



## Ileal Adenocarcinoma – A Case Report

Authors

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### Abstract

*Small bowel malignancies are a rare clinical entity and accounts for only 1-3% of GI malignancies. Adenocarcinoma is the most common histopathological variety but its frequency decreases at distal locations. Most of small bowel neoplasms are asymptomatic until they become large and hence delay the diagnosis.*

*We report a case of an ileal adenocarcinoma in a 65 year old male patient who presented with complains of pain abdomen and vomiting since 5 days. Investigations revealed small bowel obstruction. On exploration it was found to be ileal mass. Right hemicolectomy was done with en-bloc removal of distal ileal mass. Histopathology revealed ileal adenocarcinoma.*

*This rare entity is associated with a nonspecific clinical presentation that contributes to delayed diagnosis and treatment, and consequently to a worse prognosis. Approximately half of the cases are only diagnosed at surgery. Primary treatment consists of wide resection with regional lymphadenectomy. The role of adjuvant chemotherapy has yet to be determined.*

*This case demonstrates an unusual condition characterized by late and challenging diagnosis and we highlight the importance of an earlier diagnosis and optimal treatment for improved patient outcomes.*

### Introduction

Primary small bowel cancers are rare and account for only 1-3% of GI malignancies<sup>2,3</sup>. Out of this adenocarcinomas comprise 35-50% of cases, carcinoid comprises 20-40% and lymphomas present about 15-20% of cases. Incidence of adenocarcinoma decreases as we move distally.

Most patients are affected in fifth or sixth decade of life. Male to female ratio is 1.4:1. Crohn's disease and celiac disease are the most important known risk factors, but other associations may exist. Adenocarcinoma's clinical presentation lacks specificity, which contributes to an average delay of 6–10 months in diagnosis. The most common clinical manifestations are nonspecific:

abdominal pain, nausea, vomiting, bowel obstruction, occult GI bleeding, and weight loss<sup>1,3</sup>.

Advances in imaging techniques such as upper gastrointestinal barium study (UGI), ultrasonography, computed tomography (CT) scan, magnetic resonance imaging (MRI), video capsule endoscopy, and double-balloon enteroscopy have improved our ability to diagnose, localize, and treat these patients<sup>6</sup>. Early detection and surgical resection offers the best chance for long-term survival in all tumors except bowel lymphoma where chemotherapy plays the main role. However more than half of the cases, particularly for distally located tumours diagnosed are at surgery.

Surgery is the primary treatment for loco regionally limited Small Bowel Adenocarcinoma. Wide resection with negative margins and regional lymphadenectomy with adequate lymph node evaluation appears to be the best management. This differs for proximal duodenal tumors, where pancreaticoduodenectomy should be performed, and distal ileal tumors, where right hemicolectomy is indicated<sup>1,3</sup>. The role of adjuvant chemotherapy is still unknown, and prospective studies are needed to address this issue<sup>4</sup>. Some retrospective studies have shown improvement in disease-free survival with the use of adjuvant therapy.

### Presentation of the case

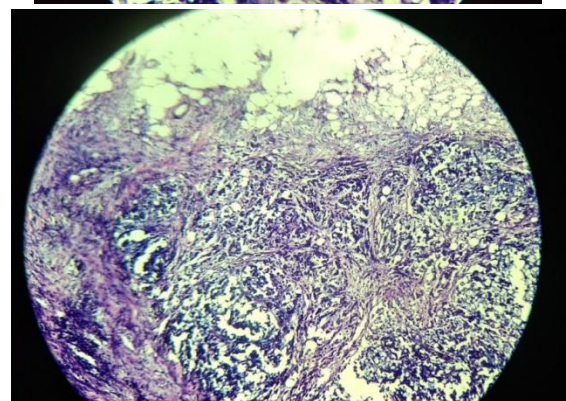
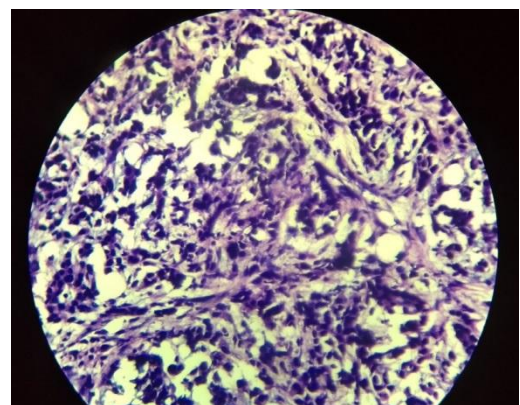
A 65 year old male patient presented to with history of abdominal pain and vomiting since past 5 days. Pain abdomen was sudden in onset, progressively worsening and predominantly in right lower quadrant and was associated with multiple episodes of vomiting since 3 days and constipation since 2 days. There was history of anorexia and weight loss. He had no significant past medical or surgical history. Physical examination revealed his vitals were stable. His abdomen was non – distended, and he had tenderness in right iliac fossa and right hypochondrium. He had guarding in right lower quadrant. Rectal examination was unremarkable. Laboratory testing showed anemia (hemoglobin,  $9.3 \times 10$  g/L) and rest of the investigations were normal.

X- Ray erect abdomen revealed multiple air fluid levels. Abdominopelvic ultrasonography suggestive of bowel obstruction with liver metastasis and mild free fluid was seen. A probable diagnosis of small bowel obstruction was made with liver metastasis. At laparotomy, a tumor involving the distal ileal segment was present. The tumour was 5\*5 cm in size, hard consistency and was about 10cm proximal to ileocolic junction with multiple enlarged lymph nodes in the mesenteric root. There was evidence of liver metastasis. No other visible lesions were

identified. We performed a right radical hemicolectomy with en bloc resection of the last 20 cm of the ileum and a primary ileocolic anastomosis. No surgical complications were noted.



Resected specimen – right hemicolectomy with en bloc resection of distal ileum



### Histopathological slides

Histopathological examination revealed an ulceroproliferative growth. On cut section, growth is greyish white layer. On microscopic

examination tumour was seen infiltrating serosa. No evidence of perineural or lymphovascular invasion. Pathological diagnosis suggestive of moderately differentiated mucinous adenocarcinoma of ileum. The tumor was staged as T4N1M1.

### Discussion

Primary small bowel cancers are rare and account for only 1-3% of GI malignancies<sup>2,3</sup>. Out of this adenocarcinomas comprise 35-50% of cases, carcinoid comprises 20-40% and lymphomas present about 15-20% of cases. Incidence of adenocarcinoma decreases as we move distally. Predominant site for adenocarcinoma of small bowel is duodenum (57%), jejunum (29%) and ileum (10%)<sup>5</sup>. Most patients are affected in fifth or sixth decade of life with males affected more than females. Crohn's disease and celiac disease are the most important known risk factors, but other associations may exist.

The clinical presentation is nonspecific, and the first symptoms are usually related to advanced disease. The most common symptoms are abdominal pain, nausea, and vomiting. These non-specific factors contribute to delayed diagnosis (average 6 – 10 months) and treatment, and consequently to a worse prognosis.

Contrast-enhanced CT scan is diagnostic. Enteroclysis is reported to have a sensitivity of 90% and is usually recommended for distal small bowel tumors<sup>1</sup>. Many other modalities have also been used. Endoscopic studies, such as double-balloon enteroscopy or video capsule endoscopy, are being increasingly used. Upper GI with small bowel follow through examinations has reported sensitivities ranging from 30 – 44%<sup>1</sup>. CT scanning has low sensitivity for detecting mucosal or intramural lesions but can demonstrate large tumors and is used in staging of intestinal malignancies. Nevertheless, approximately half of the cases are only diagnosed at surgery, mostly because of misdiagnosis.

Currently, the best treatment for this neoplasm is wide resection with lymphadenectomy. In

presence of locally advanced or metastatic disease, palliative resection or bypass is performed. The role of adjuvant chemotherapy has yet to be determined with no proven efficacy.

The outcomes from large studies have shown that, for patients with stage II to III disease who are treated with surgical resection, 5-year overall survival rates range from 20 to 30%<sup>1</sup>. These poor outcomes make early diagnosis even more important.

### Conclusion

Adenocarcinoma of the distal ileum is rare tumor and usually diagnosed late as symptoms are usually nonspecific. Right lower quadrant pain is the most frequent symptom, which raises many other more likely conditions as differential diagnoses. CT scan is frequent modality for diagnosis and particularly in elderly patients where the risk of malignancy is higher. However, approximately half of the cases are only diagnosed during surgery. Wide resection with regional lymphadenectomy is the main treatment. The role of adjuvant chemotherapy has not yet been determined. In general, patient prognosis is poor due to delayed diagnosis, and hence an earlier diagnosis is of the uttermost importance.

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