Case Report

Abdominal histoplasmosis mimicking tuberculosis in an immuno-compromised patient

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DOI: 10.5455/jrmds.20153416

ABSTRACT

Histoplasmosis should be considered as a differential diagnosis especially in immune-compromised patients presenting with gastrointestinal symptoms even in areas where histoplasmosis is non endemic. The presenting symptoms often mimic abdominal tuberculosis. There are reports of simultaneous infections of both histoplasmosis and tuberculosis in patients with acquired immunodeficiency syndrome (AIDS). With early diagnosis and aggressive antifungal therapy gastrointestinal histoplasmosis has a very good prognosis. Here we are reporting a case that initially presented with clinical and radiological evidence initially suggestive of abdominal tuberculosis which on further work up was diagnosed as abdominal histoplasmosis.

Keywords: Immuno-compromised status, abdominal lymphadenopathy, histoplasmosis

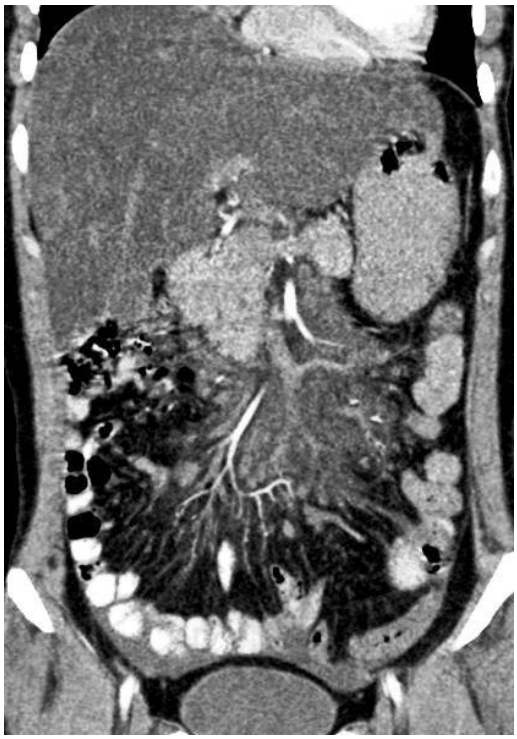
INTRODUCTION

Histoplasmosis is a granulomatous disease caused by an intracellular dimorphic fungus called histoplasma capsulatum most commonly seen in endemic areas [1]. Although primarily it involves the lung, virtually all organs which are rich in mononuclear cells can be infected. Isolated gastrointestinal tract involvement is rare and almost always associated with disseminated form of the disease or immunodeficiency. With increasing incidence of acquired immunodeficiency syndrome (AIDS) more cases of histoplasmosis are being reported from non endemic areas like India. Thus, it is now important to consider histoplasmosis in the differential diagnosis of acute abdomen especially in immune-compromised patients. The colon and cecum is the most common site to be involved followed by small intestine and upper gastrointestinal tract. Patients usually presents with diarrhoea, vague abdominal pain and fever but sometime they may present with acute abdomen like perforation, obstruction and haemorrhage. The prognosis is usually good with excellent long term survival.

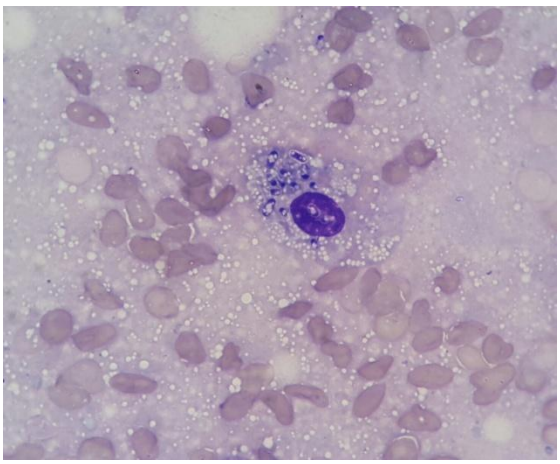
CASE REPORT

Thirty six year old female patient was admitted with complains of abdominal pain with irregular bowel habits for 6 months. She complained of watery stools 5 to 6 times a day without passage of mucus or blood. She was detected to be positive for HIV antibody 14 years earlier and was on anti- retroviral therapy (ART) for 5 years before she stopped when she got pregnant. Patient resumed taking ART after stopping for 2 years. On examination she was cachexic, afebrile with pulse rate of 84/min and blood pressure of 110/70 mmHg. Systemic examination revealed a doughy abdomen with hepatomegaly. Routine blood investigations revealed hemoglobin-10.12 gm/dl, total leukocyte count- 4500 /cumm (neutrophil 84%, lymphocyte 13%, monocyte 3%), platelet count- 1.8 lacs/cumm, ESR-19mm at the end of first hour. Liver function test revealed mildly raised enzyme level SGOT-81 U/L, SGPT-103 U/L with serum albumin 3.4 gm/dl. Hepatitis B and C serology were negative. Bone marrow aspiration study was normal. Her absolute CD4 count was 71/micro litre. Chest X Ray, contrast enhanced computerised tomography of chest, electrocardiography and 2D echocardiography were also normal. Sonography of the abdomen revealed hepatomegaly with lymphadenopathy (para-aortic and mesenteric lymph nodes) suggestive of tuberculosis. Contrast enhanced computerised tomography scan (CECT) of the abdomen showed diffuse thickening of the

small bowel mesentery with heterogenousity and increased attenuation resulting in the formation of ill defined mass-like lesions around the umbilical region. There were prominent mesenteric lymph nodes. The findings were suggestive of mesenteric panniculitis. There was also hepatomegaly with diffuse fatty changes with minimal ascites.



Legends to the figure 1: CECT Abdomen showing diffuse thickening of the small bowel mesentery with heterogenousity and increased attenuation resulting in the formation of ill defined mass-like lesions round the umbilical region with prominent mesenteric lymph nodes suggestive of mesenteric panniculitis.



Legends to the figure 2: FNAC of the abdominal lymph node showing sheets of histiocytes with few lymphocytes in a hemorrhagic background with macrophage filled with yeast form of histoplasma capsulatum.

Sonography guided fine needle aspiration cytology (FNAC) of the abdominal lymph node showed sheets of histiocytes with few lymphocytes in a hemorrhagic background. Some of the macrophages were filled with yeast form of histoplasma capsulatum. The Patient was started on oral Itraconazole in the dose of 200 mg twice a day with highly active antiretroviral therapy (HAART). There was a dramatic response with change in stool consistency and decrease in abdominal pain in due course of therapy. The patient was discharged and was asked to continue medications and follow up. Repeat Computed tomography was performed after two months of therapy to look for radiological response. There was significant reduction in the number of lymph nodes along with reduced inflammation along the mesentery in comparison to the CT done before therapy.

DISCUSSION

Histoplasmosis is a granulomatous disease caused by the dimorphic fungus histoplasma capsulatum, was first described by Samuel Darling in 1908 [2]. It is an endemic disease in the United States especially in Ohio, Missouri and Mississippi. In India histoplasmosis is not a very common disease with sporadic case reports from different parts of the country with majority from Eastern India [3]. Infection of human host usually occurs through inhalation of spores, although rare instances of transcutaneous infection have been reported and primary gastrointestinal infection by contaminated drinking water has been suggested. After inhalation in most of the patients there is spontaneous resolution of the lesion, but in a few, the organism may proliferate and spread to regional lymph nodes and disseminate via hematogenous or lymphatic routes. The dissemination is more common in persons with underlying immunodeficiency disorders like AIDS, lymphoma, elderly age, chronic diseases etc. Gastrointestinal involvement in disseminated histoplasmosis although reported up to 75% in necropsy series, only 10-20%of cases are symptomatic [4]. The most common manifestations are diarrhoea, vague abdominal pain, fever and weight loss. There are isolated case reports of intestinal obstruction, perforation and upper gastrointestinal bleeding. Lesion can occur anywhere in the gastro intestinal tract, but most often occurs in colon and cecum followed by small intestine and upper gastrointestinal tract. The gross pathologic spectrum of gastrointestinal histoplasmosis includes ulcers, mucosal nodules, haemorrhage or patechiae, lymphoid hyperplasia and obstructive masses. The spectrum of microscopic gastrointestinal lesion includes diffuse lymphohistiocytic infiltration, ulceration and lymphohistiocytic nodules [5]. Well-formed

granulomas are very uncommon. The diagnosis of gastrointestinal histoplasmosis is usually done by identification of the infecting organism by histopathology or by tissue culture. A positive skin test or antibody detection to histoplasma capsulatum has shown not to be accurate especially in patients with AIDS. The guideline for optimal treatment of disseminated histoplasmosis has not been firmly established. The current recommendation includes intravenous amphotericin B in acute phase followed by oral itraconazole twice a day [6]. Our patient presented with vague abdominal pain and chronic diarrhoea with radiological evidence suggestive of tuberculosis initially which on further work up with a high index of suspicion was diagnosed later as a case of abdominal histoplasmosis. Untreated histoplasmosis is often fatal with a mortality rate of 83%. However, with appropriate treatment mortality can be reduced to 25% [7].

REFERENCES

1. Kauffman CA. Histoplasmosis: a clinical and laboratory update. Clin Microbiol Rev. 2007; 20(1):115-32.
2. Darling ST. Histoplasmosis: a fatal infectious disease resembling kala azar found among natives of tropical America. Arch Intern Med 1908; 2:107–23.
3. Goswami RP, Pramanik N, Banerjee D, Raza MM, Guha SK, Maiti PK. Histoplasmosis in eastern India: the tip of the iceberg? Trans R Soc Trop Med Hyg 1999; 93: 540-2.
4. Gumbs MA, Girishkumar H, Yousuf A, Patel M, Narasimha V. Histoplasmosis of small bowel in patients with AIDS. Postgraduate Med J 2000; 76: 367-9.
5. Lamps LW, Molina CP, West AB, Haggitt RC, Scott MA. The pathologic spectrum of gastrointestinal and hepatic histoplasmosis. Am J Clin Pathol. 2000 Jan;113(1):64-72.
6. Bennet JE. Antimicobial agents. 9th edition. Goodman & Gilman's the pharmacological basis of therapeutics; 1996.
7. Subramanian S, Abraham OC, Rupali P, Zachariah A, Mathews MS, Mathai D. Disseminated Histoplasmosis. JAPI 2005 (53): 185-9.

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Date of Submission: 11/07/2015
Date of Acceptance: 24/12/2015

How to cite this article: Barman B, Ete T, Mishra J, Jha P, Phukan P, Warjri SB, Padmanabhan A. Abdominal histoplasmosis mimicking tuberculosis in an immuno-compromised patient. J Res Med Den Sci 2015;3(4):317-9.

Source of Support: None
Conflict of Interest: None declared