

Chronic Granulomatous Colitis Due to Tuberculosis, Case Report

Diego J Alvis-Peña^{1*}, Carlos H Calderón-Franco², Jaime G Muñoz-Cerón³, Santiago E Campbell-Silva⁴, María P Alvis-Peña⁵, S Peña-Mazabel⁶, Ángel U Ávila-Rosales⁷, Edgar Figueroa-López⁷ and Sandra Itzel Hernandez Olvera⁸

¹General Surgery Resident, Esp. Clinical Epidemiology, General Ignacio Zaragoza Regional Hospital, Mexico City, Mexico

²Resident of Internal Medicine, Mg. Clinical Epidemiology, Santa Clara Hospital, Bogota D.C., Colombia

³Clinical Surgical Gastroenterologist, Medilaser Clinic, Florence- Caquetá, Colombia

⁴Internist Doctor, Medilaser Clinic, Florence- Caquetá, Colombia

⁵Academic Unit of Medicine, South Colombian University, Neiva-Huila, Colombia

⁶Clinical Psychologist, Esp. Audit and Internal Control, Esp. Management of Health Organizations, Mg. Occupational Safety and Health, Aspirant to Doctorate in Occupational Safety and Health, E.S.E. Hospital Manuel Castro Tovar, Pitalito, Huila, Colombia

⁷Resident General Surgery, General Ignacio Zaragoza Regional Hospital, Mexico City, Mexico

⁸Resident Family Medicine, IMSS Family Medicine Unit 55 "Zumpango", Mexico

***Corresponding Author:** Diego J Alvis-Peña, General Surgery Resident, Esp. Clinical Epidemiology, General Ignacio Zaragoza Regional Hospital, Mexico City, Mexico.

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Abstract

Chronic granulomatous colitis secondary to tuberculosis is an unusual manifestation of extrapulmonary tuberculosis, this pathological entity is difficult to diagnose because most of its symptoms are nonspecific, resulting in a late diagnosis and treatment, considering that the disease is curable and preventable. Case: 42-year-old man with abdominal pain of intensity 6/10. Physical examination revealed superficial and deep palpation pain in the right iliac fossa, without signs of peritoneal irritation. Paraclinical tests showed no signs of local or disseminated infection, but the histopathological study reported chronic colitis due to mycobacterium tuberculosis. Discussion: intestinal tuberculosis is the sixth cause of extra pulmonary infection, located in most opportunities in the ileocecal region, the clinical manifestations are fever, fatigue, weight loss and abdominal pain, management is done with anti-tuberculosis drugs for an average period of 6 months, with subsequent clinical improvement and endoscopic remission.

Keywords: Intestinal Tuberculosis; Gastrointestinal Diseases; Granulomatous Colitis (Source: MeSH)

Introduction

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*, which mainly affects the lungs, is among the 10 leading causes of mortality in the world and it is estimated that about 1.4 million people have died of tuberculosis in 2019, being one of the preventable and curable infectious diseases [1-3]. In developing countries, the incidence of tuberculosis has increased significantly, due to the increase in patients with co-infection by the Human Immunodeficiency Virus (HIV), in addition to the growing use of suppressive immunotherapy in the context of different diseases [4,5].

Intestinal tuberculosis (ITB) is one of the most frequent causes of extrapulmonary TB, being the ileocecal region where about 90% of the cases are located [6]. Gastrointestinal manifestations are variable and unclear, simulating different types of inflammatory bowel disease (IBD), malignancy, or gastrointestinal infections, usually the location and localization of TBI is not very well described, making it complex to determine the incidence of the disease, since most cases of TBI patients are asymptomatic [5,7]. The objective of the following work is to present the clinical and endoscopic manifestations of a patient with ulcerative colitis secondary to tuberculosis and to describe how the diagnosis of the present pathology was obtained.

Clinical Case

We present the case of a 42-year-old man with clinical picture of 3 months of evolution, consisting of abdominal pain at the level of the right iliac fossa, colic type of intensity 6/10, associated with nausea, emetic episodes, and sensation of intra-abdominal mass, concomitant refers weight loss 3 kilograms (Kg), denies febrile peaks, denies any other symptomatology associated with the picture; with a history of rheumatoid arthritis since 2002, initially treated with methotrexate, prednisolone and calcium, later he was treated for a year with etanercept, he has no allergic history, refers surgical history of phacoemulsification in 2010 and clavicle osteosynthesis in 2015. On physical examination he was found tachycardic (Fc 104 bpm, Fr 19 rpm, T36.8°C, satO2 97% weight 55 kg Height 160 cm). Sclerae anicteric, oral mucosa moist, thorax normo expandable, lungs well ventilated. The abdomen is soft and depressible, painful on palpation of the right iliac fossa, without signs of peritoneal irritation, without palpable mass at

the moment. Blood chemistry was performed with normal ranges (albumin 4.2 g, negative carcinoembryonic antigen, negative alpha-fetoprotein, creatinine 0.6 mg/dL, blood count leukocytes 8000, neutrophils 60%, Hb 11.5 g/dL, Hcto 34.5%, platelets: 180,000, Bun 20 mg/dL). Abdominal ultrasound was performed: with report of concentric mural thickening of the ileocecal valve of the colon, then colonoscopy was performed with tumor-like lesion in the ascending colon, to determine etiology by biopsy (Figure 1 A, B). Subsequently the result of the pathology submitted to hematoxylin eosin staining evidenced granulomas in the colon mucosa, at the time of performing the special ziehl neelsen staining, granulomas due to mycobacterium tuberculosis were evidenced, finally diagnosing chronic active ulcerated granulomatous ulcerative colitis due to *Mycobacterium tuberculosis* (Figure 2, A, B, C).

Figure 1: (A) Ascending colon colonoscopy. (B) Ascending colon colonoscopy.

Figure 2: (A) hematoxylin eosin (HE) granulomas in colon mucosa (B). HE multinucleated giant cells in colon mucosa (C). Ziehl Neelsen stain (ZN) in colon mucosa.

The patient was managed for tuberculosis with Isoniazid, Pyrazinamide, rifampicin, Ethambutol for 6 months. Subsequently his evolution was favorable.

Discussion

Infection by mycobacterium tuberculosis in the gastrointestinal tract is an uncommon manifestation of extrapulmonary tuberculosis, with an average of 44 to 93% of cases being observed in the ileocecal region, given that mycobacteria have a fatty capsule that does not allow digestion and interferes with early release in the gastrointestinal tract, explaining why infection in proximal areas is infrequent [7]. Mycobacteria have a special affinity for lymphatic tissue being the ileocecal valve the most important since it contains numerous lymphatic chains, when the tuberculoma grows the intestinal wall thickens and forms small papillary invaginations in the mucosa [5]. Extrapulmonary TB occurs in 20% to 25% of cases as described by Ramirez, *et al.* [8] and the prevalence of TBI is between 3% and 5%. Our patient has one of the risk factors for TBI due to the use of anti-TNF, although HIV infections, corticoids, malignancy, Diabetes mellitus and chronic renal insufficiency are also described, according to the findings described by Peirse, *et al.* [9]. Regarding the local epidemiology, the data are unclear regarding the prevalence of the disease and mortality of extrapulmonary TB presentations, since the diagnosis of intestinal TB, in multiple opportunities, does not allow a timely diagnosis [7,10].

The clinical manifestations are not specific and the time varies between 1-12 months, which are abdominal pain, fever and fatigue. Weight loss and nocturnal diaphoresis are important symptoms of TB; a study by Zhao, *et al.* reports that the most common manifestations were ascites, nocturnal diaphoresis, as well as Makharia, *et al.* manifested as chronic diarrhea, presence of blood in stool, perineal disease and extradigestive manifestations [11,12].

Given the above, the diagnosis is based on clinical suspicion and associated risk factors, including anamnesis, diagnostic imaging, and histopathology, previously discarding more common pathologies such as Crohn's disease, ulcerative colitis, lymphoma, among others, which was performed properly in the patient in question since a biopsy of the mucosa of the ascending colon was performed by colonoscopy [13]. The treatment for TBI is the same as the one used for pulmonary tuberculosis, which has a duration of 6 months [13]. Follow-up and evolution to treatment is usually confirmed by a decrease in symptoms at 2 weeks, following anti-tuberculosis therapy, and resolution of lesions visualized in endoscopies 3 months after initiating therapy [9,14].

A case of tuberculosis was described at the level of the ascending colon, an unusual clinical manifestation, so it was decided to rule out different types of pathologies with higher diagnostic probability, taking into account the weight loss, abdominal mass, in addition to the history of immunosuppressive therapy, required pathological sampling, to decide an appropriate medical conduct. Given the unspecificity of the symptoms and the suspicion of abdominal mass, with initial results unclear, he required colonoscopy biopsy and histopathological diagnosis of chronic colitis due to Mycobacterium tuberculosis, which improved after antituberculosis treatment. Given the present clinical case will provide valuable information and important clinical points in daily medical practice, for diagnosis and treatment, since a thorough and step-by-step study should be performed to rule out TBI pathology.

Summary

Chronic granulomatous colitis secondary to tuberculosis is an unusual manifestation of extrapulmonary tuberculosis, this pathological entity is difficult to diagnose since most of its symptoms are nonspecific, resulting in late diagnosis and treatment, taking into account that the disease is curable and preventable. Case: A 42-year-old man with abdominal pain of intensity 6/10. Physical examination revealed superficial and deep tenderness in the right iliac fossa, with no signs of peritoneal irritation. Paraclinicians showed no signs of local or disseminated infection, but histopathological study reported chronic colitis due to mycobacterium tuberculosis. Discussion: intestinal tuberculosis, is the sixth cause of extrapulmonary infection, being located in most opportunities in the ileocecal region, the clinical manifestations are fever, fatigue, weight loss and abdominal pain, management is done with antituberculosis drugs for an average period of 6 months, with subsequent clinical improvement and endoscopic remission.

Ethical Aspects

Taking into account resolution 8430 of 1993, the informed consent form was filled out and approved by the patient; additionally, the sociodemographic, clinical and paraclinical characteristics of interest for this article were recorded. Authorization was requested from the hospital to review the clinical history.

Authorship Contributions

All authors participated in the conception, design, execution and preparation of the final manuscript. Likewise, all authors reviewed and approved the final version of the article.

Potential Conflicts of Interest

Those responsible for the preparation of this manuscript declare that they have no financial or nonfinancial conflicts of interest.

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ORCID

Diego Julian Alvis Peña <https://orcid.org/0000-0002-6885-0816>

Carlos Hernán Calderón Franco <https://orcid.org/0000-0002-98238409>.

Jaime Giovanni Muñoz Cerón <https://orcid.org/0000-0002-1890-9760>

Santiago Emilio Campbell Silva <https://orcid.org/0000-0002-2505-4000>

María Paula Alvis-Peña <https://orcid.org/0000-0003-4438-8169>

OrianaSofiaPeña-Mazabel <https://orcid.org/0000-0003-0568-9786>

Angel Uriel Avila Rosales <https://orcid.org/0000-0002-0580-322X>

Edgar Figueroa Lopez <https://orcid.org/0000-0002-7304-7171>

SANDRA ITZEL HERNANDEZ OLVERA <https://orcid.org/0000-0002-8085-3892>

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