

SPONDYLITIS TB THORACO-LUMBAR: A Case Report

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Introduction

Tuberculosis (TB) will be the second leading cause of death in the world by 2022. Globally, about 7.5 million people have been diagnosed as new TB patients. About 3% of 10% of extrapulmonary cases are skeletal tuberculosis, and 50% of skeletal TB cases are vertebral TB. Spinal tuberculosis infection, or spondylitis, is often referred to as Pott's disease. The patient's most frequent complaints are back pain associated with deformity, instability, and neurological deficits of the spine. A case of tuberculosis of tuberculosis spondylitis is extremely uncommon so we're going to present a 42-year-old man with tuberculosis spondylitis

Case Presentation

The patient (A.S.), a 42-year-old male, arrived at the Orthopedic Department at the Soeroto Regional General Hospital, Ngawi, Indonesia, on March 14, 2023, with a diagnosis of TB spondylitis. The patient complained of pelvic pain spreading to both legs. Pelvic pain is accompanied by difficulty walking. Patients have been experiencing this complaint since June 2023. The patient feels pain in the pelvis, especially when exposed to shock. VAS 9/10. Aside from that, the patient has no trauma history. Subsequently, the patient was examined using AP-lateral lumbosacral regio x-rays (figure 1) and found a compression fracture in the lumbar vertebra 1–5. The patient had been undergoing TB therapy with OAT for 4 months when he arrived. The patient was advised to go to the hospital and was given conservative treatment. During treatment, the patient's pain rate decreased to VAS 5/10, and mobilization increased.

Before the patient was treated at the Soeroto Hospital, the patient went to the hospital in Tangerang, performed a thoracolumbar AP-Lateral X-ray (Figure 2), found a compression fracture in the thoracic vertebra 9, and was handled by a pulmonary specialist to begin treatment of TB with OAT.



Figure 1: Lumbosacral X-ray

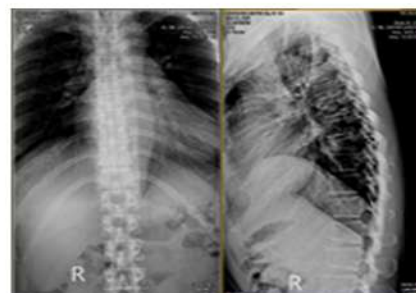


Figure 2: Thoracolumbar X-ray



Figure 3: Image of the Patient's Back

Discussion

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*

Mycobacterium tuberculosis enters the body through the lungs, the intestines, or the skin. There are three phases in the spread of tuberculosis to the bone: the first is the formation of a primary complex. The second phase is the secondary spread. The third phase is tertiary lesion.

The most common cases of spinal tuberculosis are in the anterior type (90%–95%) and rarely in the posterior type (5%–10%). The most frequently affected regions are the lower thoracic regio vertebra (75%) and the upper lumbar vertebra.

Mycobacterium tuberculosis infects elsewhere hematogenously and enters through the blood vessels in the spine. So, the most frequently affected part is the anterior to the subchondral part because the blood supply to the anterior part is greater

In the presented case, the patient had spondylitis TB type anterior type on the regio thoracolumbar seen from the patient's AP-Lateral X-rays. The patient had symptoms corresponding to stage III in Table 1.

Anatomically, the anterior part of the vertebra has motor nerves, so the motor nerves are destroyed first. It's in line with the symptoms of a patient who can only sleep and can't stand.

A physical examination and a regional thoracolumbar X-ray showed that the patient was in stage III with paraplegia. Therapy can be done for three purposes: eradicating disease, preventing or correcting anomalies, and preventing and treating associated neurological deficits.

The patient is still undergoing conservative treatment because of the patient's very high pain, which is rated at 9/10 on VAS.

Patients only had X-rays because our centre doesn't have MRIs or CT scans of the spine.

Table 1: The stages of anterior spinal tuberculosis

Stage	Description	Clinicoradiological Features	Usual Duration
I	Implantation, incipient, or pre destructive	Dull back pain with muscle spasm in the back. Straightening of the spine or loss of curve	<3 months
II	Early Destruction	Diminished disk space, paradiscal erosion kyphosis <10° (K1)	2-4 months
III	Advanced destruction and collapse	Two or more vertebral involvement with collapse. Kyphosis 11° to 60° (K2) or gibbus >60°	3-9 months
IV	Neurological involvement	Stage III dan IV with 4 grade of paraplegia	Variable
V	Deformity dan sequelae	Kyphosis K1, K2, K3, disease active locally grumbling, reactivated or healed	>3-5 months

Conclusion

Tuberculosis spondylitis is a rare case of extrapulmonary tuberculosis, which is about 3% of 10% of extrapulmonary cases. TB spondylitis is caused by *mycobacterium tuberculosis*. The recommended imaging is an MRI, but for patients, this is not done because of the lack of equipment in our hospital. The patient had stage III spondylitis, TB type anterior, and stage 3 paraplegia. Patients were given conservative therapy first due to pain, and TB medication remained given as OAT remained the primary therapy in cases of TB spondylitis.

Key word: Spondylitis, tuberculosis, uncommon, conservative

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