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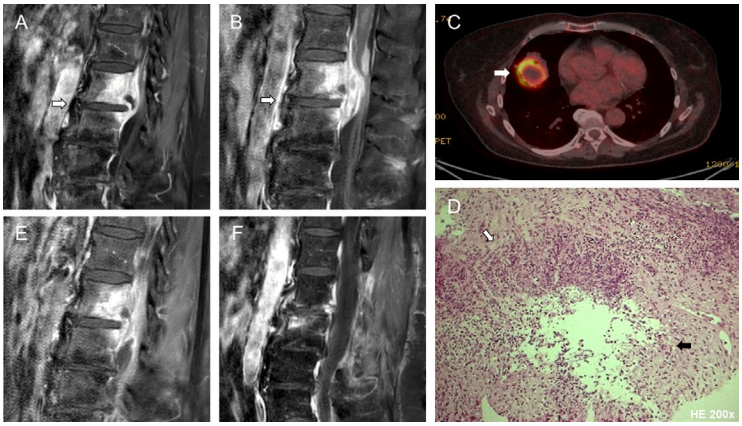
Clinical Images: Spondylitis as a rare manifestation of granulomatosis with polyangiitis



The patient, a 62-year old woman who had a known disc herniation in 2005, was admitted to the tertiary care center for lumbar spondylitis (at L2–L3) with epidural involvement seen on magnetic resonance imaging (MRI) (**A**). An infectious cause was suspected, and with empirical antibiotic treatment, clinical and imaging features improved. Three weeks after finishing antibiotic treatment, the patient was readmitted due to increasing pain. MRI showed progressive spondylitis with epidural abscess formation (**B**). Furthermore, the radiologist noted the intact intervertebral L2–L3 disc (**arrows** in **A** and **B**), which is considered a typical finding for tuberculous spondylitis (1). Fluorodeoxyglucose–positron emission tomography/computed tomography revealed a cavitating lung lesion (**arrow** in **C**). Blood, lung, and tissue cultures, polymerase chain reaction, tuberculosis (TB) skin test, and interferon-γ release test results were negative. Tissue biopsy at L2–L3 showed early necrotizing granulomatous inflammation with abundant infiltration of neutrophils (**white arrow** in **D**) and histiocytes (**black arrow** in **D**). Based on these findings, TB treatment was preemptively initiated while mycobacterial cultures were still pending. The patient's condition appeared to stabilize, but 3 weeks later she was readmitted with peripheral polyneuropathy, most likely due to tuberculostatic toxicity. Mycobacterial cultures were negative, but caudal compression had worsened (**E**). Additional testing was positive for antineutrophil cytoplasmic antibodies against proteinase 3 (PR3-ANCAs) (38 IU/ml [normal <2]). Necrotizing granulomatous inflammation and PR3-ANCA positivity are hallmarks of granulomatosis with polyangiitis (GPA) (2). ANCA positivity can also occur in TB (3), but without any evidence of active TB, GPA was diagnosed. Treatment with methylprednisolone (1,000 mg/day for 3 days), followed by oral prednisone in tapering doses and cyclophosphamide (2–3 mg/kg/day) was initiated; treatment was switched to azathioprine (3 mg/kg/day) after 3 months. Symptoms improved, PR3-ANCA was no longer present, and imaging showed marked improvement with minimal residual radiologic abnormalities of L3 and the L2–L3 disc (**F**). Though extremely rare, this case illustrates that inflammatory spondylitis can be a manifestation of GPA.

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