

Complex Perianal Fistulas as an Unusual Presentation of Tuberculosis: A Case Report

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Abstract

Gastrointestinal tuberculosis at the perianal level is one of the rarest cases of extrapulmonary tuberculosis, representing less than 1% of cases. Due to its low incidence, it is necessary to take this differential diagnosis into account, facilitating early diagnosis and timely treatment of tuberculosis. This clinical case presents a patient with unstudied chronic lower back pain accompanied by constipation, pain in the perianal area and hematochezia. Physical examination revealed complex perianal fistulas. The suspected diagnosis begins with a chest computed tomography, that shows lesions at the vertebral level compatible with vertebral tuberculosis (Pott's Disease). The culture was positive for *Mycobacterium tuberculosis*, initiating anti-tuberculosis treatment.

Keywords: complex perineal fistula; spinal tuberculosis; gastrointestinal tuberculosis; extrapulmonary tuberculosis

Introduction

A perianal fistula is a duct with infected fibrous walls that connect an anal crypt with the skin or with the lumen of the rectum [1]. These can develop after an inflammatory process generated by various pathologies such as tuberculosis, HIV, Crohn's disease, ulcerative colitis, among others. According to a report from the World Health Organization (WHO), a total of 10 million cases of tuberculosis and 1.2 million deaths were reported in 2019, making it one of the ten main causes of mortality in the world [3]. and although tuberculosis cases have been decreasing over time worldwide, in developed countries such as the United States there is an incidence of 2.7 cases per 100,000 inhabitants [2]. Colombia in 2020 reported an incidence of 22 cases per 100.000 inhabitants, and a mortality rate of 2.1 deaths per 100.000 inhabitants, establishing an event of great importance for the Colombian public health [3]. Gastrointestinal tuberculosis at the perianal level is one of the rarest extrapulmonary tuberculosis, representing less than 1% of cases [6]. The most affected part is the ileocecal region 85% of the cases, followed by the jejunum, colon and anorectal region, which is particularly rare and predominates in men in a 4:1 ratio [7]. Regarding the pathophysiology, swallowing infective material is probably the most frequent type of infection, followed by hematogenous dissemination and lymphatic dissemination [7].

For all these reasons, it is relevant to take gastrointestinal tuberculosis into account as a differential diagnosis when evaluating perianal fistulas, thus

facilitating early diagnosis and timely treatment of tuberculosis. Also, consider that in pathologies of low incidence, a late diagnosis is usually given, as occurred in this case, thus highlighting the need for a thorough physical examination and an adequate clinical evaluation of the other manifestations that the patient presents.

Case Presentation

A 31-year-old man with a history of intravenous drug use, an eight-month pain in the perianal area, constipation, hematochezia, and 6 kg weight loss over the last four months. In addition, pain in the thoracolumbar junction with limitation in arcs of movement predominantly on the left, paresthesias in the lower limbs and difficulty in ambulation.

In the examination, the gastrointestinal surgeon identified perianal fistulas, and the magnetic resonance imaging showed a posterior trans-sphincteric fistula with an extension towards the left intergluteal region. Total colonoscopy showed perianal fistulas, grade II internal hemorrhoids, anal fistula, erosive proctitis, and a normal ileocolonoscopy. After these, in the first surgical stage, a cutting seton was inserted and subsequently, in the second surgical stage, an anal fistulotomy. Simultaneously, in the chest computed tomography, neurosurgery noticed anterior vertebral involvement at the level of T12-L1 with disc degeneration, adjacent edema and bilateral psoas muscle abscess left predominance. Imaging and clinical findings are highly suggestive of spinal tuberculosis, also called Pott's disease. The interventional

radiology did percutaneous drainage of the collections, and the culture and smear microscopy determined the bacteria *Mycobacterium tuberculosis* as the etiological agent, thus initiating antituberculous treatment to combat both extrapulmonary infections: spinal tuberculosis and gastrointestinal tuberculosis manifested by the complex perianal fistulas.

Discussion

Although the incidence of tuberculosis has been decreasing over time worldwide, in developed countries such as the United States, there is an incidence of 2.7 cases per 100,000 inhabitants. [2]. In countries such as Colombia, there is still an incidence as high as 22 cases per 100,000 inhabitants [3]. still being a diagnostic possibility important, and a public health problem. The above applies to pulmonary tuberculosis, the most frequent location 60-75% of cases [4]. However, extrapulmonary tuberculosis represents only 10-20% of cases of tuberculosis [5], and even rarer is gastrointestinal tuberculosis with only 1% of cases [6]. With this in mind, gastrointestinal tuberculosis becomes a troublesome and delayed diagnosis pathology, delaying timely treatment. This pathology can affect multiple organs, from mouth to anus, peritoneum and pancreatobiliary system [8]. The symptoms are generally nonspecific, and in the absence of pulmonary tuberculosis, the diagnosis can be very strenuous, as in this case, where no pulmonary manifestations were present.

Consequently, one of the principal diagnostic problems is differentiating gastrointestinal tuberculosis from Crohn's disease (CD) due to the similarity in clinical presentation, especially in areas where tuberculosis remains endemic, and the prevalence of inflammatory bowel diseases is ascending [8]. The same occurs in the case of perianal tuberculosis, whose predominant signs are bleeding and fistulas, which are extremely rare. These are more prevalent in the population with HIV-AIDS. For aforementioned, the patient in this report presented exposure to intravenous drug use as a risk factor, which could explain the extrapulmonary tuberculosis, spinal and gastrointestinal tuberculosis.

It is worth noting that the main reason for consultation was the manifestations generated by perianal fistulas. Despite being rare, generally present with shallow, painful ulcers well-defined edges, covered with pseudomembranous material and mucopurulent discharge [9]. reiterating the importance of a thorough physical examination and injury description.

In addition, the importance of a good review of systems to achieve an adequate evaluation of different manifestations in the patient since he had had chronic low back pain for eight months, among other issues that referred to the presence of problems at the level of the lumbar, as a suggestive of another extrapulmonary manifestation of tuberculosis that occurs at the vertebral level known as Pott's disease, which usually causes symptoms similar to radiculopathy and occurs in people of low socioeconomic status.

Finally, it is crucial to obtain diagnostic confirmation through laboratory tests, such as the culture of material obtained by biopsy, which can take

up to 2 weeks, and its yield is not good (25-36%). Nonetheless, it is still the gold standard. The indicated treatment regimen is antituberculous drugs (isoniazid, rifampin, pyrazinamide, ethambutol and streptomycin), the same as for pulmonary tuberculosis [8]. In this case, the neurosurgery department treated spinal tuberculosis, which improved the symptoms presented at the perianal level and the other manifestations.

The prognosis of a patient with gastrointestinal tuberculosis depends mainly on the state of their immune system and the initiation of adequate treatment in time [8]. hence the importance of an early diagnosis; it is also important to continue close monitoring of these patients during and after treatment due to the risk of possible relapses.

Conclusion

Complex perianal fistulas may present as a rare manifestation of gastrointestinal tuberculosis, which is also an uncommon tuberculosis, making it difficult to diagnose. Therefore, they must always be taken into account as a possible differential diagnosis despite not having pulmonary tuberculosis present, especially in countries with a high prevalence of tuberculosis, such as Colombia. Do a biopsy and culture early in the event of perianal manifestations that do not improve with conventional medical treatment to obtain an early diagnosis and timely antituberculous treatment. Besides, correlate the complete clinical of all symptoms the patient presents.

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