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## Case report

### SMALL BOWEL OBSTRUCTION CAUSED BY A CARCINOID TUMOUR

\*Ganesan M<sup>1</sup>, Nirankumar Samuel<sup>2</sup>, Karthikeyan.D<sup>2</sup>, Ajay Raja<sup>2</sup>

<sup>1</sup>Professor, <sup>2</sup>MS Postgraduates, Department of General Surgery, Meenakshi Medical College Hospital and Research Institute, Enathur, Kanchipuram, Tamil Nadu, India

\*Corresponding author email: drganeshsanjeevini@gmail.com

### ABSTRACT

Carcinoid tumours are rare neuroendocrine tumours causing a spectrum of symptoms ranging from chronic intestinal obstruction to systemic symptoms like sweating, diarrhoea and right side heart failure. We present here the case history of a male patient aged forty with a carcinoid tumour in the distal small intestine presenting with chronic intermittent intestinal obstruction and no systemic symptoms and metastasis. This case is presented for its rarity.

**Keywords:** Carcinoid Tumors, Intestinal Obstruction, Metastasis

### INTRODUCTION

The carcinoid tumors are well differentiated tumors of the neuroendocrine cells.<sup>1</sup> Though rare, these tumors are mostly found in the terminal ileum.<sup>1,2</sup> They are also the most common tumor of the appendix.<sup>1</sup> Those that are found in the jejunum and ileum are multicentric in 26-30% of the cases<sup>2</sup>. As metastasis from these tumours are late, most patients' presents with hepatic metastasis.<sup>3</sup>

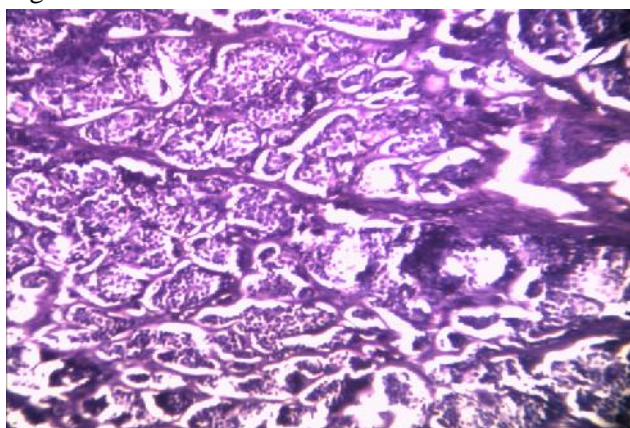
### CASE REPORT

A male patient aged forty presented to us at Meenakshi Medical College Hospital & Research Institute, Kanchipuram with complaints of lower abdominal pain with episodes of vomiting and nausea and a mass in the right iliac fossa. The patient had repeated episodes of vomiting and intermittent abdominal pain with the appearance - disappearance of the abdominal mass over a period of three months before presenting to us. Primary examination revealed a right iliac fossa mass with visible intestinal peristalsis and active bowel sounds. The patient underwent a sonography, which showed peristaltic

dilated jejunal and ileal bowel loops. An abdominal CT was done, which identified the same and rolled up thickened mesentery. A provisional diagnosis of ileocecal tuberculosis abdomen was made and the patient was managed initially by nil per oral, intravenous fluids and antibiotics and Ryle's tube aspiration. The patient underwent an emergency laparotomy when the abdomen was silent and abdominal X-ray showed features of intestinal obstruction.

During laparotomy, we found the presence of unhealthy thickened fibrotic and bunched together loops of small bowel about twenty centimeters proximal to the ileocecal junction. The mesentery was thickened and rolled up and a few lymph nodes were also found in the mesentery. The team resected the unhealthy bowel and performed an end to end anastomosis. Histopathology revealed a small bowel carcinoid (Fig 1) with clear margins with no mesenteric nodal metastasis. The post operative period of the patient was devoid of complications and an evaluation for metastasis was done by estimation

of 5-HIAA in 24 hour urinary sample which was negative.



**Fig 1: Histopathology of carcinoid tumour showing cells arranged in clusters.**

## DISCUSSION

Oberndorfer coined the term carcinoid in 1907 to describe 'hormonally active tumors'.<sup>4</sup> They originate from the gut wall stem cells and are classified depending on the location.<sup>5</sup> They constitute more than two thirds of all carcinoids and 1.5% of all GI tumors. 8.4% are found at autopsies.<sup>6</sup> Various sites of origin of this neoplasm are extra gastrointestinal 33%, small intestine 30%, rectum 11%, colon 10%, appendix 8%, stomach 4-8%, duodenum/pancreas < 2%, esophagus <1%.<sup>6</sup> The tumors are often diagnosed late as most tumors are silent.<sup>7</sup> Clinical presentation ranges from obstructive symptoms, secondary to small bowel obstruction due to peritumoral fibrosis or desmoplastic reactions leading to ischemic changes, to vasoactive symptoms of a functioning tumor like secretory diarrhoea, cutaneous flushing and heart valve fibrosis.<sup>8</sup>

The term 'carcinoid tumor' reserved for classical midgut carcinoid secreting serotonin.<sup>9</sup> The syndrome occurs due to vasoactive in the systemic circulation. The demonstration of rising concentrations of 5-HIAA in 24 hour urine samples biochemically diagnoses carcinoid tumor. The primary midgut carcinoids are generally too small to be diagnosed with conventional contrast studies.<sup>10,11</sup> The presence of a circumscribed mesenteric mass with radiating densities in CT is very suspicious of a midgut carcinoid mesenteric metastasis.<sup>11</sup> Segmental occlusions and tortuosity of mesenteric vessels are seen in mesenteric angiography.<sup>11</sup> The presence of hepatic metastases is detected by Ultrasonography. PET with the serotonin

precursor 5-hydroxytryptophan labeled with C<sup>11</sup> are highly sensitive in identifying small bowel carcinoids.<sup>12</sup>

Surgical resection remains the primary management of carcinoid tumours. Lesions less than 1 cm requires local resection, but lesions more than 1.5 cm requires extensive segmental resection owing to its high risk of recurrence.<sup>1</sup> Surgery proves beneficial in symptomatic relief, prevention of metastasis and improves the prognosis.<sup>3</sup> Somatostatin analogues are proven not only to be useful in relieving the patients of symptoms secondary to amines in the circulation in 70-80% of patients, but also stabilizes the tumour growth.<sup>3</sup>

There has been a significant change in the management of carcinoid tumours with hepatic metastases. A 90% symptomatic relief was reported by Que et al. with liver resection.<sup>13</sup> However, studies have shown similar benefits using Hepatic Artery Embolization as an alternative to surgery.<sup>14</sup>

## CONCLUSION

Carcinoid tumours are rare and have a good prognosis if treated early. Often they are diagnosed postoperatively by the pathologist. Hence a suspicion of a carcinoid tumour is a must in the evaluation of a patient with chronic intermittent intestinal obstruction. A thorough surveillance of the abdomen per operatively for mesenteric lymph nodal metastasis and a regular postoperative biochemical follow up with 24 hour urinary 5-HIAA improves the survival of the patient.

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