

From Backache to Breakthrough: Treatment of a Mysterious Spinal Lesion with Ustekinumab

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BACKGROUND

Chronic Nonbacterial Osteomyelitis is a rare inflammatory disorder that causes destructive lesions in the vertebrae, pelvis, and long bones

Pathophysiology: Poorly understood but is thought to involve immune mediated mechanisms and may have a genetic predisposition

INTRODUCTION

A 14-year-old with Crohn's disease presented to clinic with two months of lower back pain and hematochezia after stopping Infliximab

Physical Exam

- Sacral tenderness, Diffuse erythematous skin lesions, Bilateral lower extremity weakness

Initial Findings: MRI revealed T2 hyperintense mass at S4, suggestive of osteomyelitis

Hospital Course

- Failed IV antibiotic treatment course
- Multiple IR guided biopsies ruled out infection and malignancy
- Persistent pain led to a left L5-S1 laminotomy and microdiscectomy
 - Pathology confirmed chronic inflammation without microorganisms
- Ustekinumab was initiated for Crohn's disease and showed rapid improvement in both pain and mobility

FINDINGS



Figure 1 & 2 Lumbar T1 MRI: (left) Pre-treatment - Vertebral flattening along S1 superior plate with abnormal marrow enhancement. Soft tissue abnormality from L5-S1.
(right) Post-treatment - Reduction in sacral canal enhancement and decreased osseous involvement at S1.

DISCUSSION

Diagnostic challenges: CNO is frequently misdiagnosed due to similarity with infectious osteomyelitis and other bony pathology including malignancy

- MRI may not distinguish CNO from other pathologies
- Biopsy is often needed to exclude malignancy resulting in invasive workups
- Misdiagnosis can result in inappropriate treatment including prolonged courses of antibiotics which are ineffective for CNO

CONCLUSION

Increased awareness of CNO in patients with musculoskeletal pain and multisystem involvement is important to facilitate prompt diagnosis and limit invasive diagnostic testing

This case demonstrates the successful treatment of CNO with Ustekinumab, suggesting biologics may play a critical role in managing refractory CNO, particularly in patients with associated Irritable Bowel Disease

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