Concurrent Discitis and a Spinal Epidural Abscess Following Transforaminal Epidural Steroid Injection Arising From An Unlikely Bacterial Species

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Concurrent Discitis and A Spinal Epidural Abscess Following Transforaminal Epidural Steroid Injection Arising From An Unlikely Bacterial Species

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Introduction

• Transforaminal epidural steroid injection (TFESI) can be a great option for pain relief when a patient’s radicular pain is refractory to medication and physical therapy. However, it is important that clinicians understand the potential complications. A case series revealed long-term sequelae include back pain, restricted spine flexibility, and narrowing of the intervertebral disc space which can significantly affect patients’ quality of life (Visuri, Pihlajamaki, and Eskelin 2005). No previous case studies have documented a patient with discitis and an epidural abscess concurrently following a lumbar transforaminal epidural steroid injection (TFESI) and this retrospective case study aims to present both the clinical and radiographical features associated with discitis and epidural abscesses while educating clinicians on patients at a higher risk for these complications and how best to treat them.

Case

• A 60-year-old male with a past medical history of grade 3c metastatic melanoma to the right lower extremity (RLE) presented with worsening stabbing pain in his RLE for three days before being admitted to the hospital. He denied any prior history of back pain or radiculopathy. He reported a 20% decrease in his pain on the visual analog scale (VAS) after his last TFESI which was three weeks ago. Upon examination, he had a left L2 radiculopathy with absent ankle reflexes. Imaging revealed a L2-L5 lumbar transforaminal epidural abscess which was confirmed by the infectious disease team. The patient was started on a 4-week course of ceftriaxone, and he was discharged with the appropriate pain management for his symptoms. Subsequently, he underwent another MRI that showed resolution of the epidural enhancement and the small fluid collection.

Discussion

• Group G streptococci is normally found in skin flora and supports this patient’s infectious etiology being epidemics breakdown secondary to melanoma disease in the setting of TFESI. An underlying systemic infection is the most common etiology of these type of infections (Pradilla et al. 2009). Nevertheless, it is important to understand the anatomy and comorbidities that can lead to these rare but potentially dangerous after TFESI’s. Discitis and spinal abscesses most often occur because of hematogenous spread via the Batson vertebral plexus as well as arterial spread via the anterior and posterior spinal arteries. The most common comorbidity for both diagnoses is diabetes. Both also have many of the same predisposing factors such as immunocompromised status, IV drug abuse, kidney failure, spinal surgery, and foreign bodies. As in our case, the classic presentation of many of these patients is localized tenderness and restricted mobility. Some will also experience motor, sensory, reflex neurological deficits and these are typically emergent cases that cannot be missed (Bond and Maranian 2016).

• It is important to note that only 50% of patients with spinal abscesses will have fever, only 45% will have an elevated WBC count, and biopsies only yield positive cultures in 50% of cases. Additionally, the most common cause of discitis is staphylococcus aureus, however, our case unique in that Group G streptococci is the bacterial etiology of this infection rather than staphylococcus is rare compared to other reports of discitis in the literature (Hooten et al. 2006). If infection is suspected and the patient has an abnormal neurologic exam, appropriate work-up should be ordered but physicians should also order a stat MRI with contrast and start broad spectrum antibiotic coverage. This coverage can be narrowed once sensitivities are obtained. However, if the patient is stable, blood cultures and biopsies should be drawn before beginning antibiotic therapy. Cervical and thoracic pathology should receive more aggressive treatment and any patient with a worsening neurologic exam should have neurosurgery consulted (Al-Hourani, Al-Aref, and Mesfin 2016).

Conclusion

• This is the first case to show concurrent discitis and epidural abscess after TFESI secondary to cellulitis in the setting of stage IV melanoma. Additionally, this is case unique in that Group G streptococci is the bacterial etiology of this infection rather than staphylococcus is rare compared to other reports of discitis in the literature (Hooten et al. 2006).

References


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