

The Great Imitator of the Groin: Scrofuloderma Mimicking Hidradenitis Suppurativa - A Diagnostic Challenge

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Abstract: *Background:* Scrofuloderma is a form of cutaneous tuberculosis caused by direct extension from underlying tuberculous lymphadenitis. Inguinal involvement is uncommon and may mimic Hidradenitis suppurativa, leading to diagnostic delay. *Objective:* To describe a case of inguinal scrofuloderma clinically masquerading as hidradenitis suppurativa and highlight distinguishing features. *Methodology:* A detailed clinical evaluation, laboratory investigations, imaging, microbiological testing, and histopathological examination were performed. *Results:* A 24-year-old Female presented with chronic recurrent discharging sinuses in the right inguinal region for 8 months. Initially treated as hidradenitis suppurativa, further evaluation revealed acid-fast bacilli on Ziehl–Neelsen staining and caseating granulomas on biopsy. CBNAAT confirmed *Mycobacterium tuberculosis*. The patient responded dramatically to standard antitubercular therapy. *Conclusion:* Scrofuloderma should be considered in chronic groin sinuses, especially in tuberculosis-endemic regions. Early biopsy and microbiological confirmation prevent misdiagnosis and inappropriate immunosuppressive therapy.

Keywords: Scrofuloderma, Cutaneous tuberculosis, Inguinal sinus, Hidradenitis suppurativa mimicry, Tuberculous lymphadenitis

1. Introduction

Cutaneous tuberculosis represents a small fraction of extrapulmonary tuberculosis cases. Scrofuloderma results from contiguous spread of infection from an underlying tuberculous focus- most commonly lymph nodes- to the overlying skin. Although cervical lymph nodes are typically involved, axillary and inguinal nodes may also be affected.

Hidradenitis suppurativa (HS) is a chronic inflammatory disorder of apocrine gland-bearing areas characterized by painful nodules, abscesses, sinus tract formation, and scarring. Clinical overlap between HS and scrofuloderma in the groin may result in delayed diagnosis, particularly in endemic regions.

This case highlights the importance of maintaining a high index of suspicion for cutaneous tuberculosis in chronic non-healing groin lesions.

2. Methodology

This study was conducted as a single-patient observational case report at a tertiary care teaching hospital after obtaining informed written consent and institutional ethical approval. A detailed clinical history was recorded, including duration of lesions, associated systemic symptoms, prior treatments, and risk factors. Comprehensive dermatological and regional lymph node examinations were performed. Laboratory investigations included complete blood count, erythrocyte sedimentation rate, and Mantoux test. Microbiological evaluation of pus discharge was carried out using Gram staining and Ziehl–Neelsen staining for acid-fast bacilli, followed by Cartridge-Based Nucleic Acid Amplification Test (CBNAAT) for detection of *Mycobacterium tuberculosis* and rifampicin resistance. Ultrasonography of the inguinal region was performed to assess underlying lymphadenopathy and sinus tract formation, and chest radiography was done to rule out pulmonary involvement. A skin biopsy was obtained from the margin of a sinus tract for histopathological examination using hematoxylin and eosin staining to identify

granulomatous inflammation and caseation. All findings were analyzed descriptively to establish the final diagnosis.



Investigative Findings

- Hemoglobin: 10.2 g/dL
- ESR: 65 mm/hr
- Mantoux test: 18 mm induration
- Ziehl–Neelsen stain: Acid-fast bacilli detected
- CBNAAT: *Mycobacterium tuberculosis* (rifampicin-sensitive)
- Ultrasonography: Necrotic inguinal lymph nodes with sinus formation
- Histopathology: Caseating granulomas with epithelioid cells and Langhans giant cells. Dermis features: The dermis typically shows tuberculoid granulomas. Granuloma characteristics: These granulomas often have central caseation and abscess formation. As shown in image [1]. These findings confirmed scrofuloderma.

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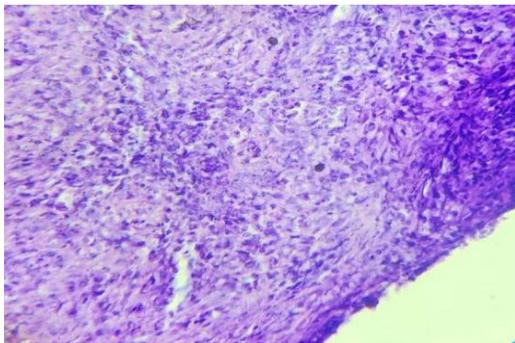


Image 1: Caseating granulomas with epithelioid cells and Langhans giant cells.

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Management and Outcome

The patient was started on standard 6-month antitubercular therapy:

- Intensive phase (2 months): Isoniazid, Rifampicin, Pyrazinamide, Ethambutol
- Continuation phase (4 months): Isoniazid, Rifampicin

Clinical improvement was noted within 4 weeks. Complete healing occurred by 3 months with residual scarring. No recurrence was observed at 12-month follow-up.

3. Discussion

Scrofuloderma can be differentiated from Hidradenitis suppurativa by several important clinical and pathological features. Constitutional symptoms such as low-grade fever, weight loss, and malaise are commonly seen in scrofuloderma but are rare in hidradenitis suppurativa. Matted underlying lymph nodes are typically present in scrofuloderma due to tuberculous lymphadenitis, whereas they are absent in hidradenitis suppurativa. Histopathologically, scrofuloderma demonstrates caseating granulomas, a hallmark of tuberculosis, while such granulomas are not observed in hidradenitis suppurativa. Microbiological examination in scrofuloderma may reveal acid-fast bacilli (AFB positivity), which are absent in hidradenitis suppurativa. Furthermore, patients with scrofuloderma show a dramatic clinical response to antitubercular therapy (ATT), whereas hidradenitis suppurativa does not respond to ATT and instead requires anti-inflammatory, immunomodulatory, or surgical management. Misdiagnosis may result in inappropriate immunosuppressive therapy, potentially worsening underlying tuberculosis.

4. Conclusion

Scrofuloderma can closely mimic Hidradenitis suppurativa in the inguinal region. Chronic groin sinuses with systemic symptoms should prompt evaluation for cutaneous tuberculosis, particularly in endemic areas. Early biopsy and microbiological confirmation are essential for appropriate management and favorable outcomes.

References

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