

## CASE REPORT

### CARCINOID TUMOR PRESENTING AS A PRIMARY MESENTERIC MASS

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**ABSTRACT:** We report a case of large primary mesenteric carcinoid tumor which was 7x7x4 cm. The 60 yrs old patient presented with the complaint of an abdominal mass since 1 yr. On radiology she was found to have a complex density mass surrounded by mesenteric fat with clear planes. On histopathology it was confirmed to be a carcinoid tumour of benign nature. Primary mesenteric carcinoid tumor is very rare. 90% of them are found in GI tract with secondary involvement of mesentery in 40-80% cases when the size is larger than 2cm. In this case it was a primary mesenteric tumour as there was no evidence of any other tumor. And second distant metastasis rate reported as 80% to 90% when they are larger than 2cm. The large size, primary mesenteric location and no metastasis despite large size make our case unique and rare.

**KEYWORDS:** Peripheral osteoma, Surgical excision, Maxillofacial region, Neoplasm.

**INTRODUCTION:** Carcinoid tumors are rare but display neuroendocrine properties. About 90% of carcinoid tumors arise in the gastrointestinal tract (GIT).<sup>[1]</sup> Carcinoid tumor is the most frequent primary malignant tumor of the small intestine beyond the ligament of Treitz and most frequently arises in the terminal ileum.<sup>[2,3]</sup> Secondary mesenteric involvement of small bowel carcinoid tumors is common, reported as occurring in 40% to 80% of cases.<sup>[3,4]</sup> However, primary mesenteric carcinoid tumors are very rare and most solid tumors arising in the mesentery are usually either secondary involvement or metastatic tumors.<sup>[1,2]</sup> Distant metastasis rates from carcinoid tumors increases up to 80% to 90% when the size of the tumor is larger than 2 cm.<sup>[3-5]</sup>

A 60-year-old woman presented with a palpable abdominal mass which was progressively increasing since 1 year. She denied any other gastrointestinal or systematic symptoms. Physical examination revealed an 8 cm sized round and movable mass without tenderness in the periumbilical area. Computed tomography (CT) scan demonstrated a 49x51x55mm sized well-defined mass with complex density located in the hypogastric region. The lesion is surrounded by mesenteric fat. Cleavage planes with small bowel loops in pelvis and rectosigmoid are maintained. No abnormal calcification or cavitation or fatty components seen within mass. Mild hepatosplenomegaly with grade 1 diffuse fatty change seen in liver. Tiny old calcified granuloma noted in right lobe of liver. (Fig. 1)

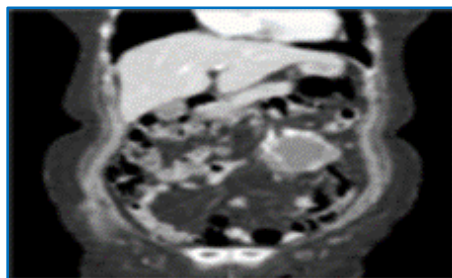


Fig. 1

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At laparotomy, a well encapsulated mass arising from the mesentery of ileum about 40 cm from ileocaecal junction was found without any adjacent organ invasion or distant metastasis. No enlarged lymph node, no peritoneal seeding, no ascites were found and liver was smooth. (Fig. 2)



Fig. 2

Histological examination showed tumor cells composed of homogenous small cells arranged in a trabecular pattern with the nucleus showing a round to oval shape, indistinct nucleoli, and coarsely granular chromatin pattern. There was no mitosis. (Fig. 3)

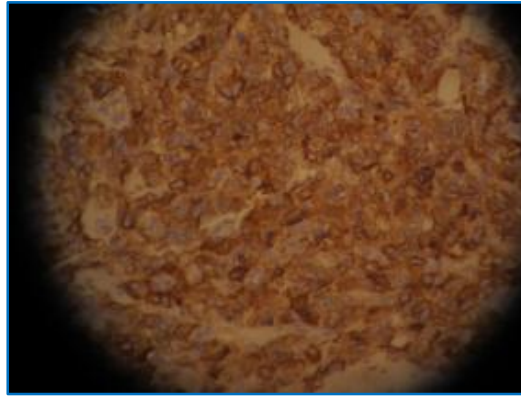


Fig. 3

Cells composing tumor are arranged in trabecular pattern. (H & E, X40)

Immunohistochemistry showed the tumor to be positive for multiple neuroendocrine markers including synaptophysin (Fig. 4A), CD56 (Fig. 4B), cytokeratin (Fig. 4C). Histopathology examination confirmed the mass as a carcinoid tumor with a benign nature. At 11 months of follow-up, the patient was asymptomatic and recurrence free.

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**Fig. 4**

Tumor expresses strong positivity in immunohistochemical stain with synaptophysin ( $\times 200$ ).

**DISCUSSION:** Gastrointestinal carcinoid is the most common primary tumor of the small bowel and mesentery. 95% of all carcinoids occur here though they comprise only 1.5% of all gastrointestinal tumours. The tumor arises from the endochromaffin cells of Kulchitsky i.e. neural crest cells situated at the base of crypts of Lieberkuhn. Other common sites of this neoplasm are appendix-30-45%, small bowel-25-35% (Duodenum 2%, jejunum 7%, ileum 91%, multiple sites 15-35%), rectum 10-15%, caecum-5%, and stomach-0.5%. Carcinoids can also rarely occur in pancreas, biliary tract, esophagus and liver.<sup>[1,2]</sup> The sex predilection of the tumor is M:F: 2:1. Most carcinoids occur in patients older than 50 years, however, appendiceal carcinoids occur in young patients in their second to fourth decade. Most patients are asymptomatic but symptoms can vary from pain, intestinal obstruction (19%), weight loss (16%), palpable mass (14%), intussusceptions, perforation, or gastrointestinal hemorrhage (rare). Carcinoids of the jejunum and ileum occur equally in men and women at a mean age of 65, 4 years.<sup>[1-4]</sup>

However, primary carcinoid tumors of the mesentery are very rare,<sup>[2]</sup> Mesenteric Involvement of Carcinoid is generally metastatic or due to direct involvement by midgut tumours as in 40-80% cases.

On CT scan, mesenteric carcinoid tumors exhibit varying degrees of fibrosis, calcification, focal or diffuse neurovascular bundle invasion by the tumor or both mechanisms.<sup>[2]</sup> So they generally pose a great challenge to surgeon during surgery as they are close to mesenteric vessels.

Microscopically, typical carcinoid tumors have one of five growth patterns: insular, trabecular, glandular, undifferentiated, or mixed.<sup>[3]</sup> Most midgut carcinoids show a mixed insular and glandular growth pattern.<sup>[4]</sup>

Surgical excision is the mainstay of treatment for carcinoid tumor. Larger tumors are usually associated with locally advanced or distant metastasis.<sup>[3]</sup> Also, approximately 50% of midgut carcinoid cases present with liver metastasis.<sup>[2]</sup> For tumours <2cm surgical excision is considered curative, while for tumours larger than that a lymph node dissection is also required because of their potential for metastasis to mesenteric nodes. For tumours which can't be completely removed surgical debulking is generally done to relieve symptoms and to prolong survival though there is no definite data to support this.<sup>[3-5]</sup>

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In this case, the tumor originated from the mesentery near the ligament of Treitz and well encapsulated, free from the small intestine (Fig. 2). At the time of surgery, the entire small bowel was meticulously inspected and no evidence of tumor mass or enlarged lymph node was found. In addition, there was no evidence of tumor anywhere else in the abdomen including the liver, ovary and other solid organs. So, it may be a primary mesenteric carcinoid tumor or metastasis from an occult primary site. Carcinoid tumors often have advanced malignant potential depending on location, size, nature. But this case shows a rare large primary mesenteric carcinoid tumor with characteristics of uncommon position and benign nature despite large size.

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