

Case Report

## A Case Report on Pott's Spine (Spinal Tuberculosis)

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### ABSTRACT

A middle-aged woman presented to the hospital with a complaint of worsening of backache since 2 days non radiating pain, unable to walk or sit. Physicians included Pott's disease in the working diagnosis when patients present with severe back pain and evidence of past history tuberculosis. A radiological examination confirmed the diagnosis of Pott's spine. Commonly AKT 4 was restarted for the first line management of spinal tuberculosis.

**Keywords:** Pott's spine, Tuberculosis, Anti-Tuberculosis drugs,

### INTRODUCTION

Pott's disease (PD) or spinal tuberculosis accounts for less than 1% of total tuberculosis (TB) cases, and usually occurs secondary to extra-spinal source of infection via the hematogenous route. Subsequently, PD may spread to an adjacent intervertebral disk or vertebra. The spinal canal can be invaded by granulomatous tissue or abscess because of direct spread from the vertebral lesion, resulting in narrowing of the spinal cord, cord compression, and later neurologic complications (e.g., paresis, paraplegia).<sup>[1,2]</sup>

Imaging examination is an important method in the diagnosis of spinal tuberculosis and most cases can be diagnosed through typical imaging's of spinal tuberculosis as well as clinical manifestations, laboratory examination, medical history. But there is also some images of spinal tuberculosis are special and atypical in clinical. This gives us the opportunity to study and confirm that it is indeed the imaging manifestations of spinal tuberculosis. Rare imaging, such as atypical

CT of the spine, Should be able to provide help and reference for the diagnosis of spinal tuberculosis, especially for those suffering from multiple organ tuberculosis patients.<sup>(3)</sup> Non-operative - anti tuberculous drugs, analgesics, Immobilization of the spine region using different types of braces and collars and surgery may be necessary, especially to drain spinal abscesses or debride bony lesions fully or to stabilize the spine.

### CASE PRESENTATION

A 65 year old female, 47kg, came to hospital with a complaint of high-grade fever with chills and rigor, worsening of backache since 2 days non radiating pain, unable to walk or sit, bed ridden, vomiting 3-4 episodes/day. Patient had past history of tuberculosis before 1 year for which she was not completed treatment of AKT4, she was a known case of type 2 diabetes mellitus on OHA and insulin. Other examination revealed lower back desquamation.

On day 1 patients vitals were stable, had a complaint of itching. Management team

suggestive of acute febrile illness and doubtful for spinal tuberculosis. Working diagnosis acute febrile illness and potts spine? Plan for sending dengue test, trace 2D echo, MRI, HbA1c and urine culture. Treatment started with IV fluids 100ml/hr, Inj paracetamol 1g IV TID, Tab Atarax 10mg OD, calasoft lotion L/A TID. Day 2, patient reviewed, vitals stable, MRI report revealed contrast spine and pott's spine T<sub>11</sub>-T<sub>12</sub>, prevertebral soft tissue, spinal cord stenosis D<sub>12</sub>-L<sub>1</sub>. 2D Echo shows ejection fraction of 66%. In urine culture, E. coli was isolated, leukocyte esterase enzyme was present, glucose and protein trace also positive. Patient diagnosed as Potts spine. IV Ceftriaxone 1gm BD, inj Emeset 4mg and inj Tramadol given as stat medication, AKT4 restarted along with day1 medications. Advised for hematologist review and bone marrow aspiration (BMA). On day 3, patient had complaints of pain, AKT4 restarted. BMA shows hypercellular marrow with essential hematopoiesis and moderate plasmacytosis and hematologist report shows no evidence of monoclonal gammopathy, plasmacytosis due to infection. Day 4, patient mobilize to chair, chest physiotherapy given. Plan for discharge next day along with following medications tab cefpodem 325mg BD for 5days, tab akurit-4, tab benadon, tab trigantin for 1month. Day 5 patient was stable, discharged without any specific complaints and advised for review after 1month.

## DISCUSSION

TB of the spine is an ancient disease. In 1782, Sir Percival Pott described spinal TB and surgical treatment of paravertebral abscess. Hence, spinal TB was called 'Pott's Disease'. Spine tuberculosis results from an infection of the bone caused by the Mycobacterium tuberculosis bacteria via a combination of hematogenous root and lymphatic drainage. TB starts in the lung but it can travel to any organ or structure of the body. The spinal column is often the most affected extra-pulmonary site<sup>(4)</sup> Skeletal TB

is treated for 12 months (INH, rifampin and pyrazinamide for 2 months followed by INH and rifampin for 10 more months). There is substantial impact of patient compliance on treatment success; directly observed therapy (DOT) is recommended. Surgery, which was once the mainstay treatment for spinal TB, is required less frequently, even in patients with cord compression. Chemotherapy alone has also been reported as a successful treatment modality.<sup>(5)</sup>

Outcomes for patients with PD have improved due to effective medical and surgical treatment. More than 80% of patients respond to medical treatment alone, and the mortality rate is generally lower than 10%. Surgical intervention in the presence of spine deformity or neurological deficit is required in approximately 50% of the patients.<sup>(6,7)</sup> Radical surgery combined with anti-TB drugs and younger age have been reported as significant favorable prognostic factors. In the present case patient was restarted on AKT4 DOTS therapy, patient complaints started resolving and surgical interventions were not necessary.

## CONCLUSION

The presence of certain alarm signals like a prolonged history of progressive back pain, constitution symptoms or pulmonary nodules on a chest radiograph, particularly in the upper lobes, may guide the clinical suspicion. Timely treatment of spinal TB can avoid extensive investigations, treatment delays and adverse long-term outcomes, including compression fractures with neurological deficits.

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