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## Case Report

# Perianal tuberculosis: A rare disease of late diagnosis<sup>☆</sup>



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### ABSTRACT

Tuberculosis remains a public health problem and its rare extrapulmonary forms persist with late diagnosis, which delays the diagnosis and favors the dissemination of the disease. The perianal manifestation occurs in approximately 0.7% of tuberculosis cases and usually manifests as fistulizing disease, but may also present with ulcerated lesions, with necrotic and quite painful clinical picture. Initial treatment should be carried out aimed at controlling perineal and perianal sepsis, with subsequent establishment of specific drug therapy provided by the Health Ministry.

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### Tuberculose perianal: uma doença rara de diagnóstico tardio

#### RESUMO

A tuberculose ainda hoje se mantém como um problema de saúde pública e suas raras formas extrapulmonares persistem com diagnóstico tardio, o que retarda o diagnóstico e propicia a propagação do bacilo. A manifestação perianal ocorre em cerca de 0,7% dos casos de tuberculose e manifesta-se geralmente como doença fistulizante, mas que pode também apresentar-se com lesão ulcerada, de fundo necrótico e bastante dolorosa. O tratamento inicial deve ser realizado objetivando o controle da sepse perineal e perianal com posterior instituição de terapia medicamentosa específica fornecida pelo ministério da saúde.

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#### Palavras-chave:

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<sup>☆</sup> Study carried out through the Medical Residency Program in Coloproctology of the Department of General Surgery, Hospital Santa Marcelina, São Paulo, SP, Brazil.

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## Introduction

Infection with *Mycobacterium tuberculosis* remains a public health problem that primarily affects patients infected by Human Immunodeficiency Virus (HIV), but is perpetuated in the world's population due notably to the emergence of multidrug-resistant bacilli, immigration and poverty of the population living in human settlements.<sup>1</sup> However, the rarity of extrapulmonary forms causes lesions to go unrecognized, delaying the specific treatment.

Extra pulmonary manifestations of tuberculosis represent approximately 5% of all cases of this disease.<sup>2-4</sup> Skin manifestations correspond to approximately 2.1%<sup>5,6</sup> and perianal involvement has a very rare incidence<sup>4,7,8</sup> of approximately 0.7% of tuberculosis cases.<sup>9</sup>

Among other factors that highlight the importance of correct diagnosis of rare tuberculosis manifestations is the fact that the risk of death in HIV patients is twofold higher in patients infected by the *M. tuberculosis* bacillus in patients who are also infected by HIV, but without infection caused by this pathogen.<sup>10</sup>

This case report aims to reporting the case of a patient treated at the Coloproctology Outpatient Clinic of Santa Marcelina Hospital SP that had perianal tuberculosis. The study was developed by the Coloproctology Service of Hospital Santa Marcelina, São Paulo and approved by the institution's Research Ethical Committee, under number 29/13.

## Case report

This is a male patient, 48-years old, born and raised in Sao Paulo, whose work is of general services, with an emphasis on waterproofing. He referred painful and hyperemic perianal lesion with progressive increase in size in the last 12 months. He denied fever and change in bowel habit, although he reported worsening of pain after evacuations.

He also had associated nonproductive and sporadic cough, as well as weight loss of 15 kg in the period, representing 20% of previous body mass. He had no comorbidities, but was a smoker with a smoking habit of one pack a day for 35 years and history of alcohol ingestion of 5 doses of hard liquor a day.

At physical examination, an extensive perineal granulomatous mirror lesion was observed with hyperemia, irregular borders and fibrin, measuring approximately 12 cm in diameter, circumferential to the anal verge. Moreover, he had bilateral inguinal lymph node enlargement, of fibro-elastic aspect, mobile, of approximately two centimeters in diameter (Fig. 1).

The patient was tested for immunodeficiency, including HIV, cytomegalovirus and syphilis, with negative results. Acid-Alcohol Resistant Bacilli (AARB) test showed a positive result in sputum and chest X-ray showed evidence of diffuse and bilateral interstitial infiltrate without cavitation. The colonoscopy showed normal colorectal mucosa. Considering the painful clinical picture, he was submitted to a derivative colostomy for hygienic reasons and improvement of pain, with excision biopsy of inguinal lymph node and perineal region.



Fig. 1 – Pre-treatment perianal inspection.

Histopathological examination disclosed chronic nonspecific granulomatous inflammation in perineal and inguinal regions. Chemotherapy treatment was thus initiated for perineal and pulmonary tuberculosis, using the treatment regimen recommended by the Brazilian Ministry of Health with rifampin, isoniazid, pyrazinamide and ethambutol, with significant improvement of perineal lesion being observed after therapy completion (Fig. 2).

## Discussion

Tuberculosis can affect any part of the gastrointestinal tract, from the esophagus to the anus<sup>3</sup> and, although it has a very rare incidence in the perianal region, it should be part of the differential diagnosis of proctologic diseases,<sup>11</sup> particularly in patients considered at risk, such as HIV-infected individuals, low-income population, homeless individuals and alcoholics with poor hygiene habits.<sup>3</sup> Furthermore, it is known to be more common in males, with a ratio of about 4:1<sup>1,4</sup> and those that practice receptive anal intercourse.<sup>12</sup>

The postulated mechanisms by which *M. tuberculosis* affects the perianal region are the swallowing of respiratory secretion filled with bacilli<sup>2,13</sup> and self-inoculation of *M. tuberculosis* in patients with pulmonary, intestinal or genitourinary disease.<sup>7,14</sup> Furthermore, according to Sharma and Bhatia,<sup>15</sup> it can more rarely originate from hematogenous dissemination in childhood with subsequent infection reactivation,



Fig. 2 – Post-treatment perineal inspection.

contamination by direct contact with adjacent organs and through lymph node dissemination.<sup>2,13</sup>

The fistulizing form presenting as perianal fistula is the most common symptom of anorectal tuberculosis, which occurs in 80–91% of cases<sup>1,2</sup> with greater evidence of complex lesions (62–100%).<sup>1</sup> The ulcerated form presents as a superficial, necro-hemorrhagic granular ulceration with irregular borders and purulent secretion, and can be quite painful<sup>16,17</sup> simulating carcinoma. Furthermore, anal bleeding, anal stenosis, and systemic symptoms such as fever, anorexia and weight loss can occur.

It should be emphasized the concomitant occurrence with the pulmonary form of tuberculosis occurs in most cases.<sup>4,18</sup> According to the study by Ichihashi et al.,<sup>19</sup> which analyzed 11 cases of perianal tuberculosis, this association was verified in 9 patients (81.8%). Sultan et al.<sup>20</sup> also showed this correlation in all seven cases assessed. Furthermore, it is more prevalent in patients with immunosuppressive disorders such as HIV infection and in these cases, it becomes a definition of disease by this virus<sup>21</sup> (AIDS).

Despite the viability of different methods, early diagnosis of perianal tuberculosis remains a challenge. The methods most often used are white blood cell count, ESR, Mantoux test, serology, culture of mycobacteria, chest radiography, computed tomography and magnetic resonance imaging of the pelvis and, more recently, through genetic amplification of polymerase chain reaction, which allows a diagnosis to be attained in approximately 48 h.<sup>17,22</sup> However, the simplest and quickest method to confirm the diagnosis of this condition is the lesion biopsy with subsequent microscopic analysis, with accuracy of 73.5%.<sup>3,4</sup>

The typical histological picture shows a giant cell granuloma contiguous to an area of caseous necrosis.<sup>1,2</sup> However, this pathognomonic sign is not always a constant and therefore differential diagnoses should be considered, such as Crohn's disease, genital herpes, actinomycosis, sarcoidosis, suppurative hidradenitis, syphilis, herpes zoster, neoplasia, trauma and lymphogranuloma venereum.<sup>3,7,21</sup>

Regarding treatment, the initial form of approach is the use of a chemotherapy regimen consisting of rifampin, isoniazid, pyrazinamide and ethambutol for six months.<sup>4</sup> However, it should be preceded by the control of perineal sepsis through control of any fistulas or even through a derivative ostomy.<sup>3</sup>

Fenniche et al.<sup>6</sup> analyzed the response to pharmacological treatment of cutaneous tuberculosis and demonstrated success in all 26 cases studied after completion of drug therapy. Ghiya et al.<sup>23</sup> also found good response in their three reported cases.

## Conclusion

One should consider the diagnosis of tuberculosis in cases of perianal lesions of little specific aspect located in this region and also in situations of recurrent proctologic disorders. Especially in immunosuppressed patients, HIV-positive patients and those with HIV risk factors, anorectal biopsy should be performed early to institute adequate treatment with an impact on morbidity and mortality of patients and also as a public health measure.

## Conflicts of interest

The authors declare no conflicts of interest.

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