10.5005/jp-journals-10030-1220

CASE REPORT

Colonic Obstruction in an Immunosuppressed Patient with Gastrointestinal Histoplasmosis

[1]Javier Perez-Calvo, [2]Jordi Castellvi, [3]Nuria Farreras, [4]Lorenzo Viso, [5]Patrizio Petrone

ABSTRACT

Introduction: Histoplasmosis is a systemic disease that usually affects immunosuppressed patients. Isolated intestinal manifestation is rare, and sometimes can be confused with other entities. A patient with acquired immunodeficienc syndrome (AIDS) delete hyphen associated with colonic obstruction due to intestinal histoplasmosis resolved with medical treatment is presented.

Case report: A 35-year-old man arrived in the emergency room due to the intestinal occlusive syndrome. At a physical examination, a painful mass was detected at the right hypochondrium. He had been treated in another hospital for 11 months, but without recollection of his diagnosis. The Abdominal X-ray was compatible with intestinal occlusion, and the abdominal computed tomography (CT) showed a collapsed and stenotic lesion at the hepatic angle of the colon, with fistulous trajectories. A diagnosis of HIV was confirmed after contacting the previous hospital. The results of a recent colonoscopy described an ulcerated mass and a concentric stenosis in the transverse colon with a suspicious of malignancy. The biopsy confirmed *Histoplasma capsulatum (H. capsulatum)* by PCR. Because of these findings, medical treatment with antifungal and digestive exclusion was initiated, presenting good response without the need for more aggressive procedures.

Conclusion: When immunodeficiency is diagnosed, especially HIV, and is associated with a not life-threating intestinal manifestation, a differential diagnosis must include opportunistic infections. Adequate medical treatment is usually sufficed to avoid unnecessary emergency surgical procedures.

Keywords: Histoplasmosis; Abdominal location; Intestinal obstruction.

RESUMEN

Antecedentes: La histoplasmosis es una enfermedad sistémica que afecta generalmente a pacientes inmunodeprimidos. Su manifestación intestinal aislada es rara, y en ocasiones puede confundirse con otras entidades. Se presenta el caso de un varón con Síndrome de Inmunodeficiencia Adquirida, asociada a oclusión colónica secundaria a afectación intestinal histoplásmica, la cual se resolvió con tratamiento médico.

Caso clínico: Varón de 35 años, se presenta a urgencias por síndrome oclusivo intestinal, objetivando a la exploración física una masa dolorosa en hipocondrio derecho. El paciente refiere haber sido tratado en otro centro hospitalario desde hace 11 meses, pero no recuerda el diagnóstico. La radiografía de abdomen es compatible con suboclusión intestinal. La TAC abdominal muestra una lesión estenótica en ángulo hepático del colon, aplastronada, con trayectos fistulosos. Se contacta al primer hospital que confirma el diagnóstico previo de VIH. Una colonoscopia realizada el mes previo describe una masa ulcerada con estenosis anular concéntrica en colon transverso, sospechosa de malignidad. La biopsia confirma *Histoplasma capsulatum* con PCR positiva. Se decide iniciar tratamiento médico con exclusión digestiva y antifúngicos, presentando buena respuesta sin necesidad de realizar procedimientos agresivos.

Conclusión: Ante pacientes con diagnóstico de inmunodeficiencia, especialmente VIH, cuando nos encontramos frente a una manifestación intestinal asociada que no comprometa inicialmente la vida del paciente, se debe tener en cuenta el diagnóstico diferencial de infecciones oportunistas. Con el tratamiento médico adecuado estos pacientes evolucionan correctamente, evitándose así una intervención quirúrgica de urgencias.

Palabras clave: Histoplasmosis; Localización abdominal; Obstrucción intestinal.

RESUMO

Antecedentes: Histoplasmose é uma doença sistêmica que geralmente afeta pacientes imunossuprimidos. Sua manifestação intestinal isolada é rara, e às vezes pode ser confundida com outras entidades. Apresentamos o caso de um homem com Síndrome de Imunodeficiência Adquirida, associado à oclusão colônica secundária ao envolvimento intestinal histoplasmático, que foi resolvido com tratamento médico.

Caso: Homem de 35 anos apresentado ao departamento de emergência com síndrome oclusiva intestinal, objetivando uma massa dolorosa no hipocôndrio direito ao exame físico. O paciente relata ter sido tratado em outro hospital por 11 meses, mas não se lembra do diagnóstico. A radiografia do abdômen é compatível com a suboclusão intestinal. A TC abdominal mostra uma lesão estenótica no ângulo hepático do cólon, achatada, com trajetórias fistulentas. O primeiro hospital que confirma o diagnóstico prévio de HIV é contatado. Uma colonoscopia realizada no mês anterior descreve uma massa ulcerada com estenose anular concêntrica no cólon transverso, suspeita de malignidade. A biópsia confirma *Histoplasma capsulatum* com PCR positiva. Foi decidido iniciar o tratamento médico com exclusão digestiva e antifúngica, apresentando boa resposta sem a necessidade de procedimentos agressivos.

[1-5] Attending Surgeon

[1-4]General Surgery, Hospital Moisses Broggi, Barcelona, Spain

[5]Department of Surgery - NYU Winthrop Hospital, Mineola, Long Island, New York, USA

Corresponding Author: Patrizio Petrone, Attending Surgeon, Department of Surgery - NYU Winthrop Hospital, Mineola, Long Island, New York, USA, emails: patrizio.petrone@gmail.com-patrizio.petrone@nyulangone.org

Conclusão: Em pacientes com diagnóstico de imunodeficiência, especialmente HIV, quando somos confrontados com uma manifestação intestinal associada que inicialmente não compromete a vida do paciente, devemos levar em consideração o diagnóstico diferencial de infecções oportunistas. Com um tratamento médico adequado, esses pacientes evoluem corretamente, evitando assim a cirurgia de emergência.

Palavras clave: Histoplasmose; Localização abdominal; Obstrução intestinal.

How to cite this article: Perez-Calvo J, Castellvi J, Farreras N, Viso L, Petrone P. Colonic Obstruction in an Immunosuppressed Patient with Gastrointestinal Histoplasmosis. Panam J Trauma Crit Care Emerg Surg 2018;7(2):167-169.

Source of support: Nil

Conflict of interest: None

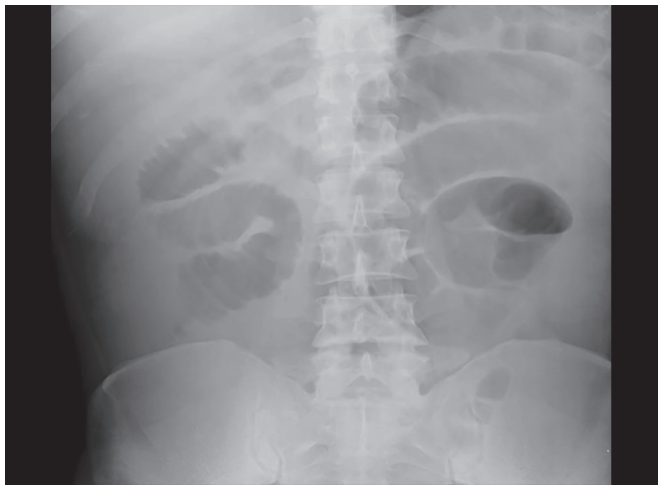

Fig. 1: Abdominal X-ray that shows a sub-occlusive image due to colonic stenosis.

INTRODUCTION

Gastrointestinal histoplasmosis is a rare systemic disease that usually affects immunosuppressed patients. It is caused by a fungus named *H. capsulatum.* It grows in the form of micelles, especially in bird droppings enriched soils.[1] Inhalation of these fragments can produce a conversion to its yeast form and spread to multiple organs.[2]

There are three clinical presentations: pulmonary, disseminated (where the gastrointestinal form is included), and cutaneous. Disseminated histoplasmosis may manifest in its chronic form, with oropharyngeal ulcers, and with or without hepatosplenomegaly. The acute form in immunosuppressed patients, with fever, general malaise, cough and weight loss can mimic different diseases such as tuberculosis or leishmaniasis.[3]

A generalized organic involvement, associated with analytical and radiological manifestations is observed in around 95% of patients with AIDS infected with *H. capsulatum*. Frequent clinical findings include the interstitial pattern on chest X-ray, pancytopenia, and CD4 count <100/µL.[4]

CASE REPORT

A 35-year-old male of Bolivian origin, which he last visited three months prior, and Spanish resident for 10 years. He is a construction worker and among his medical history, he only reported a penetrating abdominal injury years ago, and he referred no transfusions or drugs. In the previous 11 months he has been seen and treated in another hospital, but he did not know his diagnosis.

He arrived in the emergency room with an acute onset of abdominal obstruction. He referred changes in the depositional rhythm and occasionally rectal bleeding since a few months before. Clinical examination showed a palpable and painful mass at the right hypochondrium, associated with defense but without peritonism. A blood test was performed, showing leukocytosis (17000, 90% segmented forms), and microcytic anemia (hemoglobin 10 mg/dL). Abdominal x-ray showed intestinal occlusion (Fig. 1).

Abdominal CT evidenced a stenosis at the level of the hepatic angle of the colon with fistulous trajectories and an increased adjacent fat, suggesting colonic neoplasm and retrograde intestinal obstruction. Although the affected segment was approximately 6 cm, was not possible to rule out a complicated intestinal inflammatory disease (Fig. 2). Clinical manifestations, exploration, and radiology oriented the diagnosis towards a complicated colonic neoplasm at the hepatic angle.

Despite the initial diagnostic presumption, the previous hospital was contacted and confirmed that he had been diagnosed of HIV (CV 126,768 copies and CD4 + 53 cells/kg), and was receiving a retroviral treatment. In addition to the collected information, a colonoscopy was also performed a few months prior, reporting a stenotic and ulcerated lesion at the hepatic angle of the colon,

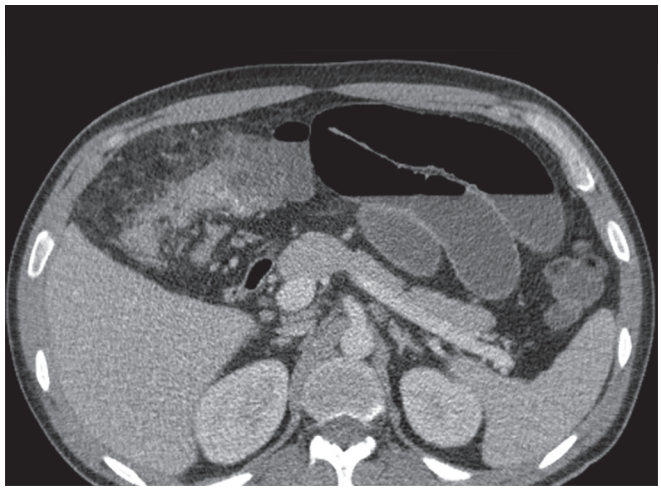

Fig. 2: Abdominal CT showing a 5 cm colonic stenosis at the hepatic angle, with fistulous trajectories and an increased fat tissue, resulting in intestinal occlusion.

suggestive of malignancy. The biopsy was informed as granulomatous colitis without identifying dysplasia or atypia. Subsequently, we confirmed the presence of *Histoplasma capsulatum* by PCR.

Chest CT was also performed, which was negative for any evidence of pulmonary histoplasmosis. Given these findings, and although the patient presented abdominal occlusion but no signs of peritonism or acute abdomen, the decision was to initiate medical treatment, including intravenous (IV) hydration, parenteral nutrition, nasogastric tube, and IV antibiotics to cover the bacterial flora of the colon, with the addition of amphotericin B. He markedly improved after 48 hours of treatment, oral intake was reinitiated on the 5th day, and he was discharged 12 days after admission with oral itraconazole.

DISCUSSION

Disseminated histoplasmosis is a common disease in AIDS patients. However, isolated gastrointestinal involvement, mainly cecum and ileum, is extremely rare. The *Histoplasma capsulatum* is a dysmorphic and endemic fungus, especially located in some areas of the southern United States, Central, and South America. It has four gastrointestinal presentations: (a) silent form, *H. capsulatum* found at the intestinal lamina propria; (b) small pseudopolyps or plates; (c) mucosal ulcerations, and (d) obstruction or intestinal perforation. It requires differential diagnosis with intestinal lymphoma, Crohn's disease, tuberculosis or atypical mycobacterium, some enterobacteria, cytomegalovirus, and other mycoses.[5]

Gastrointestinal symptoms only occur in 10% of the cases and are nonspecific, including abdominal pain, diarrhea, fever, weight loss, and lastly occlusion, perforation, and fistulization.[6] The diagnosis is made by isolation (60%) or visualization (50–75%) of the fungus in biopsies. It growths slowly and it can take weeks. Using radioimmunoassay (RIA), a polysaccharide antigen can be detected, and the diagnosis can be done in 24 hours (sensitivity 95%, specificity 98%).[7]

The treatment is based on the use of antifungals, being amphotericin B the drug of choice, optimizing the treatment with the addition of antiretroviral therapy (TARGA) to prevent relapse in these patients.[8] When the presentation is in the isolated gastrointestinal form can evolve towards stenosis and perforation, but when the disease is not detected on time can be deadly. Sometimes these patients undergo difficult intestinal resections when suspecting a different pathology, although the diagnosis usually is with a surgical biopsy showing the presence of *H. capsulatum* in the intestinal wall.

CONCLUSION

In the presence of an immunosuppressed patient, especially HIV, with an isolated intestinal manifestation such as an abdominal obstruction or perforation, it is of a great importance to consider an alternative diagnosis of opportunistic infections. If the symptoms are not life-threatening, and an adequate medical treatment is indicated, these patients usually do well avoiding an emergency surgical intervention along with the difficulties and the high risk of postoperative morbidity and mortality associated with these surgical procedures.

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