

Vertebral Osteomyelitis

Infectious Discitis

Description/pathophysiology:

- Bacterial or fungal infection of the spine
- Back pain is common; spinal infection is relatively rare. Therefore, spinal infections are “A rare cause of common symptoms.”²⁴⁸

Clinical presentations:

- Classic presentation: “...the diagnosis is suggested by the clinical findings: a sick patient with severe pain, a rigid back, fever, and a raised WBC and sedimentation rate.”²⁴⁹
 - Patient generally appears sick with systemic manifestations: fatigue, sweats, anorexia, fever
 - Back/neck/spine pain (90%): Most common region for spinal osteomyelitis is the lumbar spine, followed by the thoracic spine, then the cervical spine. Cervical spine infections are more common in IV drug abusers.
 - Pain may be acute, subacute, or chronic:
 - 30% of patients with vertebral osteomyelitis have had pain for 3 weeks to 3 months at time of diagnosis.
 - 50% of patients with vertebral osteomyelitis have had pain for more than 3 months at time of diagnosis.
 - Pain is continuous, intermittent, and/or “throbbing” and often worse at night
 - Pain is unrelated to motion or position (non-mechanical)
 - Localized stiffness
 - High ESR
- Atypical presentations: (15%)
 - Little or no fever
 - Little or no back or neck pain
 - Little or no local tenderness
 - Cervical osteomyelitis may present with headache, dysphagia, sore throat rather than febrile neck pain
 - Vertebral osteomyelitis of the thoracic and lumbar spine may present with pain in the chest, shoulder, abdominal, hip or leg.
 - Risk factors: IV drug use, DM, history of septicemia, spinal trauma, pulmonary tuberculosis, urinary tract infections, surgery, older men

Major differential diagnoses:

- Benign neck or back pain
- Degenerative disc disease
- Tumor
- Fracture
- Spondyloarthropathies: In particular, reactive arthritis is a difficult differential in this situation because of the concomitant infection (perhaps with fever and systemic symptoms) and back pain. Differentiation may be difficult, but is generally possible based on the severity of the systemic manifestations and local examination findings. **Patients with focal pain—particularly that which is exacerbated by vertebral percussion—should be further evaluated/treated for osteomyelitis.**

²⁴⁸ Strausbaugh LJ. Vertebral osteomyelitis. How to differentiate it from other causes of back and neck pain. *Postgrad Med* 1995 Jun;97(6):147-8, 151-4
²⁴⁹ Macnab I, McCulloch J. *Backache*. Second Edition. Williams and Wilkins: Baltimore, 1990