

# An Uncommon Cause of Chronic Nonhealing Perianal Ulcer

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## ABSTRACT

Chronic or persistent, nonhealing perianal ulcers could be due to an infection, inflammation, or a neoplasm. Perianal ulcer as the initial presentation of tuberculosis is rare. Tuberculosis cutis orificialis is a rare ulcerative form of cutaneous tuberculosis that affects the oral cavity, anal canal, or perianal region. A high index of suspicion for tuberculosis as the cause of persistent perianal ulcer is required for early diagnosis and treatment.

**KEYWORDS:** non-healing ulcer; perianal; tuberculosis

## INTRODUCTION

Chronic or persistent, nonhealing perianal ulcers could be due to infection, inflammation, or neoplasm. Tuberculosis cutis orificialis (TCO) is a form of cutaneous tuberculosis (TB) that involves the periorificial region and accounts for 2% of cases.<sup>1</sup> The most common site of involvement is the tongue. Other sites that can be involved are the palate, buccal mucosa, lips, and anal or perianal region.<sup>1,2</sup> We report a rare case of nonhealing perianal ulcer in an immunocompetent middle-aged man, secondary to TB.

## CASE REPORT

A 52-year-old man presented with a 1-year-old history of a painful perianal ulcer, which started as a small nodule that ulcerated and progressively increased in size. There were no similar lesions elsewhere in the skin or mucosa. He had significant loss of appetite and weight in the past 6 months. He did not complain of diarrhea, abdominal pain, or a mass. There was no fever, cough, night sweats, joint pains, or redness of the eye, nor any comorbidities, addictions, intravenous drug abuse, or high-risk sexual behavior. He had no history of pulmonary TB in the past or contact with TB in the household. On examination, he had a large irregular perianal ulcer measuring 10 × 6 cm extending around the anal opening from the 2 o'clock to 6 o'clock position. The base of the ulcer showed pinkish granulation tissue with a few deeper areas covered with slough (Figure 1). Bilateral inguinal lymph nodes were palpable, discrete, and firm with a maximum diameter of 2 cm. His laboratory test results showed hemoglobin 14 g%, total leukocyte count 6,040, platelet count 445,000, erythrocyte sedimentation rate 73 mm/hr, total protein 8 g, serum albumin 3.6 g, serum creatinine 0.3 mg/dL, and fasting blood glucose 102 mg/dL. Serology for retrovirus and syphilis was negative. Biopsy of the ulcer performed elsewhere 2 months back showed a noncaseating granuloma. He underwent a repeat biopsy that showed an acanthotic stratified squamous epithelium with a dense acute-on-chronic inflammatory infiltrate with foci of granuloma and Langhan-type giant cells in the subepithelium (Figure 2). Staining to look for acid-fast bacilli was negative. Fine-needle aspiration cytology from the right inguinal lymph node showed a well-formed epithelioid granuloma in the background of polymorphous lymphoid cells, and staining for acid-fast bacilli was negative (Figure 3). A culture and cartridge-based nucleic acid amplification test of the lymph node aspirate and skin biopsy were negative for mycobacterium tuberculosis. Computed tomography enterography and colonoscopy were normal. Chest x-ray and thoracic computed tomography showed a right lung cavitory lesion with bilateral diffuse reticulonodular opacities (Figure 4). The cartridge-based nucleic acid amplification test of the induced sputum was positive for mycobacterium tuberculosis.



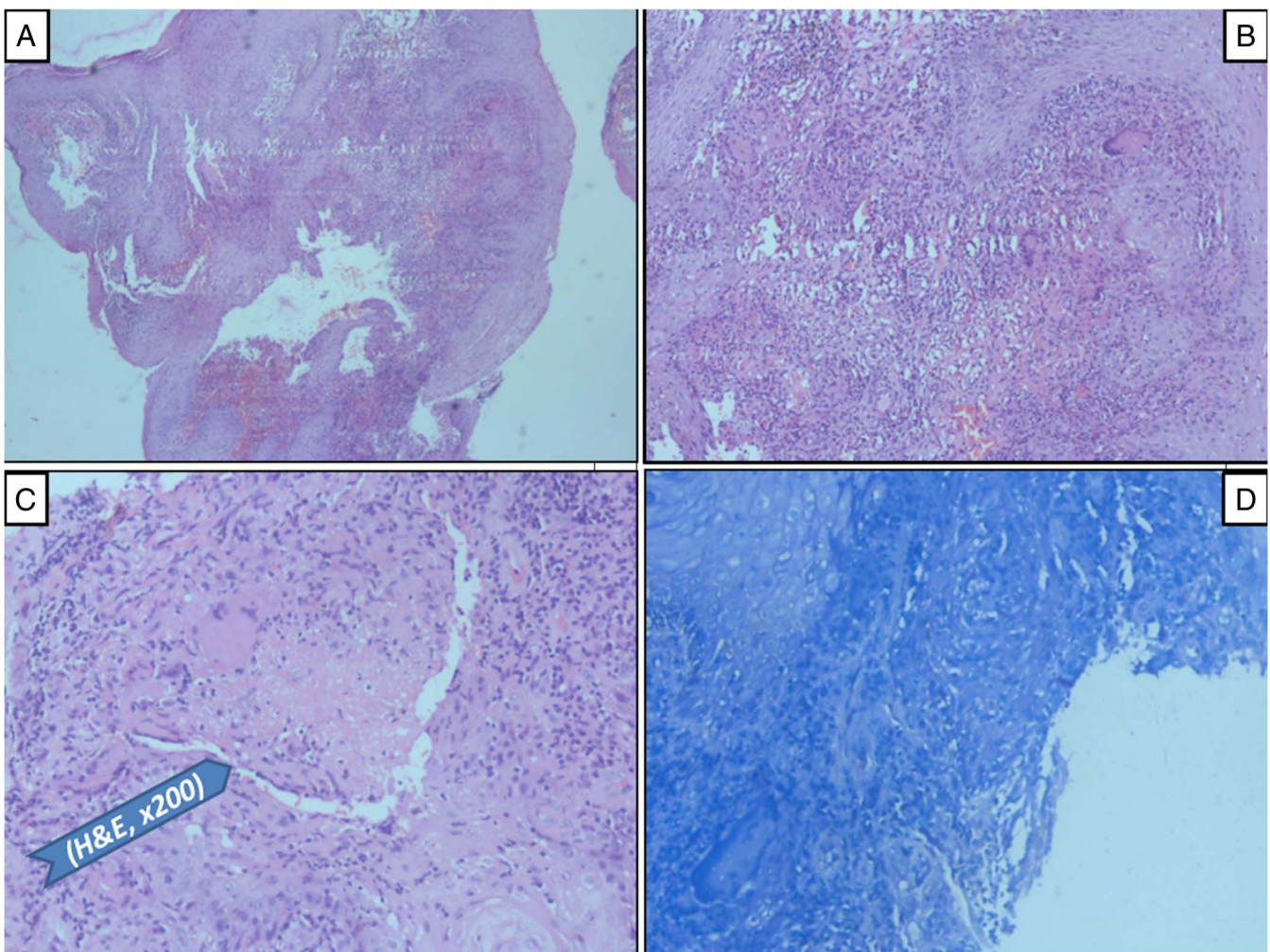
**Figure 1.** Perianal examination shows a large ulcer measuring 10 × 6 cm around the anal opening.

The ulcer healed after 1 month of starting antituberculous therapy consisting of isoniazid, rifampicin, ethambutol, and pyrazinamide (Figure 5).

## DISCUSSION

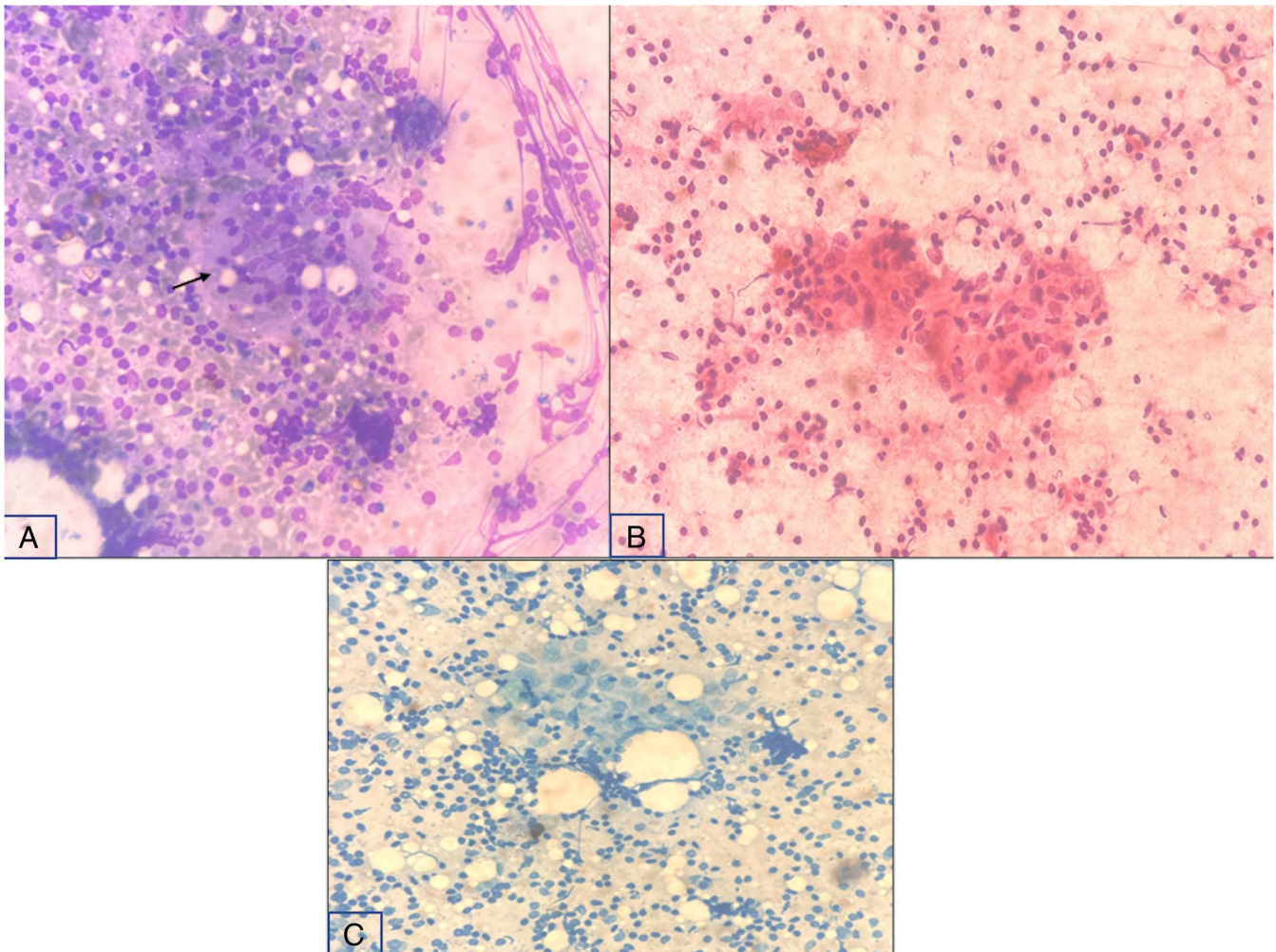
TCO is a rare ulcerative form of cutaneous TB. The lesions are most commonly located in the oral, genital, or anal mucosa. They are often associated with pulmonary or intestinal TB. The most probable cause of skin infection is autoinoculation of the mycobacterium in the perianal region from the pulmonary, intestinal, or genitourinary tract. Other modes of infection result from hematogenous or lymphatic spread.<sup>1-3</sup> TCO begins as granular nodules that break to form small groups of ulcers. These ulcers coalesce and form a large painful ulcer with undermined edges and pale granulation tissue at its base.<sup>4</sup>

The diagnosis and treatment of perianal TB is often delayed because it can be mistaken for other more common perianal conditions. The differentials for a perianal ulcer include infections such as genital herpes, lymphogranuloma venereum, and syphilis; Crohn's disease; pyoderma gangrenosum; sarcoidosis; and neoplasms.<sup>2</sup> The diagnosis of TCO is by demonstration of bacilli in biopsy, histopathology, or cultivation of the tuberculous bacilli in a culture media. The typical feature would be



**Figure 2.** Wedge biopsy of perianal ulcer showing (A) acanthotic stratified squamous epithelium, (B) foci of granuloma and chronic inflammatory cells, (C) foci of caseous necrosis, (D) acid fast staining negative for tubercle bacilli.



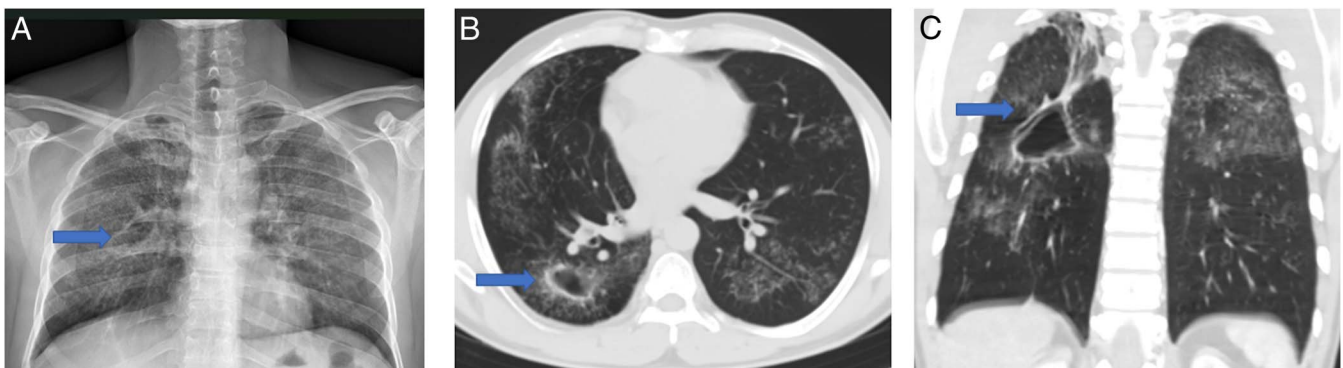


**Figure 3.** FNAC of inguinal node showing (A) well formed epithelioid granuloma with polymorphous lymphoid cells, (B) pap stain highlighting granuloma, (C) acid fast stain negative for tubercle bacilli.

epithelioid and giant cell granuloma around an area of caseous necrosis on histology. The differentiation of perianal TB from Crohn's disease may be difficult in the absence of caseation or direct demonstration of the bacillus.<sup>2,4,5</sup> Clinical response to therapy might also support the diagnosis. The treatment of

TCO is medical and consists of antituberculous drugs. The ulcers usually respond within few weeks of therapy.

Perianal ulcer as the initial presentation of TB is rare. The demonstration of mycobacteria in the ulcer may sometimes



**Figure 4.** Chest X-ray (A) and CT scan chest (B and C) showing right lung cavitary lesion with bilateral diffuse reticulonodular opacities.



**Figure 5.** Status of the perianal ulcer after one month of anti tubercular therapy.

be difficult and challenging as seen in our case. Hence, a high index of suspicion for TB as the cause for persistent non-healing perianal ulcer together with thorough search for TB at extracutaneous locations is required for early diagnosis and treatment.

## DISCLOSURES

**Author contributions:** All authors contributed to the conception of the work; acquisition, analysis, or interpretation of the data; drafting the work or revising it critically for important

intellectual content; and final approval of the manuscript. P. Mohan is the article guarantor.

**Financial disclosure:** None to report.

**Informed consent** was obtained for this case report.

**Prior presentation:** This case report was presented at the Tamil Nadu ISG Mid-Term Conference; September 24, 2022; CMC Vellore, India.

Received December 19, 2022; Accepted March 16, 2023

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