

TB spine at the level of lumbosacral junction (L5-S1 Level): A Case report

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Skeletal TB (STB) contributes to around 10% of EPTB, and spinal TB has been the most common site of Skeleton TB (STB), amounting to around half of skeletal EPTB. . We report a rare case of a young male patient with spinal TB at L5- S1 level, which is uncommon.

Keywords: TB spine, Lumbosacral Junction, L5-S1 level

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Background

The incidence of extrapulmonary TB (EPTB) is low at nearly 3%. Skeletal TB (STB) contributes to around 10% of EPTB, and spinal TB has been the most common site of Skeleton TB (STB), amounting to around half of skeletal EPTB. The thoracolumbar junction is the most affected region followed by the lumbar spine and the cervical spine. EPTB involving the lumbosacral junction (L5-S1 level) is uncommon. Therefore, it is necessary to make a diagnosis to achieve the appropriate treatment and favourable prognosis. We report a rare case of a young male patient with spinal TB at the L5-S1 level, which is uncommon.

Case Summary

A 36 years old male presented to the orthopedics outpatient department with a primary complaint of lower back pain with left-side radiculopathy for 2 years. MRI dorsolumbar spine showed involvement of L5 and S1 vertebral bodies and L5-S1 IV disc with endplate erosions and destruction of vertebral height loss with pre-paravertebral granulation and small epidural collection at the same level with nerve root impingement .findings suggest possibilities of infective spondylodiscitis mainly Koch's etiology. (figure2). For that posterior spinal fixation with L4, L5, S1 pedicle screw and S2 vertebra ala iliac screw + L5-S1 Transforaminal lumbar interbody fusion was done (figure 3). Post-operative intravenous antibiotics were started till histopathology and gene expert for TB report came. The result of the Histopathological examination showed chronic granulomatous inflammation. gene expert report is also suggestive of TB infection. Then after the patient was instructed to continue anti-TB treatment.

We observed a progressive improvement during the follow-up with a complete remission of the back pain and also radicular pain. In the last follow up the patient able to walk independently without any neurological signs.

Case Presentation

Chief Complaint: A 36 years old male presented to orthopedics outpatient department with a primary complaint of lower back pain with left-side radiculopathy for 2 years.

History of present illness

2 years ago patient started having a fever with pain in the lower back. MRI lumbar spine was done at that time and suggestive of the possibility of TB spine. and after that, all investigation was done to confirm TB and then after Anti TB treatment was started. after the anti-TB treatment, his symptoms significantly improved. The patient continued Anti TB treatment for 8 months then after the patient stopped treatment by himself. After 3 months of stopping treatment, the pain recurred and increased in nature.

Family History: No history of tuberculosis in the Family.

General Examination

The patient was conscious, cooperative and well-oriented to time, place and person. the temperature was 37.4 °C, the heart rate was 90 beats/minute, the respiratory rate was 14 breaths/minute and the blood pressure was 120/90 mmHg. On neurological examination, the patient had left side EHL muscle power was 4/5 and left side hypo aesthesia over the dorsum of the foot. Rest neurology was normal tendon reflexes are also normal.

Laboratory examination

The laboratory examination findings were all within normal limits, including the complete blood count with ESR, routine urine test results and liver function test results. The results of hepatic serology were also negative. The fasting blood glucose level is also within the normal range.

Imaging examinations

Lung digital radiography showed no involvement in radiography.

Lumbosacral digital radiology showed the involvement of L5 and S1 vertebrae with loss of vertebral height (figure 1).

Magnetic resonance imaging (MRI) dorso-lumbar spine showed suggestive involvement of L5 and S1 vertebral bodies and L5-S1 IV disc with endplate erosions and destruction of vertebral height loss with pre-paravertebral granulation and small epidural collection at the same level with nerve root impingement findings suggest possibilities of infective spondylodiscitis mainly Koch's etiology. (figure 2).

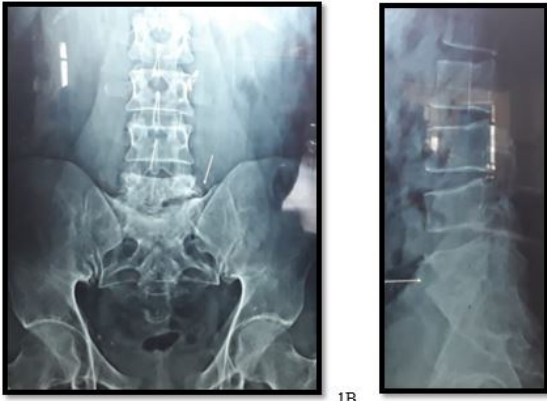


Figure 1A, B: Digital X-ray showing Lumbar spine anteroposterior view(1A) and lat view(1B). X-ray showing involvement of L5 and S1 vertebrae with loss of vertebral height.

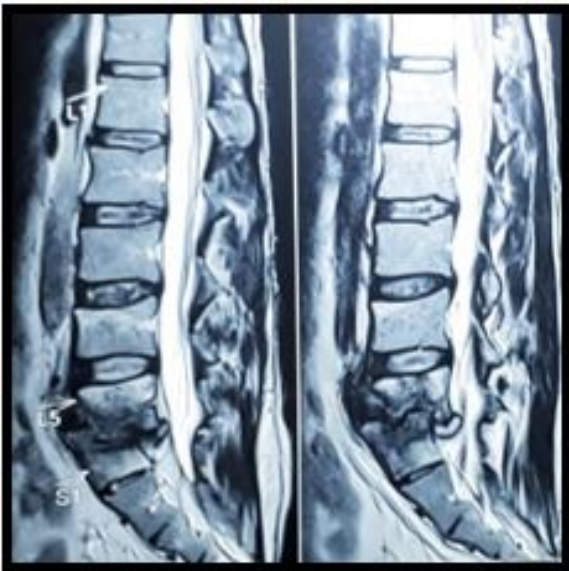


Figure: 2A

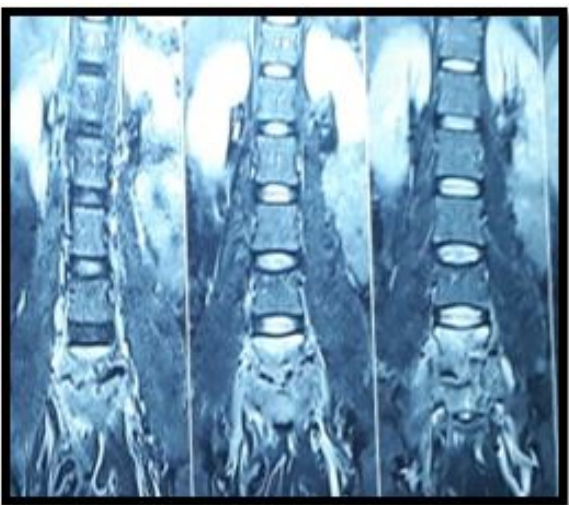


Figure: 2B

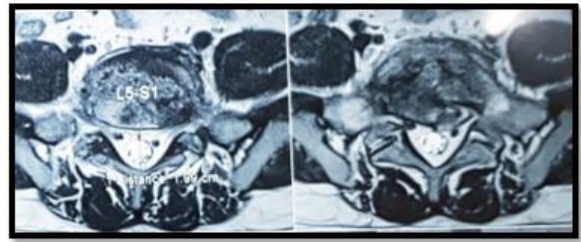


Figure: 2C

Figure 2A, B, C: MRI lumbar spine Sequences—suggestive involvement of L5 and S1 vertebral bodies and L5-S1 IV disc with endplate erosions and destruction of vertebral height loss with pre-paravertebral granulation and small epidural collection at the same level with nerve root impingement.

Final Diagnosis: Spinal TB at the level of L5-S1 level .(lumbosacral junction)

Treatment: Posterior spinal fixation with L4 ,L5 , S1 pedicle screw and S2 vertebra ala iliac screw + L5-S1 Transforaminal lumbar interbody fusion(figure 3)

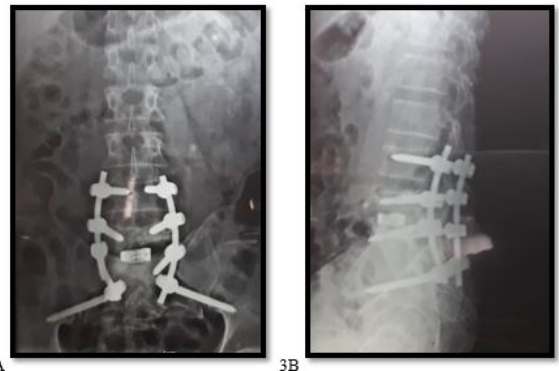


Figure 3: x-ray lumbosacral spine: suggestive of fixation at L4-5, S1-2 with transforaminal lumbar interbody fusion.

Outcome and Follow up

After the operation patient was on anti-TB treatment. We observed a progressive improvement during the follow-up with a complete remission of the back pain and also radicular pain. In the last follow up the patient was able to walk independently without any neurological signs.

Conclusion

For spinal TB, the Thoracolumbar junction is the most affected region of the spinal column followed by the lumbar spine and the cervical

Spine. In their case patient had involvement at the level of L5-S1 level and diagnosis based on clinical features, MRI findings and pathological and microbiological examination. post-surgical patient prognosis is good such as the case we reported.

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