Spinal Epidural Hematoma After Lumbar Epidural Steroid Injection in Undiagnosed Vitamin K Deficiency Due to Short Bowel Syndrome

Vasanth Selvam[1] DO, David Rash[1] DO, Linjia Gao[1] DO, Lauren Stimler-Levy[1] MD, Thomas Jan[1] DO

Catholic Health: Mercy Hospital[1], Mt.Sinai South Nassau[2]

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INTRODUCTION

- Interventional Spinal Procedures are diagnostic and therapeutic tools, commonly used for the management of chronic back or sacroiliac pain where conservative measures have been insufficient
- Interventional spinal procedures carry a risk of epidural hematoma, particularly with coagulopathies
- The American Society of Interventional Pain Physicians (ASIPP) guidelines stratify bleeding risk based on antiplatelet and anticoagulant therapy but offer limited guidance on acquired coagulopathies

Case Study:

In our study we examine a patient with a history of colonic resection and short bowel syndrome (SBS) with undiagnosed vitamin-k-deficient coagulopathy who subsequently developed an epidural hematoma from a lumbar epidural steroid injection

METHODOLOGY

- Informed consent was obtained from the patient for the submission of this case report

Table 1: Social Media Engagement Metrics (YouTube vs TikTok)xf



Possible epidural abscess noted at L3-L5

Figure 1: CT Lumbar Spine



Large posterior epidural hematoma extending from L3 to L5, causing effacement of the thecal sac at L3-L4 and L4-L5

Figure 2: MRI Lumbar Spine with and without Contrast

Case Presentation

Patient Presentation

- 72 year old male with History of Chron's disease S/P multiple bowel resections (SBS), HTN, Paroxysmal AFib (not on anticoagulation), GERD, prior GI bleed
- Presented to the Emergency room, 4 days after lumbar epidural steroid injection with worsening right leg pain, numbness, and difficulty ambulating. Denied fever, bowel/bladder incontinence, and saddle anesthesia

Physical Exam

- Reduced strength and sensation in the right lower extremity

Diagnostic Workup

- Labs: INR>9, PTT 60 sec, elevated liver enzymes, mild leukocytosis (WBC 11.59)
- CT L-Spine: Concerning for possible epidural abscess (Fig. 1)
- MRI L-Spine(w/ and w/o contrast): Large posterior epidural hematoma L3-L5 with thecal sac effacement at L3-L4, L4-L5 (figure 2)
- Hematology identified low factors of II and X with mixing-study correction, consistent with vitamin K deficiency from SBS-related malabsorption

Treatment

- Fresh frozen plasma and IV vitamin K corrected coagulopathy
- Patient declined recommended surgical decompression and was managed conservatively with gradual improvement
- Patient discharged to acute rehabilitation with ongoing vitamin K supplementation and INR monitoring

CONCLUSION

- This case illustrates a rare but serious complication in a patient with undiagnosed vitamin K deficiency from short bowel syndrome
- Targeted history-taking for bowel resections, malabsorptive states, and chronic diarrhea, along with selective pre-procedural PT/INR testing, could identify high risk patients and reduce the risk of such complications

References:

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