

Septic Arthritis Of Lumbar Facet Joint: Rare Presentation In A Pediatric Patient

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INTRODUCTION:

Septic arthritis of facet joint (SAFJ) is a rare and potentially dangerous clinical entity. It was first reported by Halpin et al in 1987 and by many other authors in recent years. However most of these cases usually involve adults and rarely reported in pediatric age group. Hematogenous spread from other locus of infection is the most common pathologic cause of SAFJ but direct inoculation has also been reported (Muffoletto, Ketonen et al. 2001). Diagnosis is confirmed by a combination of imaging, laboratory studies, and arthrocentesis (or open culture) with staining and culture of specimens. Management options include antibiotic administration with or without open debridement.

CASE REPORT:

A 11-year-old Indian boy with no significant medical history presented with persistently debilitating low back pain and spasm. He denied any recent trauma or fall following his onset of symptoms. Pain was non radiating. The patient denied fever, dysuria, paraesthesias, bowel or bladder retention or incontinence, or other constitutional symptoms. He also denied any recent contact with tuberculosis patients.

On physical examination, the patient had antalgic gait favoring his right side. No obvious skin lesion, swelling or fluctuant area noted. However there was significant left paravertebral muscle spasm. No neurological deficits noted over his bilateral lower extremities. Rectal examination was normal.

The patient was admitted to the hospital for pain control and further investigation. Plain radiographs of lumbar spine showed no obvious pathology except for mild loss of lordosis. Laboratory investigations showed raised total white count ($9.7 \times 10^9/L$), ESR was 65mm/hr and CRP was 33mg/L. Blood and urine cultures had no growth. We proceeded with MRI of lumbosacral spine with contrast for the patient which showed abnormal signal and enhancement in the left L4/L5 facet joint and

adjacent erector spinae muscle suggestive of septic arthritis. The patient was started on antibiotics and CT guided biopsy was done however the sample did not yield any positive result. The patient completed 6 weeks of antibiotics and was completely asymptomatic after treatment.

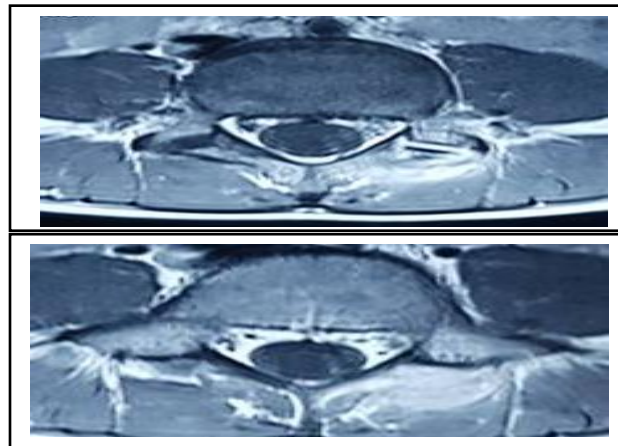


Figure 1: Axial T2 –weighted image of left L4/L5 facet joint septic arthritis

Figure 2: Surrounding muscle edema

DISCUSSIONS:

Septic arthritis of the facet joint is a rare condition especially among children. In all cases patients presented with prodromal symptoms and positive inflammatory laboratory studies. If left untreated, may progress to epidural abscess and severe neurologic symptoms. MRI serves as a great tool to detect the disease as well as to rule out any other conditions. CT guided biopsy can provide accuracy for targeted treatment.

CONCLUSION:

High index of suspicion is very important for early detection and treatment. This will avoid progression into severe complications.

REFERENCES:

1. Muffoletto, A. J., et al. (2001). "Hematogenous pyogenic facet joint infection." *Spine (Phila Pa 1976)* **26**(14): 1570-1576.
2. Halpin DS, Gibson RD, et al. "Septic arthritis of a lumbar facet joint". *J Bone Joint Surg Br.* 1987;69(3):457-459