

## CASE REPORTS

# QUADRIPLEGIA DUE TO SPINAL SUBDURAL ABSCESS

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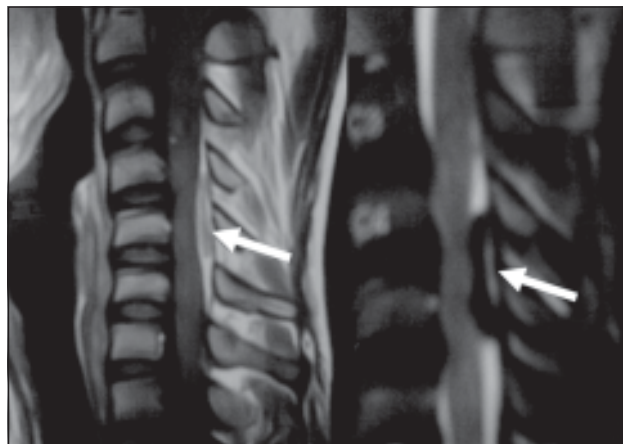
### Introduction:

Spinal subdural abscess (SSA) is a very rare cause of quadriplegia. According to the site of involvement, they may present with paraplegia or rarely quadriplegia. The most common site is thoraco-lumber region, but our patient presented with cervical SSA. We should consider it as a medical emergency because early diagnosis and prompt treatment can save the life and prevent residual disability of the patient.

### Case Report:

A 22 yrs old male right handed student hailing from Sunamganj presented with weakness of all four limbs & retention of urine for 2 days. Weakness was sudden in onset & worsens for 24 hours then became static. On 1<sup>st</sup> day he could walk by himself with difficulty but from 2<sup>nd</sup> day he needed support from others. Weakness was preceded by neck pain & low grade continued fever for 2 days. Pain was stabbing in nature without any radiation but aggravated by movement. He had no history of diabetes mellitus, pulmonary tuberculosis or skin infection. His body temperature was 99.8° F, pulse- 96/min, blood pressure 120/70 mm of Hg. There was no lymphadenopathy or any apparent infective focus. On neurological examination- Higher psychic function & Cranial nerves were intact with normal fundus. Muscle tone was normal with power 3/5 in all four limbs, Deep tendon reflexes were absent with bilateral equivocal planter reflexes. Abdominal & Cremestic reflexes were absent. Pain & touch sensation was impaired upto C-6. There was no sign of meningeal irritation. No abnormality was detected in other systems. There was total lymphocyte count 12,200/cmm, neutrophil was 75 percent; ESR was 15 mm in first hour, RBS- 120 mg% and CXR P/A view was normal. MRI of cervical spine revealed intradural extramedullary lesion at C4-C5 level – finding was consistent with subdural abscess (Fig.-1). Then empirical intravenous antimicrobial therapy was started and

continued for six weeks. He was completely improved without any residual neurological deficit. Follow up MRI shows complete resolution of abscess (Fig.-2).



**Fig.-1:** MRI of cervical spine- Showing subdural abscess compressing spinal cord (white arrows).



**Fig.-2:** Follow up MRI after antibacterial treatment showing complete resolution of abscess.

### Discussion:

Central nervous system (CNS) infections presenting to the emergency room include meningitis,

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encephalitis, brain and spinal epidural abscess, subdural empyema, and ventriculitis. These conditions often require admission to an intensive care unit (ICU) and are contributing significantly to morbidity and mortality. Reducing morbidity and mortality is critically dependent on rapid diagnosis and, perhaps more importantly, on the timely initiation of appropriate antimicrobial therapy.<sup>1</sup> Spinal subdural abscesses (SSA) are rare and to date only 57 cases have been reported. The exact incidence of the SSA is unknown.<sup>2</sup> The most affected region is the thoraco-lumbar spine and the most common bacterial source is *Staphylococcus aureus* this particular case presented with subdural abscess in cervical spines region.<sup>2</sup> Etiologies of spinal subdural empyema include hematogenous spread from skin lesions, systemic sepsis, direct spread from spinal osteomyelitis and complications of discography. Early diagnosis and emergent treatment is vital to prevent the formation or progression of neurologic deficits.<sup>3</sup> Sub-dural empyema represents a loculated infection between the dura and the arachnoid. Spinal subdural abscess (SSA) is a rare but well-described entity.<sup>4</sup> It may occur secondary to a systemic infectious focus or following a surgical procedure. This case is unique because no apparent focus was obvious after extensive search as possible. There are only two SSA cases in the literature that are unrelated to such conditions and without any well-documented etiology.<sup>5,6</sup>

### Conclusion:

Spinal subdural abscess though very rare condition, it is a medical emergency. Early diagnosis and treatment is essential to save life and disability. It is important to consider SSA as possibility in all cases of acute paraplegia or quadriplegia.

### References:

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