



## CA-cecum Presenting as Large Bowel Obstruction with Appendicitis: A Rare Case Report

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**Abstract: Introduction:** Caecal tumors, though rare, pose diagnostic challenges due to their insidious onset and anatomical features. This case study emphasizes the importance of a high index of suspicion for early diagnosis and treatment of caecal carcinoma. **Case Report:** A 63-year-old female presented with symptoms suggestive of large bowel obstruction and acute appendicitis. Imaging revealed a tubular structure in the subcecal location, prompting emergency laparotomy. The patient underwent right hemicolectomy, revealing a 6 cm adenocarcinoma involving the terminal ileum, ileocecal junction, and cecum. Surgical biopsy confirmed moderately differentiated infiltrating adenocarcinoma. **Discussion:** The discussion delves into the increasing incidence of colon cancer in India, particularly in patients presenting with acute appendicitis. Diagnostic challenges, including interpreting diffusely dilated colon images, are explored. Surgical management is detailed, emphasising the need for right hemicolectomy for caecal lesions and various approaches for left-sided lesions. The multidisciplinary approach to patient care, involving medical and radiation oncologists, is highlighted for complex colorectal diseases. **Conclusion:** This case underscores the significance of considering caecal carcinoma in patients with intestinal obstruction, leading to appropriate diagnostic measures and timely surgical intervention. The importance of a multidisciplinary approach to patient care is crucial for effective preoperative assessment and planning neoadjuvant or adjuvant therapy.

**Keywords:** Carcinoma Caecum, Hemicolectomy, Bowel Obstruction, Appendicitis, Carcinoma colon, Caecal Tumor, Ileocolic resection, Hartman's Procedure, Intestinal Obstruction.

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## INTRODUCTION

Caecal tumors are rare but have insidious onset and cannot easily be diagnosed. The caecum is the dilated part of the right colon situated in the right iliac fossa. Caecal tumors present late because of the anatomical features of this part of colon. The tumors in the caecum are insidious in onset and often attend

large size. Barium enema and colonoscopy have limitation in accessing this region. Computed tomography (CT) scan is expensive and not readily affordable in the developing world [1]. High index of suspicion is therefore necessary to the diagnosed carcinoma of the caecum as it is a curable disease if diagnosed early and treated.

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### CASE REPORT

A 63-year-old female presented with history of abdominal pain and non-bilious vomiting for 3 days. Stool and flatus not passed for 3 days. She is a known case of hypertension on irregular medication. She reports no weight loss or loss of appetite. On admission her blood pressure was 116/72mmhg, heart rate was 82 bpm and she was afebrile. General physical examination was unremarkable. On abdominal examination, she had abdominal distension and tenderness in right iliac fossa. Rectal examination revealed normal anal tone, ballooning and faecal stain present. Laboratory investigations revealed haemoglobin of 9.5 gm/dl, white blood cell counts - 5500 with haematocrit value of 30.2%. Renal, liver and other parameters were normal. X-ray revealed dilated large bowel loops with multiple air fluid levels. Contrast enhanced CT abdomen revealed a right enhancing blind ended tubular structure in subcecal location at 7 o'clock position with significant

adjacent fat stranding, likely present acute appendicitis, circumferential thickening involving terminal ileum, IC junction and adjacent part of cecum possibility of malignant/inflammatory pathology. Patient was taken up for emergency laparotomy, intra-operatively a growth of approx. 6 cm in length involving terminal ileum IC junction and cecum with inflamed appendix of approx. 8 cm in length, mesenteric lymph node present. Rest of the large bowel, small bowel, liver and spleen were found to be normal. hence proceeded right hemicolectomy with end ileostomy with excision of mesenteric lymph nodes. Operative biopsy specimen reported as moderately differentiated infiltrating adenocarcinoma of ascending colon with size of 5 cm with both proximal and distal margins are free of tumor. Patient post-op period was uneventful, started orals on 4<sup>th</sup> post-op day, functioning stoma 2<sup>nd</sup> post op day and discharged on post op day 11. Patient on chemotherapy and regular follow-up and doing good till date.

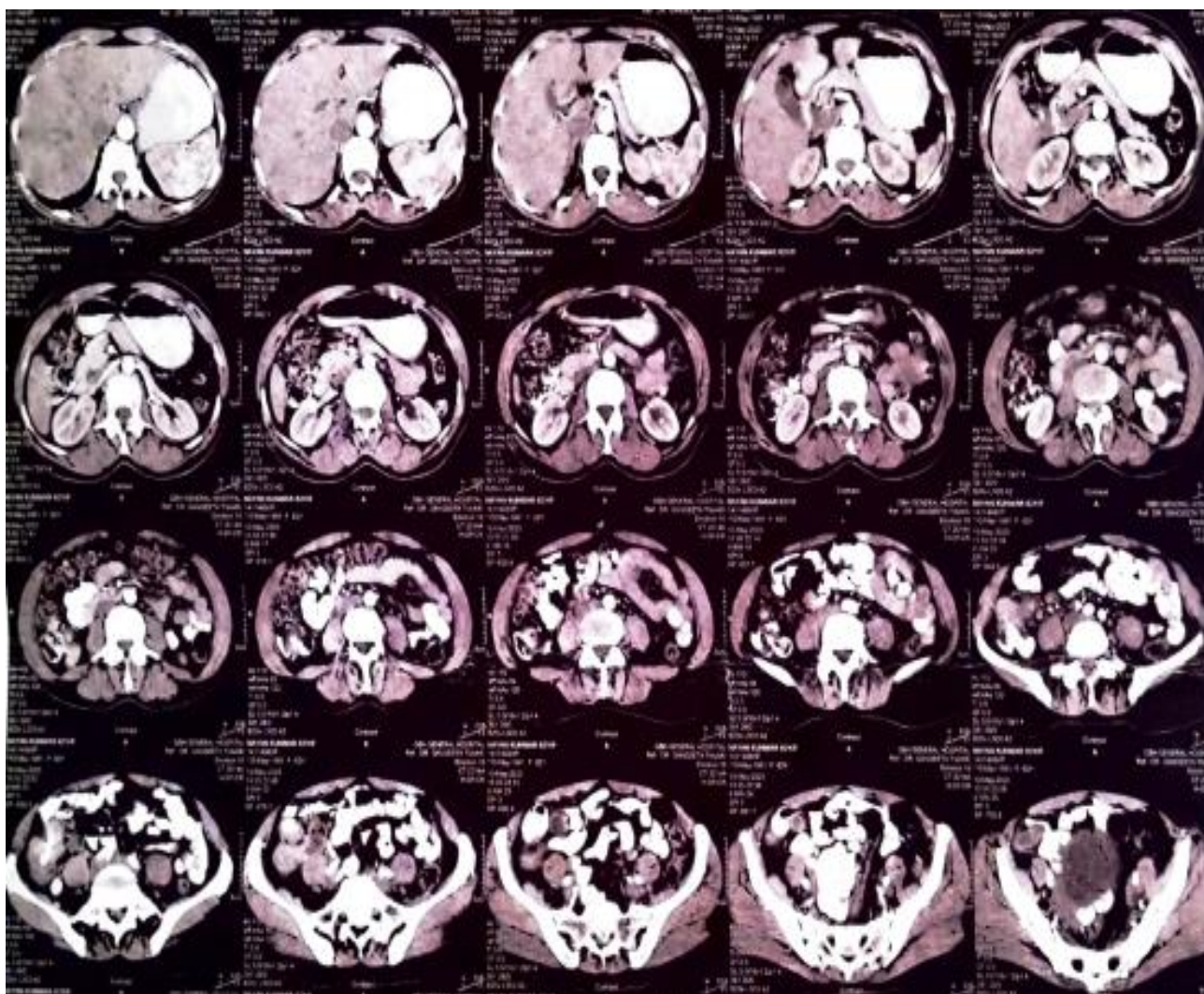


Figure 1: CT image



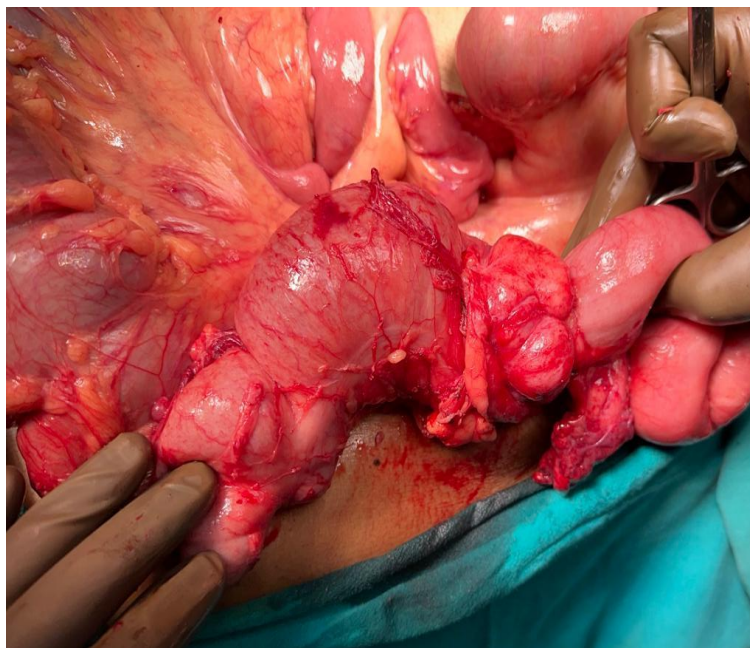


Figure 2: Intra-op picture



Figure 3: Right Hemicolectomy specimen with growth at Cecu

## DISCUSSION

Adenocarcinoma of the colon is the most common intestinal tumour in the world [2]. Incidence is higher in females and in the elderly, with a peak age of 65 years [3]. In India colon cancer is relatively rare compared with western countries, but is on the rise. Patients aged between 45–60 years presenting with acute appendicitis had more than a 17-fold increased risk of an underlying CRC than would be expected given the study population demographics. Throughout all age groups, there was an increased risk of CRC with an overall risk six times greater than expected. This study supports the hypothesis that a presentation with appendicitis in patients  $\geq 45$  years may constitute a sign of underlying colorectal malignancy [4]. Abdominal radiography is usually the first imaging study performed in patients suspected of having LBO. The examination should include supine and nondependent (either upright or left

lateral decubitus) radiographs to aid in the diagnosis of LBO and exclude an SBO and to detect pneumoperitoneum. One of the challenges facing radiologists and clinicians is determining the cause of a diffusely dilated colon ( $\geq 6$  cm) on abdominal radiographs. Pseudo-obstruction, dilatation of the colon without mechanical obstruction [5].

Risk factors include genetic predispositions, environmental factors and inflammatory conditions like ulcerative colitis and Crohn's disease. Surgical resection remains the only curative option in colonic cancer with intestinal obstruction. Left hemicolectomy would have been ideal for our patient provided the tumour was classified between stages 1 and 3. The risk of obstruction is very high with left-sided colonic lesions. Obstructing tumours usually present at a more advanced stage and 25% have distant metastases at presentation. Intestinal

perforation can occur at the site of the tumour if there is closed-loop obstruction.

Patients diagnosed with large bowel obstruction necessitate adequate resuscitation and prophylactic antibiotics. Additionally, they should be properly informed and prepared for the possibility of a stoma. During the surgical procedure, an exploratory laparotomy is typically performed, during which the liver is examined for metastases, and the colon is carefully inspected for synchronous tumors. The most suitable surgical approach depends on the specific location of the obstruction. For right-sided lesions, a right hemicolectomy is the preferred procedure. In the case of a transverse colonic lesion, an extended right hemicolectomy may be more appropriate. In both instances, the need for a stoma can often be avoided. For left-sided lesions, the optimal approach varies depending on factors such as the patient's age, overall fitness, underlying pathology, and the surgeon's experience.

There are several options available for the surgical management of left-sided lesions. A "three-staged" procedure involves an initial defunctioning colostomy, followed by resection and anastomosis, and ultimately closure of the colostomy. On the other hand, a "two-staged" procedure entails sigmoid resection and end colostomy (known as Hartmann's procedure) followed by colostomy closure. Lastly, a "single-staged" procedure involves resection, on-table lavage, and primary anastomosis, which eliminates the need for a stoma. Although the two-staged approach has a reversal rate of only 60%, the single-stage procedure offers the advantage of avoiding a stoma altogether. The reported rates of anastomotic leaks following on-table lavage and primary anastomosis are less than 4%. However, the overall perioperative mortality rate for malignant large bowel obstruction remains approximately 20%.

## CONCLUSION

In conclusion, the case highlights the presentation of carcinoma of the cecum with intestinal obstruction and the successful adoption of emergency hemicolectomy, either through open or laparoscopic means. It is crucial to consider this possibility when evaluating patients presenting with distal small-bowel obstruction, as it can lead to appropriate diagnostic investigations, patient preparation, and accurate surgical intervention.

Ileocolic resection involves the limited resection of the terminal ileum, cecum, and appendix, with the extent of small intestine resected depending on the specific disease process. This procedure typically involves creating a primary anastomosis between the distal small bowel and the ascending colon. Performing an anastomosis at or proximal to the ileocecal valve can be technically challenging, often resulting in the removal of the cecum if the most distal ileum needs to be resected. On the other hand, right colectomy is the recommended procedure for removing lesions or addressing diseases in the right colon when curative intent resection of proximal colon carcinoma is desired. This procedure involves ligating and dividing the ileocolic vessels, right colic vessels, and right branches of the middle colic vessels. Typically, approximately 10 cm of the terminal ileum is included in the resection, and a primary ileal-transverse colon anastomosis is usually feasible.

Complex colorectal disease often benefits from a multidisciplinary approach to patient care. Preoperative assessment of cancer patients by medical oncologists and/or radiation oncologists is crucial in planning neoadjuvant or adjuvant therapy. Additionally, if intracavitary radiation or intraoperative radiation therapy is planned, the involvement of radiation oncologists during the surgery becomes essential.

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