

CASE REPORT: A BONE DEEP INVESTIGATION

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INTRODUCTION

A 60-year-old woman, previously healthy, presents to hospital with fatigue, right buttock pain, and a non-pruritic grey-violaceous rash on both legs.

No past medical history, no medications, no family history.



3 days non-pruritic grey-violaceous rash with small mobile masses on both legs

ROS significant for 3 weeks right buttock pain

INITIAL LABS

Bloodwork showed leukocytosis with neutrophilia and eosinophilia, markedly elevated inflammatory markers, and acute kidney injury.

- Hgb 94, **WBC 19.4** (neutrophilia & eosinophilia), Plt 284
- **CRP 181, ESR 96, Ferritin 1148**
- Haptoglobin, LDH, Bilirubin, and reticulocytes WNL
- **Cr 134**, electrolytes and extended lytes WNL
- **Urinalysis – proteinuria**

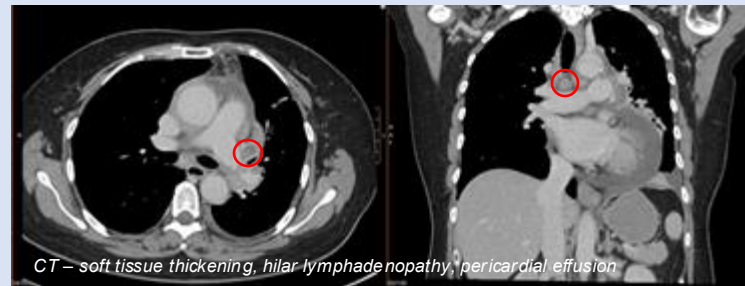
EXTENDED WORKUP

MALIGNANCY: SPEP, Bence Jones, flow cytometry negative

AUTOIMMUNE: ANA, ANCA, C3/4, RF, ENA, APLA, anti-Sm, anti-GBM, anti-dsDNA negative

INFECTIOUS: blood cultures, hepatitises, HIV, strongyloides, skin tuberculosis (TB) test positive but induced sputum negative

OTHER INVESTIGATIONS

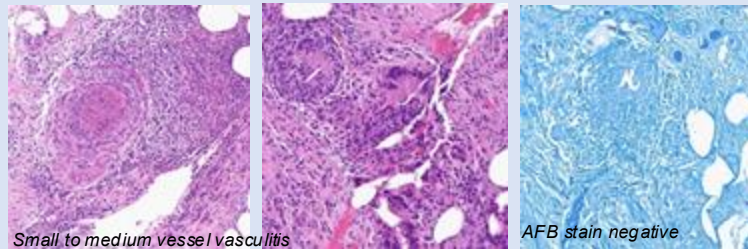


CT – soft tissue thickening, hilar lymphadenopathy, pericardial effusion



MRI – S1 vertebral body lesion

Computed tomography scans revealed prominent lymphadenopathy, a pericardial effusion, a left sided pleural effusion, and a lesion in the S1 vertebral body.



Small to medium vessel vasculitis

AFB stain negative

Biopsies of the rash supported a neutrophilic vasculitis, however serum markers of vasculitis, cryoglobulinemia, and systemic lupus erythematosus were negative.

The Diagnosis:

Core biopsy of the sacral lesion revealed inflammatory soft tissue with lymphoplasmacytic cells and scattered neutrophils. Biopsy was negative for malignancy. AFB stain was negative.

Sacral lesion samples were sent to PHL and eventually reported **AFB positive** on microscopy and culture positive for *Mycobacterium tuberculosis* complex, making a diagnosis of disseminated TB.

TEACHING POINTS

- **Extrapulmonary TB can present with nonspecific symptoms and findings requiring a high degree of suspicion** based on the history, physical exam, and initial laboratory and radiographic investigations.
- Diagnosing extrapulmonary TB requires microbiological testing. AFB smear microscopy, mycobacterial culture, nucleic acid amplification testing, histologic testing, and genotyping for drug resistance should be performed with cell count, chemistry, and adenosine deaminase analyzed in fluid specimens.
- Confirmatory testing requires a microbiologic diagnosis, and treatment should be under the purview of specialist care.

LEARNING OBJECTIVES

1. Develop an approach to undifferentiated lymphadenopathy.
2. Apply the principles of diagnosis and management of tuberculosis.

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Conflict of Interest Summary

A BONE DEEP INVESTIGATION Presented by NICOLE YAN Evidence of Conflict of Financial Interest

	Co-author	Conflict disclosures
1	Nicole Yan	No conflicts to disclose
2	Abdullah Malik	No conflicts to disclose
3	Zahra Merali	No conflicts to disclose