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Case Report

Primary mesenteric carcinoid tumor: A rare entity

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ABSTRACT

Mesenteric tumors are uncommon lesions. Primary mesenteric carcinoid is a rare entity with only a few reported cases. Therefore, a thorough examination of the resected bowel is necessary to rule out the presence of possible primary tumor in the adjacent bowel loop. We present a case of primary mesenteric carcinoid.

KEY WORDS: Mesenteric carcinoid, neuroendocrine tumor, primary tumor

INTRODUCTION

Mesenteric tumors are uncommon lesions. These lesions may be cystic or solid, and they may demonstrate malignant or benign clinical behavior. Carcinoid tumors are rare epithelial tumors. More than 90% of gastrointestinal carcinoids are located in the appendix, small intestine, and rectum [1]. Secondary involvement of the mesentery due to metastasis is relatively common. However, primary mesenteric carcinoid is a rare entity with only a few cases reported in the literature [2,3].

We present a rare case of a primary mesenteric carcinoid tumor.

CASE REPORT

A 28-year-old female presented to outpatient department with a complaint of pain in the abdomen. The patient had no other gastrointestinal or systemic complaints.

On examination, a mass was palpable measuring 4 cm in diameter. Hemoglobin was 10 g%. Total leukocyte count, Differential leukocyte count, renal function tests, and liver function tests were within normal limit. Ultrasound abdomen revealed a solid mass measuring 6.8 × 6.0 cm between left kidney and spleen. Computed tomography (CT) scan demonstrated a heterogeneously enhancing solid soft tissue density mass lesion of size 64 mm × 53 mm × 60 mm located anterior to the lower pole of left kidney in the mesentery.

On laparotomy, the tumor was seen arising from the mesentery near jejunum. No small bowel/colonic lesion was seen. Excision of the tumor with jejunal loop was done with jejuno-jejunal anastomosis.

The specimen was submitted for histopathologic examination. Gross examination revealed an encapsulated growth in the mesentery measuring 6.5 cm in diameter [Figure 1]. The jejunal loop was unremarkable. On examination of the mesentery, no lymph nodes were dissected.

Microscopy revealed tumor composed of small round cells arranged in a trabecular pattern. The nucleus of the cells had speckled chromatin and inconspicuous nucleoli. 2-3 mitosis/hpf were seen [Figure 2]. No invasion was seen into the adjacent mesentery and jejunal loop. On

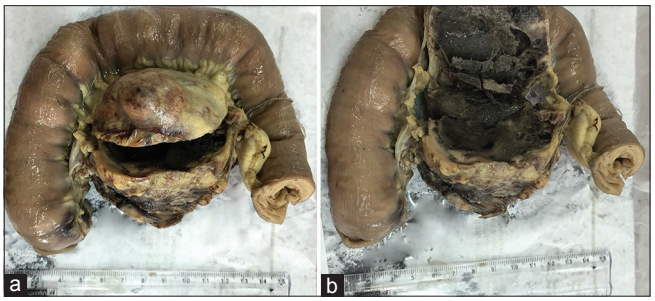

Figure 1: (a) Encapsulated growth in the mesentery with attached jejunal loop, (b) Cut surface of the growth in the mesentery

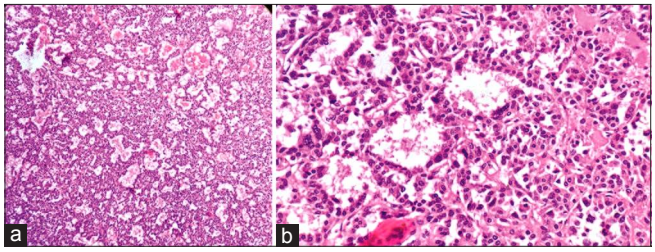

Figure 2: (a) Small round cells arranged in trabecular pattern (H&E, ×100), (b) Cell nucleus with speckled chromatin and inconspicuous nucleoli (H&E, ×400)

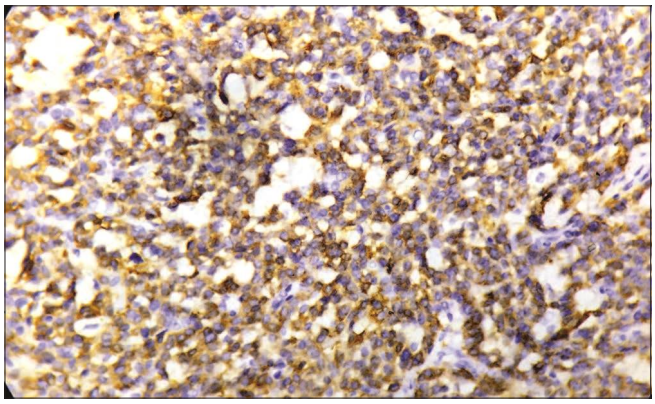

Figure 3: Chromogranin - positive in tumor cells

immunohistochemical staining chromogranin was positive. CK7 and CK20 were negative. MIB score was 3% [Figures 3 and 4]. Thus, a diagnosis of primary mesenteric neuroendocrine tumor (WHO Grade 2) was made.

DISCUSSION

Mesenteric carcinoids are rare tumors. Most of them are metastatic lesions from a primary gastrointestinal tract carcinoid. Primary mesenteric carcinoid has been reported very infrequently. It was shown in a series conducted by mayo clinic that in small bowel even small carcinoids can metastasize [1]. So, to rule out a possible primary small intestinal tumor, a meticulous pathological examination of the resected adjacent bowel is advised. A CT or 5 HIAA levels alone are not confirmatory. In 1996, Kimchi *et al*. [3] reported a case of primary mesenteric neuroendocrine tumor arising in the mesocolon. They did not find another tumor on abdominal CT or during laparotomy. Furthermore, the pathologists did not find a primary lesion in the resected colon; thus, helping in the diagnosis of a primary mesenteric carcinoid. In our case, we conducted a thorough histopathological examination of the resected bowel to rule out the presence of possible primary tumor in the small bowel loop. The occurrence of carcinoid tumor in the mesentery can be explained by the presence of neural crest cells in small amounts in unconventional sites such as interatrial septum of the heart, the liver hilus, and mesenteric vessels due to the dispersed migratory properties of the neural crest [4,5].

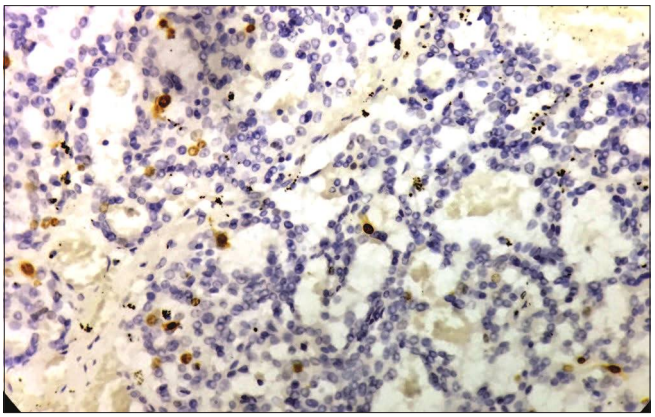

Figure 4: MIB - labeling index score - 3%

Surgical excision is the mainstay of treatment for neuroendocrine neoplasms. In our case, the tumor was resected along with part of mesentery and attached small bowel loop. The patient was asymptomatic after 6 months of follow-up.

In a case report by Yamuha *et al*., the resection of the tumor along with part of mesentery and attached small bowel loop was done for a Grade 2 lesion measuring 4 cm in diameter. After 2 years follow-up, the patient remained asymptomatic [6].

In general, for tumors smaller than 2 cm without lymph node involvement, local segmental resection is adequate [7,8]. However, for tumors larger than 2 cm with regional mesentery metastasis and lymph node involvement, wide excision of the bowel and mesentery with lymph node dissection has been recommended because tumors larger than 2 cm are associated with 80-90% incidence of metastasis [7-9].

CONCLUSION

The primary mesenteric carcinoid tumor is a rare entity. A thorough histopathological examination of the resected bowel is required to rule out the presence of possible primary tumor in the adjacent bowel.

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