

Case Report of a Challenging Diagnosis of Nasal Tuberculosis

Caso Clínico de um Diagnóstico Desafiante de Tuberculose Nasal

Keywords: Antitubercular Agents/therapeutic use; Nose Diseases/drug therapy; Tuberculosis/diagnosis; Tuberculosis/drug therapy

Palavras-chave: Antituberculosos/uso terapêutico; Doenças Nasais/tratamento farmacológico; Tuberculose/diagnóstico; Tuberculose/tratamento farmacológico

Dear Editor,

The incidence of tuberculosis (TB) has been steadily declining for the past two decades. However, since the beginning of the COVID-19 pandemic, the TB incidence rate is estimated to have increased.¹

Although western Europe is considered a low TB incidence region, recent migration trends have called attention to its ongoing relevance, since ear, nose, and throat (ENT) manifestations, such as nasal and nasopharyngeal tuberculosis, are rare.²

We describe a clinical case of a 77-year-old white man presenting to the ENT clinic with a two-week history of right nasal obstruction and localized pain. Anterior rhinoscopy revealed a friable, erythematous crusting of the anterior right septal mucosa. A biopsy was done showing inflammatory exudate, ulceration, and no evidence of malignancy. The patient started oral antibiotics and corticosteroids, with limited improvement.

At re-assessment, an anterior septal friable perforation was seen, and a paranasal sinus computed tomography (CT) scan revealed thickening of the nasal vestibule and anterior nasal septum with irregularity of the right mucosa and septal perforation. Paranasal sinuses were clear and pneumatized. No bone lesions were found. Punch biopsy of the septal ulcer was repeated, confirming the ulcerative granulomatous lesion with caseating necrosis without vasculitic nor neoplastic features (Fig. 1A). No microorganisms were found.

An immune panel, a klebsiella nasal swab and an HIV test were negative.

At this point, a review of the patient's medical history disclosed an episode of ganglionic tuberculosis 30 years ago. The patient denied fever, weight loss or night sweats and chest CT was normal. The histopathologic review of the tissue sample taken previously was required and staining with Ziehl-Neelsen was positive for acid-alcohol resistant bacilli. The polymerase chain reaction (PCR) and culture test were positive for *Mycobacterium tuberculosis* (Fig. 1B).

The patient started antitubercular therapy with isoniazid, rifampin, ethambutol and pyrazinamide for four months, followed by two months of isoniazid and rifampin.

At the first- evaluation one month following treatment, the patient was clinically improved. Anterior septal perforation remained, which resulted in nasal tip ptosis.

Nasal tuberculosis is a rare entity, and clinical presentation with ulcerative and destructive features can mimic malignancy, emphasizing not only the need for biopsy, but also routine microbiology and appropriate culture tests, so that infectious causes are not overlooked, and treatment is not delayed.

The diagnosis is difficult, especially because it requires a high diagnostic suspicion and histological confirmation is hampered by lengthy and false negative results. In fact, smears of acid-fast bacilli and cultures tend to be negative in nasal tuberculosis.

Given the recent reversal in TB prevalence trends worldwide, physicians should bear in mind that, even though nasal tuberculosis is a challenging diagnosis, new diagnostic tools such as PCR or interferon- γ assay can be extremely useful to achieve prompt results.³

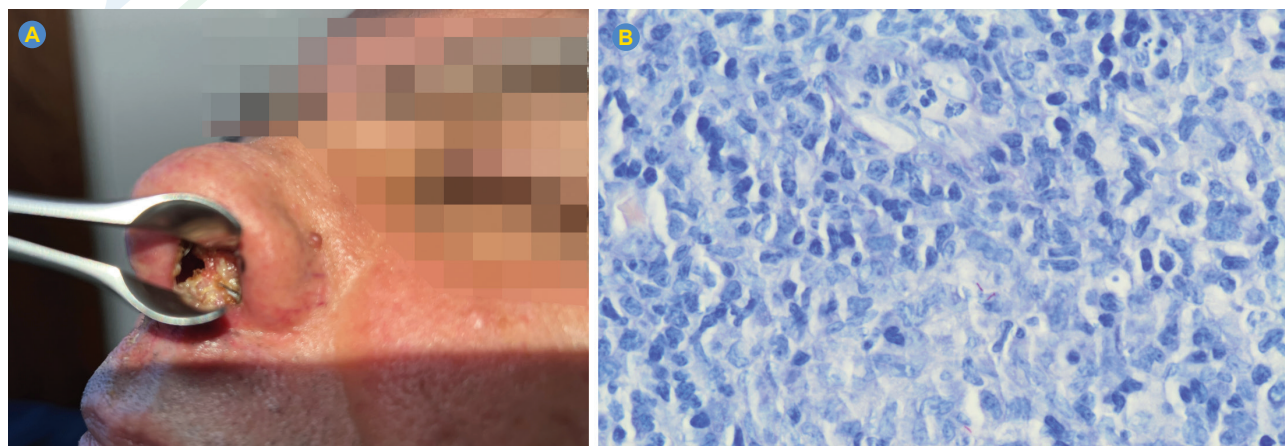


Figure 1 – (A) Anterior rhinoscopy revealing septal lesion; (B) Staining with Ziehl-Neelsen revealing acid-alcohol resistant bacilli (original magnification x600)

AUTHOR CONTRIBUTIONS

JID: Conception and writing of the manuscript.
ANP: Writing and critical review of the manuscript.
FSV: Data collection.
SSC, LM: Critical review of the manuscript.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

FUNDING SOURCES

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

1. World Health Organization. Global tuberculosis report 2022. Geneva: WHO; 2022.
2. Butt AA. Nasal tuberculosis in the 20th century. Am J Med Sci. 1997;313:332-5.
3. Masterson L, Srouji I, Kent R, Bath AP. Nasal tuberculosis-an update of current clinical and laboratory investigation. J Laryngol Otol. 2011;125:210-3.

Joana Ida DIAS^{✉1}, Ana NÓBREGA PINTO¹, Francisco SOUSA VIEIRA², Luís MEIRELES¹

1. Department of Otorhinolaryngology and Head and Neck Surgery, Centro Hospitalar Universitário do Porto. Porto, Portugal.

2. Department of Clinical Pathology, Centro Hospitalar Universitário do Porto. Porto, Portugal.

✉ **Autor correspondente:** Joana Ida Dias. joanaidasousadias@gmail.com

Recebido/Received: 12/01/2023 - **Aceite/Accepted:** 04/05/2023 - **Publicado Online/Published Online:** 12/06/2023

Copyright © Ordem dos Médicos 2023

<https://doi.org/10.20344/amp.19614>

