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Case Report

Intestinal Mucormycosis Presenting as Perforation Peritonitis in a 35 Year Old Diabetic Male

Rai S* and Narru N
Department of General Surgery, UCMS and GTB Hospital, New Delhi, India

***Corresponding author:** Shreyash Rai, Department of General Surgery, UCMS and GTB Hospital, New Delhi, India

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Abstract

Invasive mucormycosis causes extensive angioinvasive disease with high mortality rates in patients with risk factors. Gastrointestinal mucormycosis is a rare form of the disease with increasing number of cases being reported from developing countries. Early stages of the disease largely remain unrecognized due to non-specific symptoms and signs. We report a case of intestinal mucormycosis presenting as perforation peritonitis in a 35-year-old diabetic male.

Keywords: Mucormycosis; Peritonitis; Angioinvasion

Introduction

Invasive mucormycosis is an uncommon disease particularly affecting immunocompromised individuals. Individuals with solid organ transplantation, heamatopoeitic stem cell malignancy, receiving corticosteroids or deferoxamine therapy and uncontrolled diabetics are specially at risk with notably high reported mortality rates [1]. Depending on the site involved, mucormycosis has been divided into rhinocerebral, pulmonary, gastrointestinal, cutaneous, isolated renal and disseminated forms [2]. Gastrointestinal involvement is rare with stomach, colon and small bowel being the usual sites of involvement [3].

Case Presentation

A 35 year old male presented to the emergency room with abdominal pain since 1 month which had a sudden increase in intensity associated with multiple episodes of vomiting and abdominal distension since 5 days. Patient was not a known diabetic and was not on any immunosuppressent drugs. He was in shock and abdominal examination revealed peritonitis. Investigations revealed deranged blood sugar levels and the erect chest X-ray showed gas under the right diaphragm. No viral marker was positive. A previous CECT of the abdomen done 20 days ago was suggestive of ascites, ileal thickening and decreased enhancement of terminal ileum (Figure 1 and 2). Patient was taken up for exploratory laparotomy, which revealed 2 liters of fecopurulent peritoneal contamination. A 3×3 cm perforation was identified in jejunum 10cm distal to duodenojejunal junction (Figure 3) with 30cm of gangrenous ileum with multiple perforations. Resection of the jejunal perforation and anastomosis was done with retrograde duodenostomy and distal feeding jejunostomy considering the contamination. Gangrenous ileal segment was resected and a double barrel ileostomy was formed. Histopathology revealed mucormycosis (Figure 4) when liposomal amphotericin B was started for the patient. Patient could not recover and expired postoperatively.

Discussion

Primary gastrointestinal disease is the least frequent form of presentation for mucormycosis. Early diagnosis and treatment are important considering the aggressive nature of the disease. Colonoscopy and biopsy of the affected segment may help prove the diagnosis. In other cases, biopsy after laparotomy paves the way [4]. Clinical diagnosis of the same is difficult due to non-specific clinical features with most of the diagnosis being formed after histopathological analysis post-surgery or postmortem [5]. Radiological features are non-specific and CECT features may include thickened bowel wall with intense and poor contrast enhancement suggestive of congested and necrotic areas, respectively [6]. A delay of therapy of more than 6 days has been shown to double the mortality rate [7]. The management of GIT mucormycosis involves surgical debridement and antifungal directed therapy (liposomal amphotericin B) [8,9]. There is a high reported mortality (63.9%) probably due to delay in diagnosis and rapid progression of the disease after angioinvasion [10]. In conclusion, GIT mucormycosis is a rare life threatening disease with high incidence in immunocompromised patients.

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