



Images In Medicine

Spinal Epidural Abscess

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INTRODUCTION

Spinal epidural abscesses (SEA) can have devastating consequences if they are not promptly diagnosed and treated¹. We present an illustrative case of advanced cervical epidural abscess in a patient with multiple emergency department visits in whom the diagnosis was not initially recognized.

CASE PRESENTATION

A 42 year old woman presented with 4 weeks of subjective fevers, intermittent chills, severe headaches, and worsening left-sided neck pain. On two prior emergency department visits, she was diagnosed with nonspecific musculoskeletal pain and torticollis, and discharged home with analgesics and muscle relaxants. On the day of admission, she was afebrile, confused, and unable to fully open her mouth. Her head was tilted to the left, and her neck range of motion was severely restricted. Motor strength and deep tendon reflexes were diminished in her bilateral lower extremities and in her left upper extremity.

Her WBC was $25.6 \times 10^3/\mu\text{L}$. A lumbar puncture showed 140 WBCs/mm³ with 80% neutrophils, glucose of 195 mg/dL, and protein of 6,029 mg/dL, suggesting a parameningeal abscess with secondary spinal fluid block. Cervical spine MRI showed a large retropharyngeal abscess extending from the posterior oropharynx to C4 (Figure A), an epidural abscess extending from C1 to C3 with some displacement of the spinal cord, and abnormal cord signal from C6 to T1

consistent with myelitis (Figure B). Multiple blood cultures grew methicillin-resistant *Staphylococcus aureus* (MRSA). The patient and her family refused neurosurgical intervention, and she was treated with 8 weeks of parenteral antibiotics. At discharge, she was ambulatory with assistance, and had



Figure B. The white arrow represents epidural abscess and spinal cord compression.



Figure A. The white arrow represents a large retropharyngeal abscess.



Figure C. Follow up MRI done three months later showing the complete resolution of the retropharyngeal abscess, epidural abscess and myelitis.

residual upper extremity weakness. A follow up neurological exam and a repeat spinal MRI (Figure C) were both normal within three months.

DISCUSSION

The classic triad of fever, back pain, and neurological abnormalities is rarely present at the time of the first medical evaluation of SEA, underscoring the need for a high index of suspicion for this rare syndrome.¹ Gadolinium-enhanced magnetic resonance imaging is the diagnostic modality of choice to confirm the presence and determine the location of the abscess.² Our patient's ultimate recovery in the absence of surgery is consistent with previous retrospective studies showing similar outcomes with medical conservative approaches versus surgical interventions.³ Nevertheless, in the absence of more solid prospective clinical trial data, emergent surgical decompression and debridement, followed by long-term antimicrobial therapy remains the treatment of choice.

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Disclosure of financial interests

The authors and or spouse/significant other have no financial interest to disclose.

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