

## Scrofuloderma Case Report

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### ABSTRACT

Scrofuloderma is the most common clinical type of chronic subcutaneous tuberculosis in our environment. It is mainly caused by *Mycobacterium tuberculosis*, which is characterized by producing cold abscesses and secondary liquefaction of the adjacent skin; this results in scrofuloderma: a cutaneous lesion that covers another tuberculous process, frequently lymphadenopathy. Furthermore, scrofuloderma manifests itself with frequent fistulization, which can last for months or years, if an accurate and timely diagnosis and treatment are not carried out, it may remit and go unnoticed by the patient or health personnel. Hereby we present the case of a patient with scrofuloderma treated in our hospital unit.

**Keywords:** Scrofuloderma; Cutaneous TB; Tuberculosis; Extrapulmonary TB

### Introduction

Cutaneous Tuberculosis represents less than 2% of all cases reported by M. Tuberculosis. Scrofuloderma and Lupus vulgaris are the most common clinical forms of cutaneous TB worldwide; this is associated with a moderate resistance of the body's innate immunity and is a chronic condition; It is caused mainly by *M. tuberculosis* variety *Hominis*, and to a lesser extent by *M. Bovis*<sup>1,2</sup>. It can affect any group age, with higher prevalence in children, young adults and elderly<sup>3</sup>.

The present case report is of clinical importance as being a pathology of chronic evolution, it can go unnoticed, or underdiagnosed in inexperienced clinical eyes, and it is usually treated as a simple bacterial abscess recurrently, and without adequate follow-up. clinical. This clinical case has presented informed consent for the publication of its content and iconography, maintaining confidentiality.

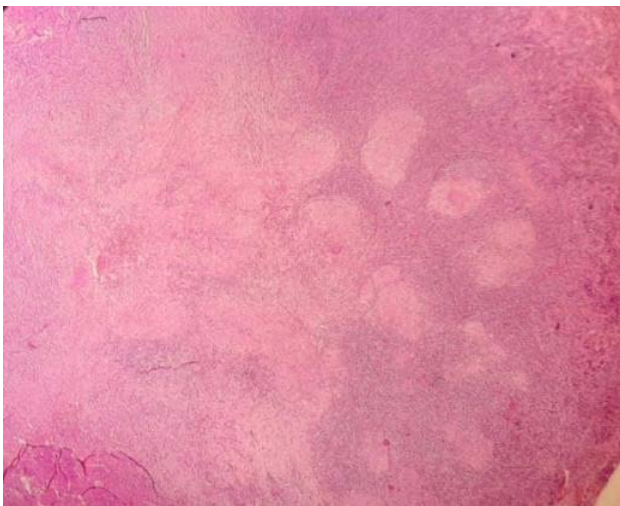
### Presentation of The Clinical Case

We present the case of a 25-year-old female patient, born in the Province of Cotopaxi and resident in the City of Quito, Ecuador. She did not have comorbidities or significant family medical history. She reported a right supraclavicular cutaneous abscess for 5 years, which was drained without any complications; she did not have any extension studies (**Figure 1**).

Three months ago she presented a right subclavicular mass which was treated as a recurrent soft tissue bacterial abscess by medical personnel on several occasions; she received multiple antibiotic regimens, without improvement. On physical examination, we noted a 4-cm erythematoviolaceous rubbery plaque, slightly painful, with occasional serohematic fluid leakage, as well as surrounding longitudinal scars. Furthermore, she presented a painful 1 cm lymph node in the right axilla (**Figure 2**).



**Figure 1:** Histopathology of the cervical lymph node with HE staining shows multiple granulomas of different sizes with a nodular arrangement. Courtesy of Dr. Pedro León, pathologist.



**Figure 2:** With a higher magnification lens, epithelioid histiocyte granulomas with the presence of multinucleated giant cells are evident. Courtesy of Dr. Pedro León, pathologist.

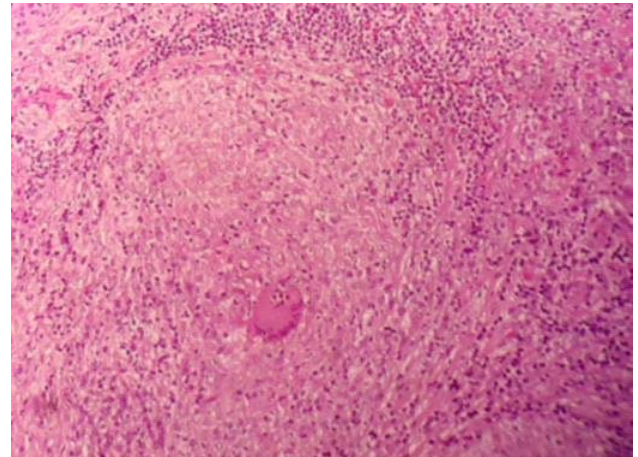
Among the important laboratory and imaging examinations, A chest x-ray reported multiple microcalcifications throughout the lung field; In addition, a soft tissue ultrasound was performed demonstrating a soft tissue mass of 29 x 6 x 18 mm with a volume of 1.7 ml, and the Doppler showed increased vascularity in relation to an abscess in formation, along with 2 thickened lymph nodes of 6 and 17 mm. A rapid TB detection test (GeneXpert MTB/RIF ULTRA) of a thoracic and axillary lymph node biopsy turned reactive (**Figure 3**).

A simple chest tomography showed an increase in the size of the cervical, supraclavicular, subclavicular and bilateral axillary lymph nodes; No pathological changes were identified at the lung level.

Given the clinical diagnosis and positive PCR for cutaneous TB, a Isoniazid, rifampin, pyrazinamide, ethambutol anti-tuberculosis regime was started, after one month of monitoring the patient with improvement in clinical evolution.

The histology result of the lymph node shows multiple granulomas of different sizes with a nodular arrangement

characterized by epithelioid histiocytes with the presence of multinucleated giant cells of Langerhans-type morphology and occasional central necrosis; With Ziehl Neelsen staining, occasional rods morphologically compatible with acid-fast bacilli compatible with lymph node tuberculosis were identified.



**Figure 3:** Ziehl Neelsen stain identifies rods that are morphologically compatible with acid-fast bacilli (arrow). Courtesy of Dr. Pedro León, pathologist.

There were no clinical criteria to initiate isoniazid preventive treatment (IPT) for the patient's close contacts.

## Discussion

In Ecuador during 2021, there is a report of a total of 6,330 new cases of TB, of which 5,973 patients presented tuberculosis and 357 cases of drug-resistant tuberculosis<sup>4</sup>. The incidence rate of tuberculosis in Ecuador in that year was 48 for every 100,000 person<sup>5,6</sup>. During 2018, extrapulmonary TB cases constituted 18.46% of total TB cases<sup>7</sup>.

Within the clinical presentation, scrofuloderma manifests as an indurated erythematous-violet nodule or gum on the skin, which is covered by another tuberculous process (infection due to contiguity, although it can also occur due to systemic contamination), usually from a lymph node. There are other locations from which the nodule can extend such as pleura, abdomen, tract genitourinary, joints, bones and meninge<sup>1,2</sup>. The nodule or gum progressively grows, abscesses and then opens to the outside through fistulas that release serous, purulent or caseous material, producing induration of the adjacent skin area, nodules, gummas and cold abscesses; Very frequently it heals and involutes, repeating the cycle every certain period of time, leaving scars<sup>8,9</sup>. The most frequently affected places are the neck, chest wall, armpits and inguinal region<sup>1</sup>.

The current recommendation according to the WHO is the use of an automated PCR test such as the GeneXpert® MTB/RIF ULTRA as an initial test for the diagnosis of pulmonary or extrapulmonary TB and/or MDR-TB, which is obtained in two hours<sup>10</sup>. The Gold standard test for diagnosis remains bacteriological examination by tissue culture or biopsy. Other tests of great diagnostic value are the observation of bacilli using Ziehl Neelsen staining<sup>8,9</sup>.

The standard antifungal treatment for cutaneous tuberculosis in Ecuador is the same as in the pulmonary forms, which consists of an initial phase of four drugs isoniazid, rifampicin, pyrazinamide and ethambutol (2HRZE), for two months, followed by the consolidation phase of four months of use of isoniazid and rifampicin (4HR).

## Conclusions

Scrofuloderma, like the rest of cutaneous TB, is a rare entity that can go unnoticed by the patient or due to a lack of expertise on the part of the healthcare professional, since it is a slowly evolving pathology and can often be found latent, until moment that triggers symptoms and puts the patient on alert, in which case he underwent multiple antibiotic treatment regimens without resolution and relapsed twice in a period of 5 years. The patient did not report pulmonary symptoms or having had close contact or being in overcrowded conditions. There is no doubt that active surveillance must be carried out in cases of cutaneous TB to make an accurate and timely diagnosis, avoiding unnecessary treatments due to the lack of diagnostic suspicion.

## References

1. Ruiz-Márquez EA, Navarrete-Solís J, González-Cabello D. Scrofuloderma: Case report. *Cosmotic, Medical and Surgical Dermatology* 2020;18(1):28-30.
2. Franco-Paredes C, Marcos LA, Henao-Martínez AF, et al. Cutaneous mycobacterial infections. *Clin microbiol Rev* 2018;32(1).
3. Concha M, Fich F, Rabagliati R, et al. Tuberculosis cutánea: reporte de dos casos y revisión de la literatura. *Rev Chile Infect* 2011;28(3):262-268.
4. de Brito Vieite CMA. Health and Environment Ranking: A study of the countries at the iberoamerican region and its challenges ahead. *RISUS* 2019;10(1):143-152.
5. Silva G, Perez F, Marín, D. Tuberculosis en niños y adolescentes en Ecuador: análisis de la notificación, las características de la enfermedad y el resultado del tratamiento. *Rev Panam Salud Publica* 2019;43.
6. Cantos YYQ, Choez AAL, Andrade PVZ, Zambrano JRS. Diagnóstico y Características Clínicas de la Tuberculosis Cutánea Asociada a Infección por VIH. *Polo del Conocimiento: Revista científico-profesional* 2022;7(2):18.
7. Debrouwere I, Álvarez Vera PC, Pavón Benítez XDC, Rosero Arboleda CK, Prinzie P, Lebeer J. Lessons from disability counting in ecuador, with a contribution from primary health care. *International Journal of Environmental Research and Public Health* 2021;18(10):5103.
8. Correia MIG. Tuberculosis cutánea: revisión de la literatura. *Dermatología Venezolana* 2019;57(1).
9. World Health Organization. WHO consolidated guidelines on tuberculosis. Module 3: Diagnosis-Rapid diagnostics for tuberculosis detection. World Health Organization. 2020.
10. Laxminarayan R. Economic benefit of tuberculosis control. *World Bank Publications* 2007; 4295.