

Anal localization of tuberculosis, a rare extra-pulmonary form: A case report

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Abstract

Gastrointestinal localizations of tuberculosis account for approximately 1% of cases of extra-pulmonary tuberculosis, and anoperineal localizations are sporadically reported in the literature. In this article, we present a case of tuberculosis anal fistula that showed favorable evolution with medico-surgical treatment. We also discuss the diagnostic modalities and management approaches for this pathology.

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Keywords: Extra-pulmonary tuberculosis; Medico-surgical treatment; Tuberculosis anal fistula; Tuberculosis; anoperineal localizations; Tuberculosis account.

Introduction

The diagnosis of anal tuberculosis is often challenging and requires systematic investigation, particularly in endemic countries and when there is a suggestive clinical context. Histological examination of fistulectomy specimens is crucial for diagnosis [1]. Due to the rarity of this extra-pulmonary form of tuberculosis, we report a case of tuberculosis anal fistula and discuss the diagnostic modalities and management strategies based on existing literature.

Patient and observation

Patient information: A 64-year-old male with no significant medical history and no tuberculosis in his surroundings presented with symptoms suggestive of tuberculosis, including intermittent fever, especially nocturnal, anorexia, and weight loss, without any other associated signs.

Proctologic examination: The examination revealed an ulcerated-looking anal fistula with an external orifice at 8 o'clock at the root of the thigh and an internal orifice at 8 o'clock (Figure 1).

Diagnostic process: Radiography, laboratory tests, and colonoscopy results were normal.

Therapeutic intervention: The patient underwent fistulotomy plus seton placement (Figure 2). Samples were taken for routine microbiology culture, which confirmed the presence of tuberculosis.

Pathological study: Histology revealed the presence of epithelioid and giant cell granulomas (Figure 3).

Follow-up: At 8 weeks postoperatively, the seton fell off, and the patient received antibacillary treatment for a period of 9 months. The patient was followed up for 8 months after sur-



Figure 1: External orifice at 8 o'clock at the root of the thigh.



Figure 2: Post-operative appearance of the fistulotomy plus seton.

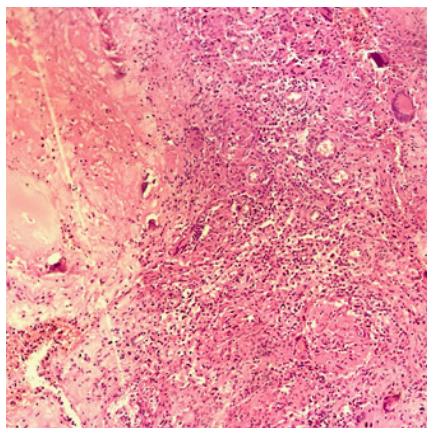


Figure 3: Epithelioid and giant cell granulomas.



Figure 4: Appearance after complete healing of the wound.

gery, with no recurrence observed, and complete healing of the wound (Figure 4).

Discussion

Perianal involvement is a rare extra-pulmonary form of tuberculosis, and most published cases are reported as case reports [2,3]. Among the reviewed case reports, males were more commonly affected than females, with the majority of cases occurring during the fourth decade of life [2,3]. Shukla et al. [4] reported that 15.6% of patients undergoing surgical repair of fistula-in-ano in a tuberculosis-endemic region were found to have tuberculosis upon histopathological examination. The incidence of tuberculosis has increased due to the onset of acquired immunodeficiency syndrome [5]. Four clinical forms of anal tuberculosis have been described: verrucous, ulcerated, lupus, and military [6]. Currently, the most common form (60% to 100% of cases) appears to be a simple or complex fistula, often presenting with an abscess at the anal margin [7]. Differentiating tuberculosis fistula from a cryptoglandular fistula is challenging, as there are no specific functional signs or preferred sites [6,8]. These long-standing fistulas are often complex and recurrent despite appropriate surgical treatment [6,8]. The tuberculin skin test remains a valuable diagnostic tool, with a positive result in 75% of cases [9]. Histological or bacteriological analysis is essential for the definitive diagnosis of anal tuberculosis. The typical histologic lesion is the presence of epithelioid and giant cell tubercles surrounding a zone of caseous necrosis, although the presence of caseation is not always consistent and can pose diagnostic challenges, particularly in cases of Crohn's disease with anoperineal involvement [7]. Diagnosis can also be achieved by direct examination (Ziehl-Nielsen stain) and culture for Koch's bacillus in anal lesions. To expedite the diagnostic process (which usually takes 3 to 4 weeks), newer techniques such as Polymerase Chain Reaction (PCR), GeneXpert, and histopathology (HPE) have been introduced. PCR-based detection of TB has shown significantly higher sensitivity compared to histopathology and GeneXpert [10]. Surgical treatment of the fistula aims to ensure good drainage of infected lesions and flattening of the fistulous tract. The approach may involve one or multiple stages depending on the location of the fistulous tract relative to the sphincter apparatus [7,11]. In regions with multi-drug resistant TB, additional antibiotics such as Streptomycin may be added to the standard four-drug antibiotic therapy regimen [12].

Declarations

Authors' contributions: NB searched PubMed, analyzed the data and wrote the manuscript. IE and AM analyzed the data and critically reviewed the manuscript. HL created the search strategy and analyzed the data. TT conceptualized the review and critically reviewed the manuscript. All authors read and approved the final manuscript.

Ethics approval: This case report was conducted in accordance with ethical principles and received approval from the University of Mohamed V Research Ethics Committee on July 10 of this year. The research followed ethical standards and guidelines, including the Declaration of Helsinki.

Consent to publication: We hereby confirm that written informed consent for the publication of the study's findings has been obtained from the participant patient involved in the research. The consent forms explicitly outline the purpose of publication and ensure the participant understanding of his contri-

bution to the study. Any identifying information related to the participant will be kept confidential, and only de-identified data will be used for publication.

Competing interests: The authors declare that they have no competing interests.

Availability of data and materials: The datasets generated and analyzed during the current study are not publicly available due to their format as images. These image datasets are provided within this article and its supplementary information files, and due to their visual nature, they cannot be uploaded to a public repository. Interested parties can access the datasets directly within the article.

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References

1. J Afr Hépatol. Gastroentérol. 2012; 6: 15-17.
2. Anorectal abscess, Fistula-in-ano, Perianal abscess, Perianal fistula. Am J Med Sci. 2016; 351(4): 427-434
3. Tai WC, Hu TH, Lee CH, et al. Ano-perianaltuberculosis: 15 years of Clinical experiences in Southern Taiwan. Colorectal. Dis. 2010; 12(7): e114-20.
4. Shukla HS, Gupta SC, Singh G, et al. Tubercular fistula inano. BrJ Surg. 1988; 75(1): 38-9.
5. Hartsein M, Leaf HL. Tuberculosis of the breast as a presenting manifestation of AIDS. Clin Infect Dis. 1992; 15: 692-3.
6. Kraemer M, Gill SS, Seow-Choen F. Tuberculous anal sepsis: report of clinical features in 20 cases. Dis Colon Rectum. 2000; 43: 1589-91.
7. Sultan S, Azria F, Bauer P, et al. An operineal tuberculosis: Diagnostic and management considerations in seven cases. Dis Colon Rectum. 2002; 45: 407-10.
8. Alyoune M, Nadir S, Merzouk M, et al. Fistules anales tuberculeuses: A propos de 13 cas. Ann Gastroenterol Hepatol. 1994; 30: 9-11.
9. Denis-Delpierre N, Merrien D, Billaud E, et al. Tuberculose extrapulmonaire dans la region centre ouest: Etude retrospective de 217 case. Presse Med. 1998; 27: 341-6.
10. Garg P, Goyal A, Yagnik VD, Dawka S, Menon GR. Diagnosis of anorectal tuberculosis by polymerase chain reaction, GeneXpert and histopathology in 1336 samples in 776 anal fistula patients. World J Gastrointest Surg. 2021; 13(4): 355-365.
11. Candela F, Serrano P, Arriero JM, et al. Perineal Disease of Tuberculous Origin. Report of a Case and Review of the Literature. Dis Colon Rect. 1999.