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Intestinal Paracoccidioidomycosis Mimicking Crohn's Disease: A Case Report

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ABSTRACT

Paracoccidioidomycosis is a systemic fungal infection caused by Paracoccidiodes brasiliensis. Brazil is considered the epicenter of this infection, accounting for 80% of all reported cases. Gastrointestinal manifestations range from abdominal pain and diarrhea to secondary appendicitis and colonic ulcers. We present an unusual case of intestinal paracoccidioidomycosis. Colonoscopy findings such as stricture and deep ulceration can mimic Crohn's disease, so it is important that healthcare providers maintain a high index of suspicion in endemic areas.

Keywords: Paracoccidioidomycosis; Crohn's disease; Intestinal paracoccidioidomycosis; Colonic ulcers; Inflammatory bowel diseases

INTRODUCTION

Paracoccidioidomycosis (PCM) is a systemic fungal infection caused by the dimorphic fungi Paracoccidiodes brasiliensis [1]. It´s considered an endemic disease limited to Latin America, with nearly 85% of cases reported in Brazil, followed by Colombia, Venezuela, and Ecuador [1,2]. Its chronic form commonly affects the lung, mucous membranes of the upper aerodigestive tract, and skin. Gastrointestinal (GI) involvement represents 10 to 30% of cases. The entire GI tract can be affected by PCM, allowing for a broad differential diagnosis, including inflammatory bowel diseases (IBS) [3].

CASE PRESENTATION

An 82-year-old man from Brazil was admitted to our hospital with significant weight loss (10% of body weight in four months), anemia, cough, and dyspnea. Thoracic and abdominal computed tomography showed contrast-enhanced thickening of the cecum and ascending colon (Figure 1), with corresponding enlarged mesenteric lymph nodes, in addition to ground-glass opacities in the lower lung fields (Figure 2). A colonoscopy was performed and showed a partially circumferential ulcerated lesion, measuring about 4 cm, with irregular borders in the ascending colon (Figure 3) near the ileocecal valve, and superficial ulcers in the sigmoid colon (Figure 4). Histology revealed a chronic granulomatous colitis with the presence of fungi in the form of yeasts with evident budding, suggestive of *Paracoccidioides braziliensis* (Figure 5). Serologies using the immunodiffusion and counting immunoassay

methods were positive for P. braziliensis. As a result, the diagnosis of chronic multifocal PCM was given and therapy with itraconazole was initiated. The patient was discharged from the hospital and is currently under outpatient follow-up without symptoms.

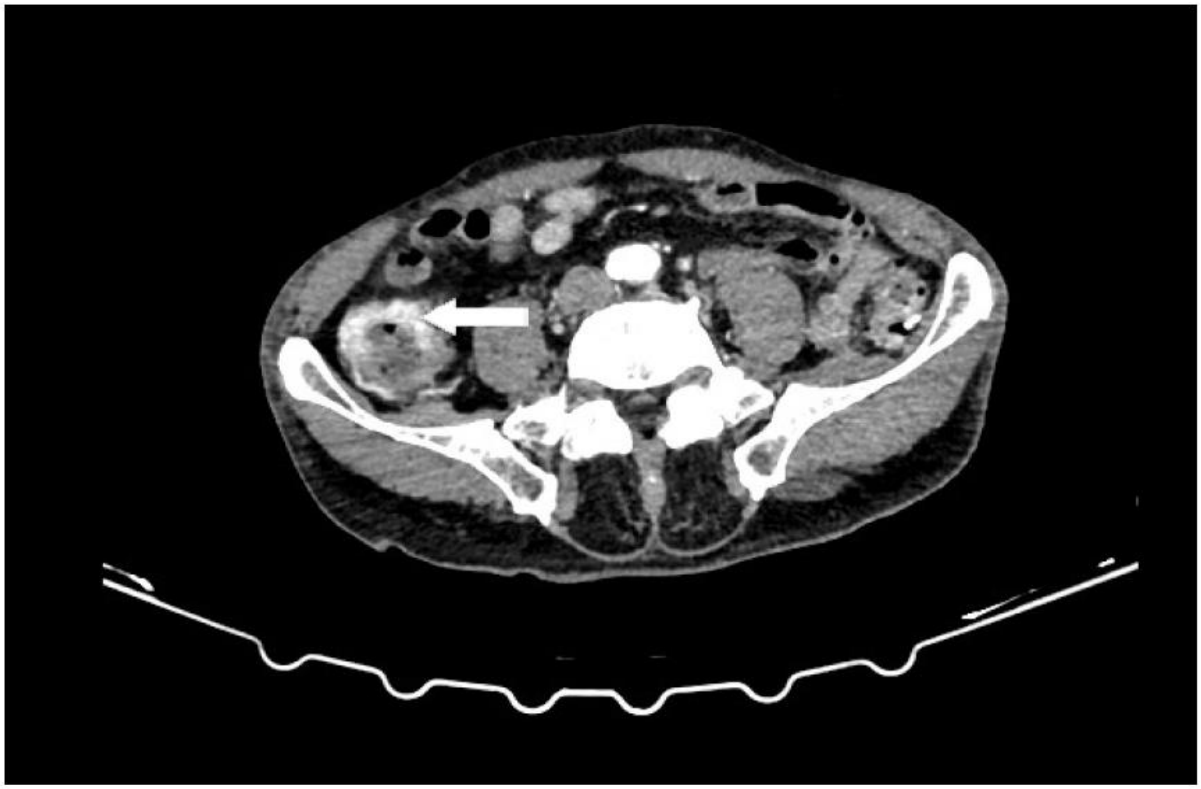

Figure 1: Computed tomography showing contrast-enhanced parietal thickening of the cecum and ascending colon (white arrow).

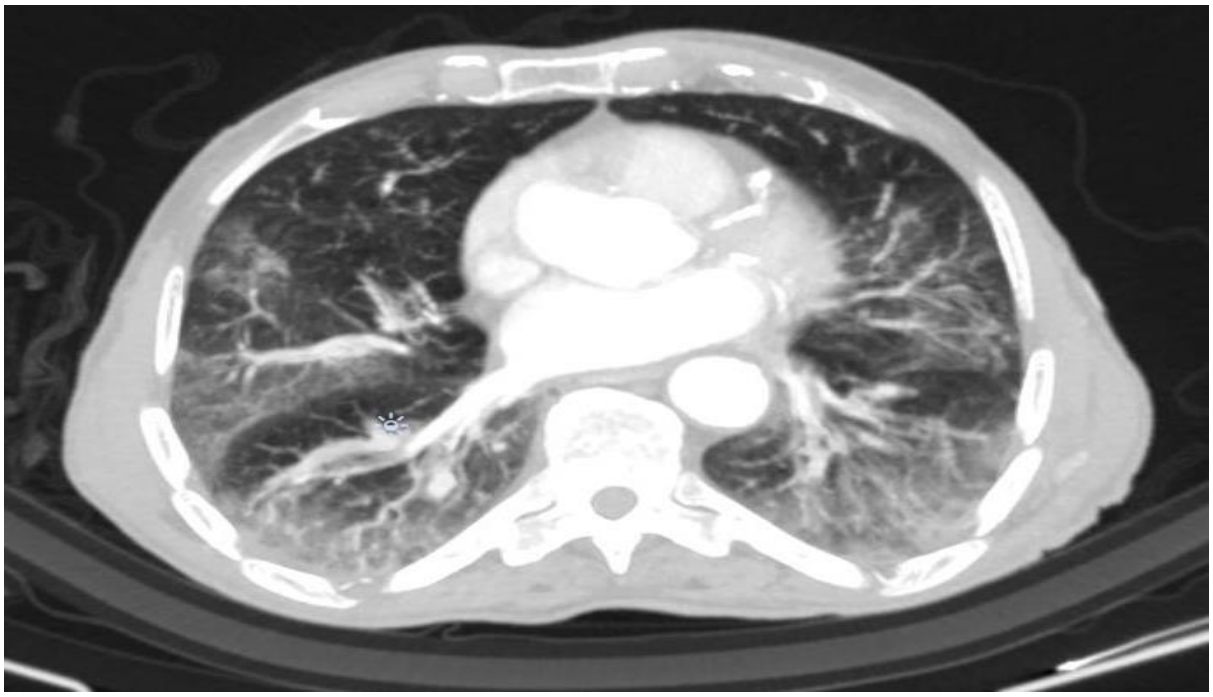

Figure 2: Computed tomography showing ground-glass opacities in the lower lung fields.

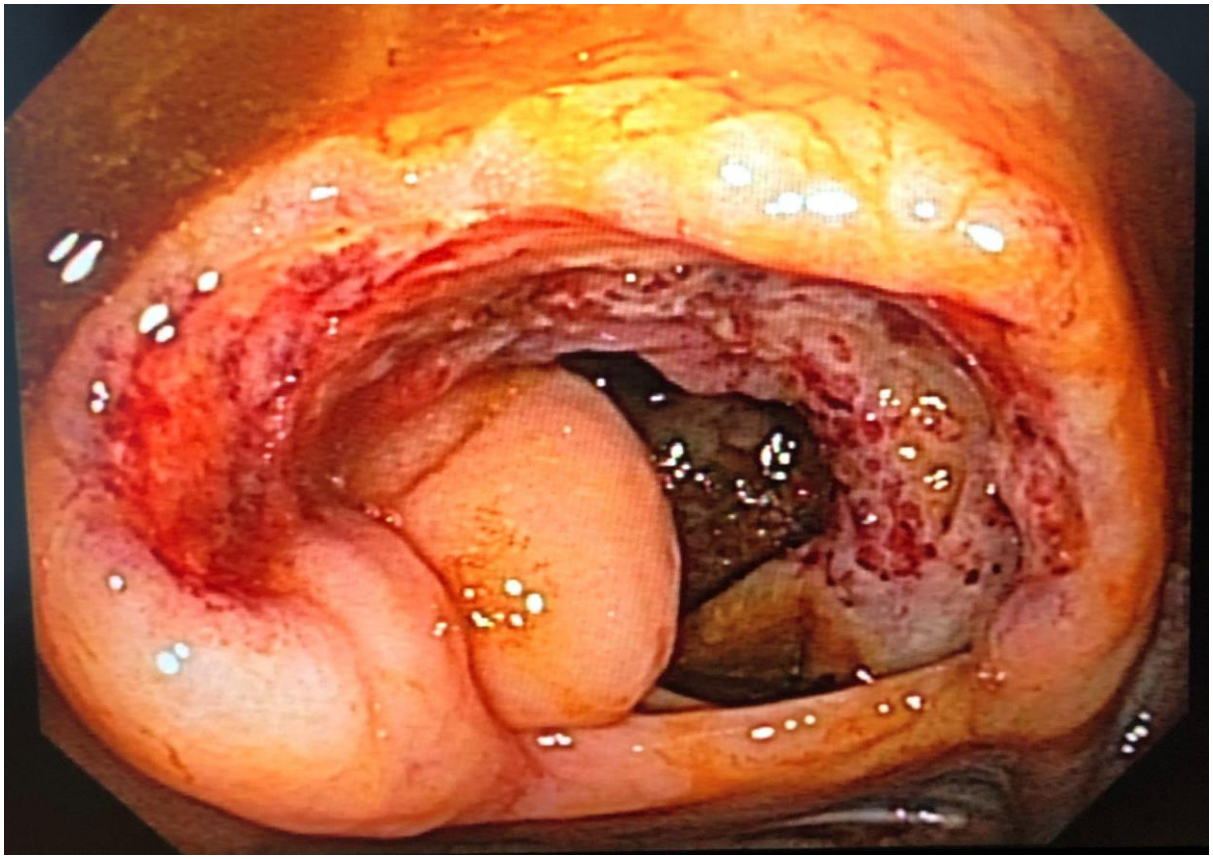

Figure 3: Semi circumferential ulcerated lesion in ascending colon.

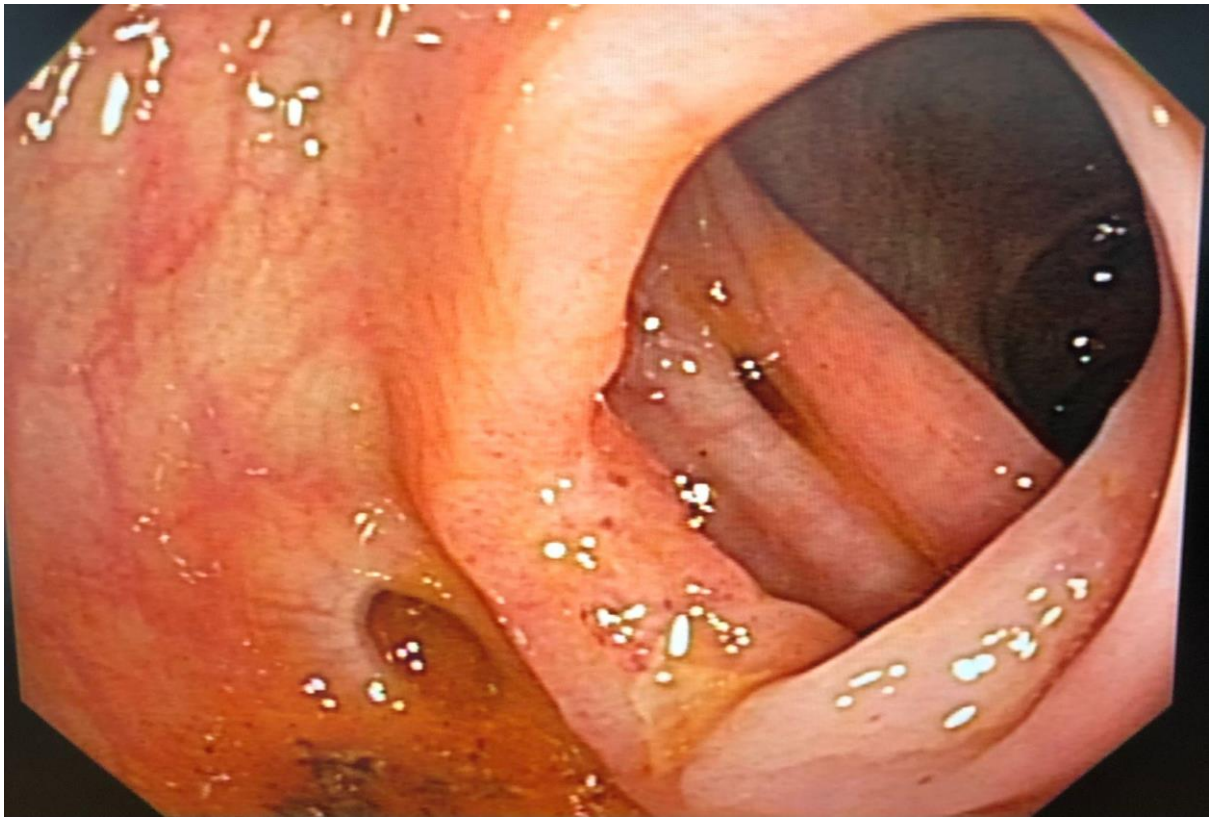

Figure 4: Superficial ulcer in sigmoid colon.

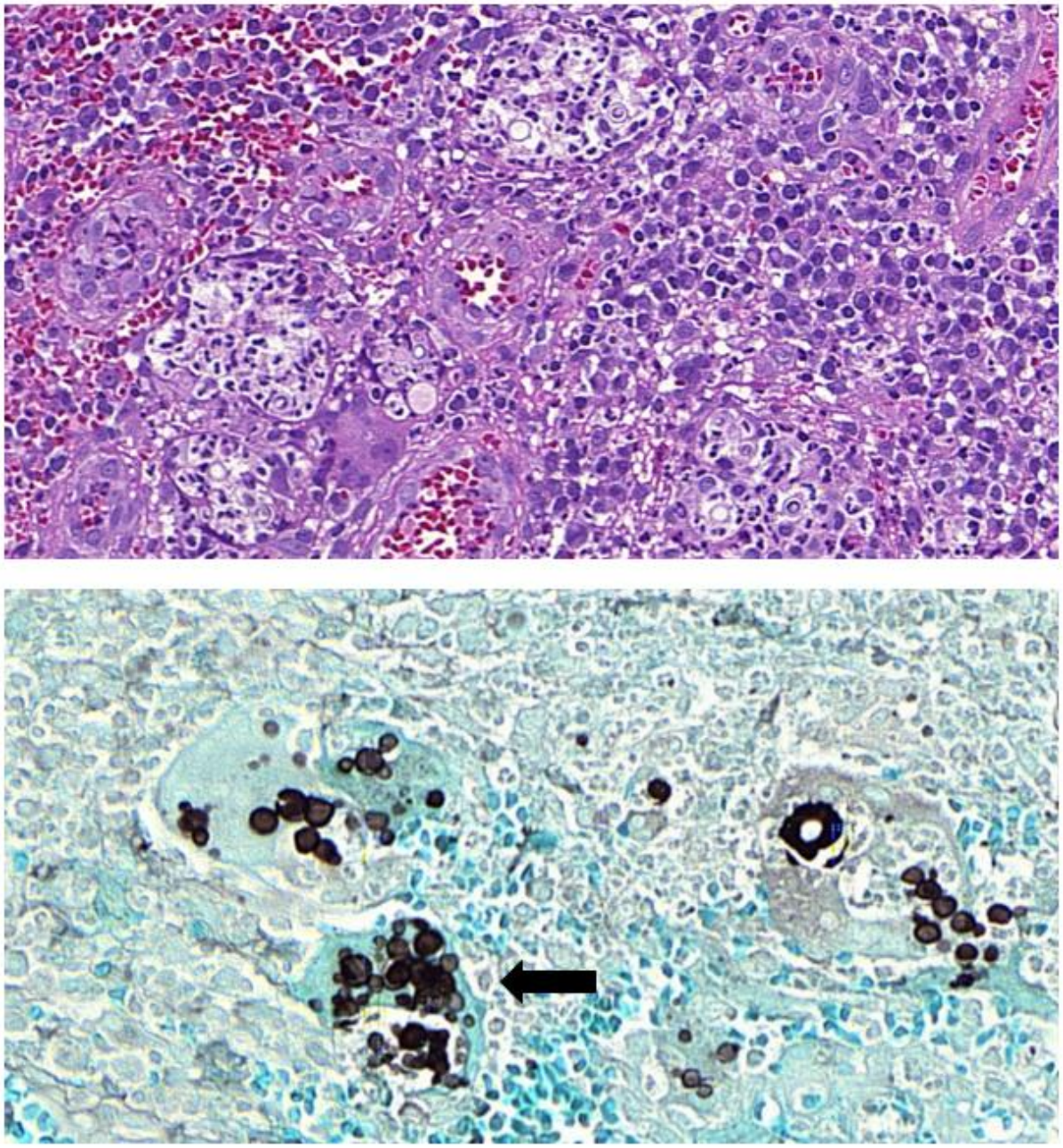

Figure 5: Colon biopsy showing chronic granulomatous colitis with the presence of fungi in the form of yeasts (black arrow), suggestive of *Paracoccidioides braziliensis.*

DISCUSSION

PCM is the most common systemic mycosis affecting non-immunocompromised hosts in South America [4]. The prevalence of PCM varies between countries, and Brazil is most affected, accounting for 80% of all reported cases [5]. It is classified into two main clinical forms: (1) A juvenil type, which is generally observed in children and adults under 30 years old and presents with symptoms such as weight loss, anemia, and enlargement of multiple lymph nodes; and (2) an adult type, which predominantly affects people between the 4th and 7th decades of life and usually represents a reactivation of primary infection. In the latter, pulmonary involvement and ulcerated lesions of the skin and mucous membranes are the most common findings [2].

Even though PCM is more prevalent in the lung and skin, it can involve different abdominal organs [1], comprising 10 to 30 % of cases [4]. Manifestations of GI involvement include abdominal pain and diarrhea to secondary appendicitis and colonic ulcers [1]. GI PCM is almost invariably associated with other organ involvement, mainly the lungs [4]. Our patient had, in addition to intestinal involvement, pulmonary manifestations of the disease, which is consistent with the literature.

Although the entire GI tract may be affected by P. brasiliensis, lesions are more commonly found in segments with more lymphoid tissue, such as the terminal ileum, right colon and appendix [6]. The pattern of intestinal involvement tends to begin at the ileum and extend to the colon and rectum [7].

PCM may mimic other diseases. Colonoscopy findings such as strictures and deep ulcers are very similar to Crohn's disease [2], so pathology is very important in the diagnosis. In the present case report, yeast suggestive of P. brasiliensis was found in colon biopsies, which was confirmed by serum serologies.

Treatment is with antifungals. Itraconazole, at a daily dose of 200 mg, has widely been used in mild and moderate forms of PCM. For severe and disseminated forms, amphotericin B is indicated. In the latter, the duration of treatment with intravenous medication is tailored to clinical stability, which takes, on average, two to four weeks. The total duration of treatment can vary from 9 to 18 months, with an average of 12 months [8].

CONCLUSION

PCM may involve multiple abdominal organs, which is a common finding in systemic mycosis [1,4]. Colonoscopy findings can mimic those of Crohn's disease [2]. Biopsy is of fundamental importance for differentiation in endemic areas, followed by confirmatory serum serology.

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