

Jejunal Cancer Presenting as Small Bowel Obstruction: A Case Report

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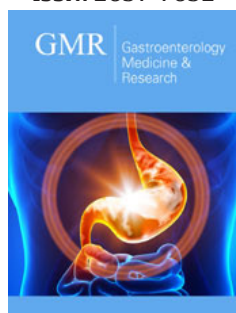
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Abstract

Jejunal cancer represents a seldom-discussed subset within the spectrum of gastrointestinal malignancies and an uncommon root cause of small bowel obstruction. We present a case of a 61 year old female presenting with small bowel obstruction and after the obstruction was relieved with conservative measures, the endoscopic evaluation revealed a growth in proximal jejunum. Biopsy from growth was taken and histopathological examination led to the final diagnosis of jejunal adenocarcinoma. It is crucial to recognize that jejunal cancer, while rare, can serve as a potential instigator of small bowel obstruction with a grim prognosis, particularly warranting attention in the care of elderly patients.

Introduction

Small bowel obstruction is one of the common causes of acute pain and abdomen cases presenting to the emergency department. The predominant etiology is identified as adhesions following surgical interventions, with less common etiologies comprising Crohn's disease, hernias, volvulus, and malignant factors [1]. Small bowel malignancies comprises of only 4% of gastrointestinal malignancies and out of these only 29 % have jejunal cancer [2,3]. Hence, jejunal cancer represents a rare subset of gastrointestinal malignancies and furthermore a rare cause of small bowel obstruction.

Case Report

A 61-year old female presented with complaints of intermittent episodes of colicky pain upper abdomen for 3 months. Pain was associated with distension, bilious vomiting and inability to pass stool and flatus during the episode. Relief was experienced through spontaneous or induced vomiting. There was no significant past history. Physical examination revealed a small palpable nodule beneath the umbilicus (Figure 1a). Routine investigations and X-ray results were normal. Ultrasonography revealed a hypoechoic nodule with internal vascularity at the umbilicus (Figure 1b). Biopsy of the umbilical nodule demonstrated metastatic deposits of adenocarcinoma, characterized by malignant glandular infiltration into fibrous stroma (Figure 1c, H&E, 10X). Computed Tomography (CT) showed heterogeneously enhancing short segment (4.5cm) thickening in proximal jejunum with abrupt narrowing and dilatation of proximal duodenum and stomach alongside soft tissue enhancing nodule in umbilical region (Figure 2a,b). Endoscopic examination revealed circumferential growth occluding the lumen of the proximal jejunum (Figure 3a). Biopsy of the jejunal growth revealed well-differentiated adenocarcinoma (Figure 3b, H&E, 20X). Final diagnosis of metastatic jejunal adenocarcinoma was established, leading to patient's referral to gastrosurgical department where she underwent gastrojejunostomy with palliative intent and was attached to oncology department for further management. Post operatively, the patient is symptomatically improved.

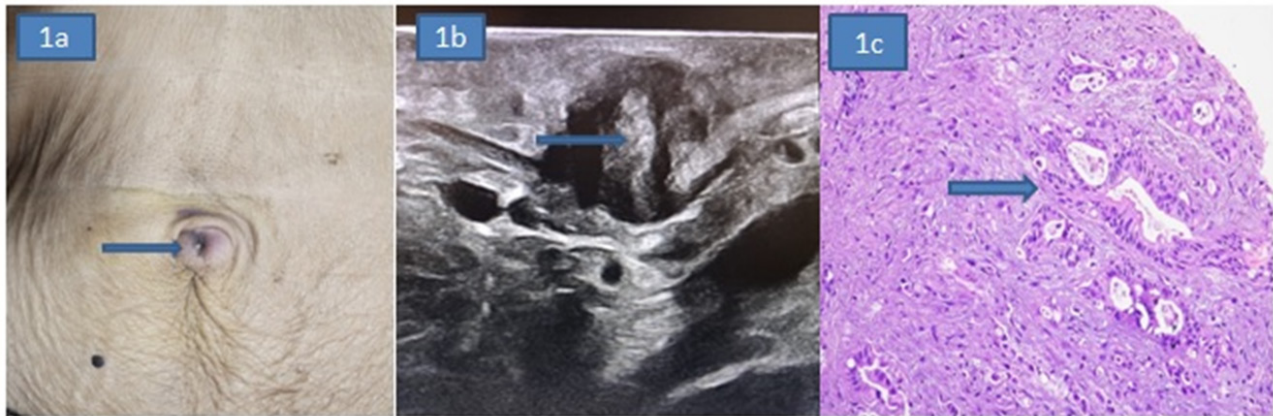


Figure 1:

- a. Image showing a small palpable nodule beneath the umbilicus.
 b. Ultrasonogram image showing a hypoechoic nodule with internal vascularity at the umbilicus.
 c. Histopathology image showing metastatic deposits of adenocarcinoma, characterized by malignant glandular infiltration into fibrous stroma.

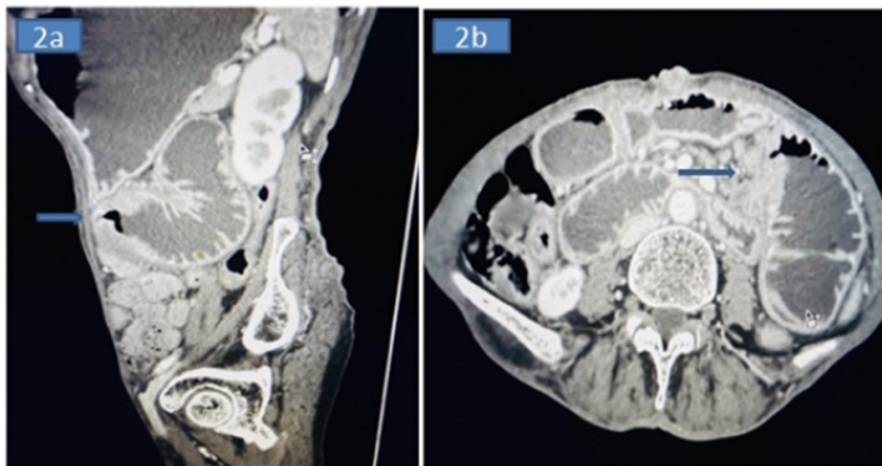


Figure 2:

- a,b:** Sagittal and axial computed tomography image showing heterogeneously enhancing short segment (4.5 cm) thickening in proximal jejunum with abrupt narrowing and dilatation of proximal duodenum and stomach alongside soft tissue enhancing nodule in umbilical region.

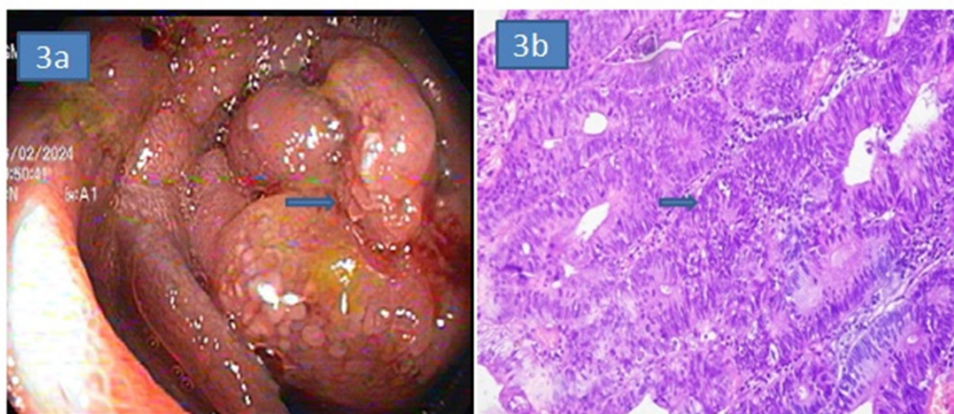


Figure 3:

- a. Endoscopic image showing circumferential growth occluding the lumen of the proximal jejunum.
 b. Histopathological image showing well-differentiated adenocarcinoma with closely packed malignant glands.

Discussion

Small bowel comprises of almost three-fourths of whole of gastrointestinal tract but attributes for only 5% of malignancies [3]. Various hypotheses have been postulated for this and include the fast transit of food and higher IgA levels with more extensive lymphoid tissue. There is also a more rapid turnover of cells and lower bacterial count, as compared with the colon [4]. Jejunal adenocarcinoma is very rare cause of small bowel obstruction in adults and the diagnosis is often delayed by upto 6 to 10 months due to vague presentations such as non-specific abdominal discomfort, nausea, vomiting and infrequently as frank obstruction especially in advanced cases [4,5]. Hence most of the patients who present clinically are already having advanced stages of cancer. Reports have shown that roughly 40% of the patients are having stage III disease (lymph node metastasis) and another 40% have stage IV disease (distant metastasis) at the time of presentation [5]. CT scan (especially CT-enterography) is usually the first modality in patients presenting with GI symptoms but its sensitivity for detection of mucosal and flat lesions remains low. Final diagnosis is often achieved by histopathological assessment of resected surgical specimens or endoscopy guided biopsy specimens. Conventional endoscopic modalities can't be used to assess the whole of small bowel but this has been overcome by the advanced techniques of enteroscopy and capsule endoscopies [6]. The treatment modalities available for jejunal malignancy comprises of surgical resection and chemotherapy. The surgical resection includes wide excision of involved bowel with mesentery and lymph nodes. This curative resection offers upto 50% cure rates [7]. Overman et al. [8] reported response rates of upto 45% with a combination of 5FU and platinum agent even in metastatic small bowel adenocarcinoma and a median progression free survival of 8.7 months [8].

Conclusion

In the course of managing small bowel obstruction, particularly in patients lacking a surgical history, it is imperative to bear in mind the possibility of malignant causes. Failure to diagnose promptly could significantly worsen the already grim prognosis. This case report aims to accentuate the significance of recognizing jejunal cancer as a rare yet potential source of small bowel obstruction, especially in the elderly population.

Conflicts of Interest

None.

Declarations

Ethical approval

Not applicable.

Consent to participate

Patient provided informed consent to participate.

Human ethics

Not applicable.

Consent for publication

Patient provided informed consent to publish the included information.

Availability of supporting data

Not applicable.

Competing interests

None.

Funding

None.

Authors' contribution

VB came up with the idea, material preparation and original draft written by AB and AA helped with the data collection, manuscript was reviewed and revised by BS. All the authors read and approve the final manuscript.

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