosis was performed.

Gross examination:- revealed a broad-based Meckel's Diverticulum measuring 5.5 x 2.4 cm attached to the mid of ileum measuring 12 x 2 cm. On cutting open, the lumen of Meckel's Diverticulum was continuous with the ileal lumen. At the tip of the diverticulum, there was a polypoidal mass measuring 2.8 x 2 x 1.5 cm. The cut section through the mass

was grey-white, infiltrating into the muscular layer [Figure 1,2].

On microscopic examination:- sections from the diverticulum revealed all three layers of the intestinal wall with ileal mucosa. Sections from the polypoid lesion at the tip showed tumour cells arranged in an organoid pattern. Individual cells revealed scanty cytoplasm, uniform round nuclei, and salt and pepper chromatin with inconspicuous nucleoli. Rosette formation was seen, with a high mitotic count. The tumour was infiltrating into the muscularis propria of the wall [Figure 3,4].

Immunohistochemistry tumour cells revealed diffuse cytoplasmic positivity for chromogranin and synaptophysin with a high Ki67 index.

Features were compatible with neuroendocrine tumour - high grade.

The patient had no postoperative complications and was discharged home. There was no clinical or radiological evidence of metastatic disease.

Conflict of interest: None

Written informed Consent: Taken

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Fig 1: showing a gross picture of the external surface of Meckel's diverticulum.



Fig 2: Gross examination revealing polypoidal lesion at the tip of Meckel's diverticulum.

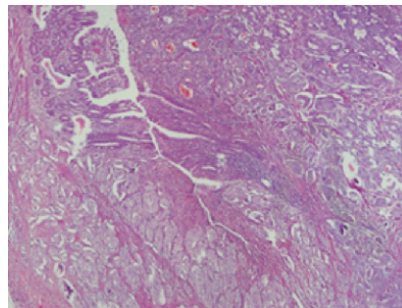


Fig 3: Microscopic examination revealing ileal lining with an organoid pattern of tumor [H&E,10x]

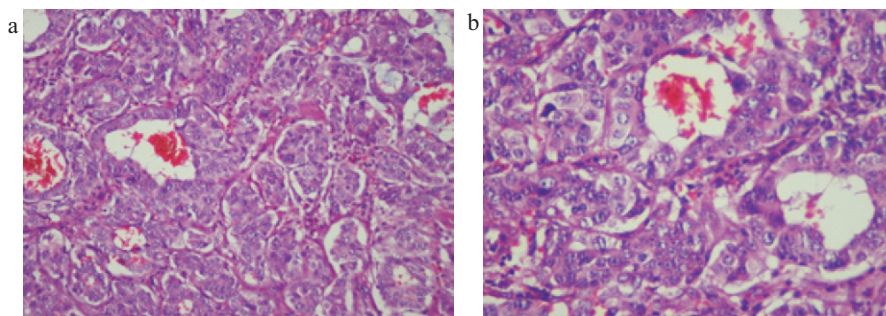


Fig 4: Microscopic examination revealing nests of tumor cells with uniform nuclei and salt and pepper chromatin [a-H&E,20x; b-H&E,40x]