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Case Report

A case of sigmoid colon carcinoma presenting as pyrexia of unknown origin

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ABSTRACT

Pyrexia of unknown origin (PUO) is a diagnostic challenge with a variety of causative factors, one of which is malignancy. This report throws light on sigmoid colon carcinoma, one of the lesser understood causes of pyrexia of unknown origin, where unremitting fever was the presenting symptom. Exclusion of common infectious causes of fever with thorough diagnostic work up lead to a diagnosis of adenocarcinoma of sigmoid colon. Fever subsided completely in the postoperative course.

Keywords: Pyrexia of unknown origin, Colorectal malignancy, Colon cancer, Sigmoid colon

INTRODUCTION

Pyrexia of unknown origin (PUO) is a commonly encountered presentation in India. Possible causes considered while quenching the final diagnosis of the PUO are infections, neoplasms, collagen-vascular diseases and miscellaneous disorders.[1,2] Pyrexia is reported to be associated with occult malignant conditions of reticuloendothelial system, hematological malignancies, colon, lung, kidney, pancreas and liver, other malignancies have also been reported.[1,2] Colonic malignancy presenting with only fever first is rare and very few cases have been reported in literature.[1] Here, we report a case of sigmoid colon malignancy presenting as PUO which responded immediately postoperatively.

CASE REPORT

A 48-year-old female patient presented with long standing, high grade, unremitting fever associated with chills and rigor since one and half months accompanied by fatigue and malaise. She was referred from the medicine department to rule out surgical cause of PUO. General physical examination including per rectal examination was unremarkable.

Common infectious causes of fever were ruled out with radiographic examination of chest, abdomen and blood investigations, including blood and urine cultures, which showed no growth of any organism. Erythrocyte sedimentation rate (ESR) was found to be raised (70 mm). In further evaluation of abdominal pathology, contrast enhanced computed tomography of abdomen was done which was suggestive of a long segment asymmetric bowel wall thickening (19 mm) in the proximal sigmoid (Figure 1). No suspicious metastatic lesions were seen. Colonoscopy confirmed an ulcero-proliferative sigmoid colon growth and biopsy was taken. Histopathological examination confirmed the diagnosis of adenocarcinoma of sigmoid colon.

On exploratory laparotomy, a mass in sigmoid was found to be firmly adhered to the lateral wall with pus collection at the adherent site along with a sealed off perforation (Figure 2). This pericolic abscess was attributed as the causative factor for unremitting fever. Anterior resection with colorectal anastomosis was performed. In the postoperative period fever completely subsided. Patient followed up for adjuvant chemotherapy.

Figure 1: Computed tomography image, arrow pointing to the site of origin of sigmoid colon carcinoma.

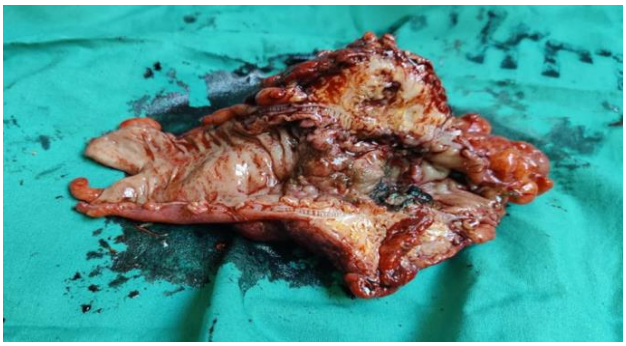

Figure 2: Surgical specimen of resected sigmoid colon.

DISCUSSION

PUO is defined as fever of more than 38.3 ºC for 3-weeks, without an identifiable cause, despite intensive inpatient investigations for one week.[1-3] In cancer patients this fever can be attributed to the neoplasia itself and infections, latter being more common.[1] Hematological malignancies (lymphoma) are the most common malignancies causing PUO.[1-3] In solid neoplasms predominating etiologies are kidneys, lungs, colon cancers. Colonic malignancies with PUO have a variable incidence depending on the series, from 0% to 5% of all cases of PUO.[4]

Nearly less than 10% of all patients with carcinoma of the colon develop fever at some stage.[5] It may develop from intestinal obstruction, perforation with or without bacteremia, or pericolic abscess. *Streptococcus bovis* bacteremia has been implicated as a causative factor for fever in colon carcinoma, along with a few reports of bacteremia due to Clostridium species, Actinomyces pyogenes, and Escherichia coli in patients with colon carcinoma.[5,7] Mechanism of the fever and in patients with a well-differentiated solid tumor are elucidated. However, cytokines such as IL1, IL6, IL18, and tumor necrosis factor α are very likely involved as indeed is prostaglandin E2.[5,6] Fever can be due to metastatic disease too. In cases of colonic malignancy, liver metastasis leads to an upregulation of cytokine production, mainly tumor necrosis factor (TNF) by the tumor cells or by the immune system.[5] In this case no metastatic lesions were present hence fever was attributed to infective etiology secondary to malignant perforation i.e. adherent localized pericolic abscess after a sealed off perforation of sigmoid colon which masked the obvious signs and symptoms of perforation or peritonitis and kept masquerading as PUO. High index of suspicion in malignancies, not only hematological but colonic malignancies should be in cases of PUO.

CONCLUSION

Colorectal carcinoma can be considered as a differential diagnosis while evaluating patients with pyrexia of unknown origin with high index of suspicion. Gastrointestinal malignancies with or without complications like sealed off hollow viscus perforation with localized abscess, can be considered in differentials for PUO.

A thorough diagnostic work up is necessary to rule out infectious causes and metastatic disease to ascertain the definitive cause of fever.

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