

Atypical Cause of thoracic osteomyelitis causing acute neurological dysfunction in an Immunocompetent host

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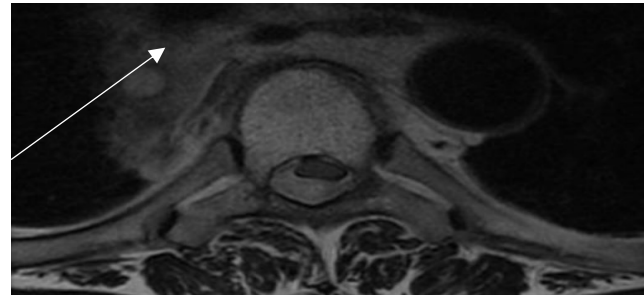
Background

- *Prevotella bivia* is a commensal flora in oral cavity, GI tract, and Vagina
- Rarely reported to cause osteomyelitis, and when noted was in immunocompromised patients.
- We present a very rare case of *Prevotella Bivia* vertebral osteomyelitis in immunocompetent patient.

Case

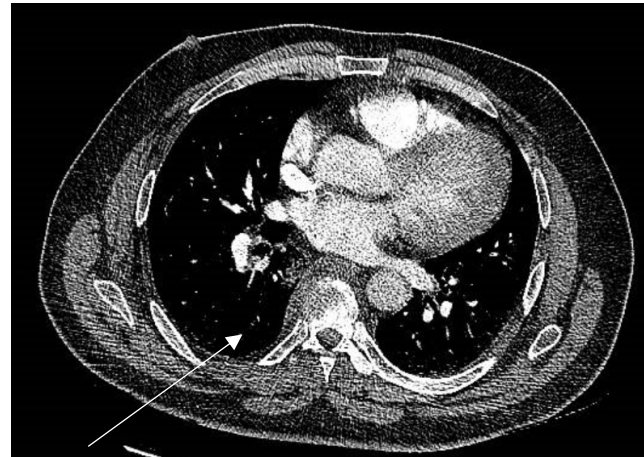
- 48-year-old male with notable history of smoking and hypertension
- Complaint: Right sided back pain for 1 month, exacerbated by lying on same side and coughing. Associated with tingling and numbness of both lower limbs for 1 day.
- Examination: Afebrile. Focal mid thoracic spine tenderness. No overlying skin changes. Normal neurological exam, no focal deficits.
- Pertinent labs: Leukocytosis ($10.9 \times 10^3/\mu\text{L}$)
- Elevated ESR at 22 mm/hr.
- Chest X-ray: clear lung fields with ill-defined endplate irregularities at mid thoracic vertebral bodies
- CT chest with contrast: T5-6 discitis/osteomyelitis with phlegmon/developing abscess.
- MRI: discitis and osteomyelitis at T5-6 with phlegmon formation causing cord compression
- Blood cultures were negative. HIV negative.
- Treatment: Patient underwent posterior thoracic decompression, removal of phlegmon and infected bone followed by thoracic fusion
- T5-T6 laminar bone culture grew *Prevotella bivia*.
- Antibiotic: 6 weeks of IV ceftriaxone and oral metronidazole

Figure 1



MRI: 9 mm fluid collection

Figure 2



CT scan: Vertebral Osteomyelitis with fluid collection

Discussion

- *Prevotella bivia* osteomyelitis is reported in literature twice in immunocompromised patients (an elderly man with rheumatoid arthritis¹ and a female with seronegative juvenile rheumatoid arthritis after intra-articular joint injection²). It was not reported previously in Immunocompetent patient.
- Exact mechanism of infection is still unknown. Possible mechanism is transient bacteremia along with obstruction of vasa vasorum of the bone can cause anaerobic medium suitable for bacteria growth³.

Conclusion

Due to the acute neurological symptoms caused by the phlegmon, surgical removal of the phlegmon and debridement of infected tissue followed by prolonged course of antibiotics with anaerobic coverage was done. On our literature review, this might be the first case of *Prevotella*-associated bone infection in an immunocompetent host⁴.

References

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