

# Retroperitoneal abscess as an initial presentation of cecal carcinoma

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## ABSTRACT

We report an unusual case of cecal carcinoma presenting first time as retroperitoneal abscess. As the patient was septic on presentation and the underlying cancer was not clear, she was treated initially by extraperitoneal drainage of the abscess. She later underwent a palliative right hemicolectomy. She presented a month later with recurrence at the drainage site. This case highlights this unusual initial presentation of right colonic cancer, the diagnostic dilemma and the poor prognosis associated with it.

**Keywords:** Cecal cancer, retroperitoneal abscess, perforated colonic cancer, hemicolectomy, recurrence.

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**R**ight colonic cancer frequently presents with anemia, changes in bowel habits mainly diarrhea, acute obstruction, abdominal mass or liver metastases. Other rarer presentations such as cancer perforation especially that of the left colon have also been reported. It occurs in 4-5% of cases with high mortality rate approaching 40-50%.<sup>1</sup> Perforation may be the first manifestation of colonic cancer in one third of the patients.<sup>2</sup> Retroperitoneal perforation of right colonic cancer is however much less common. We report an unusual initial presentation of a cecal carcinoma.

**Case Report** A 66-year-old Sudanese lady presented as an emergency complaining of right-sided abdominal pain, increasing constipation, fatigability and right flank swelling of 5-day duration. She gave a history of some weight loss, but there was no history of vomiting or abdominal distension. She was a known diabetic on dietary

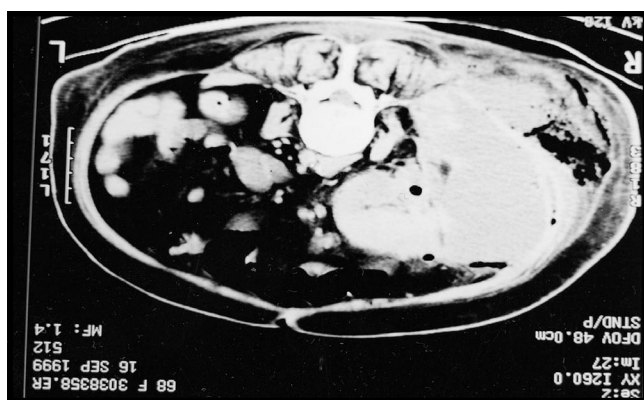
control. On examination she looked ill, toxic, and pale but not jaundiced. Her blood pressure, pulse and respiratory rate were normal, temperature was 38.5°C. There was no lymphadenopathy and her chest was clear. Abdominal examination revealed a fluctuant tender swelling in the right iliac fossa (RIF) extending laterally and posteriorly to the right flank with an overlying edematous and erythematous skin. Rest of the abdomen was soft and non-tender with normal bowel sounds. Her initial investigations showed marked leucocytosis of 24,000 per mm<sup>3</sup>, iron deficiency anemia with hemoglobin of 6.1g%. Urea, electrolytes and liver function tests were within normal limits. Plain x-rays showed soft tissue mass in the RIF and flank with subcutaneous gas at the site of the swelling. Differential diagnoses of perinephric abscess, psoas abscess or subcutaneous gangrene were made. Computerized tomography (CT) scan (**Figure 1**) showed subcutaneous gas with retroperitoneal abscess and eroded right iliac bone

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**Figure 1** - Computerized tomography scan of the abdomen showing the subcutaneous gas and the retroperitoneal abscess cavity.

raising the possibility of a tuberculous abscess. The patient was adequately hydrated, transfused and covered with broad-spectrum antibiotics. More than 1.5 litres of pus was surgically drained through a right flank incision, and plenty of necrotic tissues were excised and sent for culture and sensitivity, acid-fast bacilli (AFB) and histology. The cavity was then left open and packed. The patient was nursed in the intensive care unit (ICU) and her general condition improved over the next 48 hours. Repeated abdominal examination revealed RIF fullness and review of the CT scan raised a possibility of RIF mass. Therefore, possibility of cecal carcinoma causing perforated acute appendicitis with retrocecal retroperitoneal collection was entertained. Histopathology and cytology revealed evidence of malignancy. Colonoscopy showed cecal lesion suspicious of malignancy and biopsy showed moderately differentiated adenocarcinoma. After 10 days of the initial drainage, laparotomy was carried out revealing large solitary metastatic nodule in the left hepatic lobe, a large cecal mass adherent laterally and posteriorly with large distant mesenteric lymph nodes. Upon mobilization of the mass a communication with the drained abscess cavity was found. This was believed to be the site of the perforation. Palliative right hemicolectomy was performed with end to end ileo-transverse anastomosis. Postoperative recovery was non-eventful. Fourteen days later the flank wound was sutured. The histopathology showed infiltrating moderately differentiated (grade 2) adenocarcinoma of the cecum (Dukes C2).

She was discharged home in a reasonable health and was seen in the out-patient clinic a month later. Examination of the flank wound revealed tumor recurrence, which was confirmed histologically. The family decided to send her back to Sudan and she was lost to follow-up.

**Discussion.** Colonic perforation is considered by some authors to be the 2nd most common complication of colonic tumors,<sup>2</sup> occurring in 4-10% of colonic cancer cases.<sup>1,2</sup> It is the first presentation of colonic cancer in approximately 33%.<sup>2</sup> The morbidity rates associated with this complication is usually high<sup>1,2</sup> and as such patients have their operation on emergency basis, their immediate operative mortality rate is high and long-term prognosis is poor compared with elective colonic surgery.<sup>3</sup> Our patient presented with a retroperitoneal abscess as an initial manifestation of cecal carcinoma. This is very unusual and rare; review of literature has yielded only one similar case.<sup>4</sup> It might be that the cecal cancer has obstructed the base of a retrocecal appendix leading to obstructive appendicitis with its subsequent perforation and abscess formation. However, the patient has had no symptoms suggestive of acute appendicitis to support this assumption. Inappropriate management of an unrecognized lesion is invariably fatal.<sup>4</sup> Fortunately our case survived the initial septic insult after aggressive treatment of the retroperitoneal collection and her general condition improved to undergo palliative right hemicolectomy 10 days later. However, she presented later with recurrence at the initial drainage site of the retroperitoneal abscess. Furthermore, she has had a liver secondary at presentation.

The diagnosis of perforated colonic cancer was not entertained at presentation. The matter was made impossible by presence of the retroperitoneal abscess. Nevertheless, after the abscess drainage, there was a clinical and radiological suspicion that there might be a mass lesion in the RIF. In their study of 39 patients with perforated colorectal cancers, Hulnick *et al*<sup>5</sup> suspected the diagnosis initially in 4 patients (10%) only. Emergency surgery for colorectal cancer has become more aggressive and radical over the past decade. Hence, staged procedures based on considerations of safety have given way to immediate resection. For right-sided colonic obstruction immediate resection and anastomosis is now almost universal and for left-sided tumors primary resection has overtaken staged resection.<sup>3</sup> This has been extended to include perforated colorectal cancer where the advocated surgical procedure is now resection and primary anastomosis.<sup>2,3,6-9</sup> In recent years, there is an overall decline in mortality rate following one-stage surgical procedure with an improvement in 3-year survival rate. However, further efforts towards improving the immediate and late outcome of emergency surgery in complicated colorectal cancer is needed.<sup>9,10</sup> Umbach and Dorazio<sup>9</sup> reported no mortality following resection and primary anastomosis without a protective colostomy or ileostomy in perforated left colonic cancers and similar results were obtained by others.<sup>1</sup>

Toxemia is quite common in patients presenting with perforated colonic cancer. In one study, 20 patients out of 39 (51%) were toxemic at initial presentation, but in only 4 was the diagnosis of perforated colorectal neoplasm initially suspected clinically.<sup>5</sup> Computerized tomography scan enabled the diagnosis of perforated neoplasm in the majority of cases (92%) and can also demonstrate metastatic liver disease. Therefore, CT is indicated in cases of suspected or proved perforated colorectal disease to establish the diagnosis and stage the extent of the disease.<sup>5</sup> In our patient, preoperative CT scan has failed to reveal presence of the liver secondary, but raised suspicion regarding presence of a cecal lesion, albeit after the abscess drainage.

Awareness of this uncommon presentation can lead to a precise preoperative diagnosis and appropriate therapy. The possibility of a perforated colonic carcinoma should be considered in instances of unexplained retroperitoneal mass and infection.<sup>11</sup> Ripolles et al<sup>11</sup> illustrated the radiological features of retroperitoneal abscesses due to perforated colon carcinoma in 3 cases. Although, ultrasound alone is enough to diagnose periappendicitis and sigmoid disease, combined use of CT and US may improve assessment of its origin and extension.<sup>11</sup> Appendicitis can occur rarely in association with carcinoma of the cecum, particularly in the elderly. As many as 3% of patients over 40 years of age presenting with appendicitis also have obstructing colonic carcinomas.<sup>12</sup> If this possibility is not recognized and thorough laparotomy is not carried out at the time of initial surgery, an early malignant lesion may go undetected. In this situation, if appendectomy is performed, it will need to be revised to a right hemicolectomy at a later date. This adversely affects survival chances due to the possibility of early dissemination of malignant disease through the breaching of intestinal integrity and tumor cell spillage with subsequent recurrence in the appendectomy wound, probably as a result of initial

appendectomy<sup>13</sup> or at the site of the abscess drainage as happened in our case.

This case highlights an unusual initial presentation of cecal carcinoma, the diagnostic dilemma encountered by the treating surgeon and the appropriate management of such cases.

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