

## Paediatric Tuberculous spinal abscess causing compression at the lumbar level

Mehta R, Agrawal A, Singh V

Investigation performed at R.D. Gardi Medical College, Ujjain (M.P.)

### Abstract

Incidence of paediatric spinal tuberculosis (TB) is increasing. Paediatric spinal TB is known to cause rapid bony destruction and deformity progression. We present a 4-year child with lumbar kyphotic deformity, progressive lower limb weakness and early bladder involvement. Imaging revealed near complete destruction and retropulsion of L4 vertebra with spine at risk signs. Posterior decompression, L1 to S1 fixation with pedicle screws and punching the remaining L4 body ventrally was performed. With aggressive post-operative physiotherapy and AKT patient recovered neurologically from Frankel C to Frankel E grade with complete radiological resolution of disease at final follow-up of 1 year. No further progression of deformity was observed at final follow-up.

**Conclusion:** Early diagnosis, timely and judicious surgical intervention is the key to management of paediatric spinal TB.

### Address of correspondence:

Dr Rahul Mehta  
Associate Professor & Department of  
Orthopaedics, R. D. Gardi Medical  
College, Ujjain

Email-Drrahulmehta@gmail.com

### How to cite this article:

Mehta R, Agrawal A, Singh V  
Paediatric Tuberculous spinal abscess causing compression at  
the lumbar level Ortho J MPC. 2022; 28 (1):48-49

Available from:  
<https://ojmpc.com/index.php/ojmpc/article/view/155>



### Introduction

The incidence of vertebral TB is increasing and it accounts for 10-20% of all extra-pulmonary cases of TB(1). Thoraco-lumbar junction is the most commonly involved site followed by lumbar and cervical region.(2) Spinal TB occurs most commonly in children and young adults(3). Early diagnosis and intervention is required in children as it may lead to bony destruction, deformity of the growing spine and severe neurological complications.

### Case Report

A 4yr old female child presented with the complains progressively increasing back pain and bilateral lower limb weakness since 2-3 months, with inability walk or sit without support since last 15 days. Frequency of micturition was increased and constitutional symptoms were present. Neurological status was Frankel grade C.(4)

Pre-op xray suggested of mild lumbar kyphosis with vertebral destruction at multiple

levels. MRI and CT scans revealed complete destruction with retropulsion of L4 vertebral body and partial destruction of L2L3L5 vertebra. Spine at risk signs were present hence surgery planned.

### Surgical Procedure

Under GA in prone position with all bony prominences well padded. The procedure was performed under C-arm guidance. Midline skin incision given, posterior only approach was used. L3 partial L4 complete Lt. laminectomy with L1-S1 posterior decompression with instrumented fixation (3.5mm pedicle screws)was performed.

Retropulsed L4 fragment was punched ventrally. Customised LS corset was applied and patient was registered for ATT category-1 for 9 months. Patient was followed up and clinical, radiological and haematological assessment was done every 2wks, 6wks, 3months, 6 months till 12 months. At final follow up, patient came walking without

support and neurological recovery was complete (Frankel grade 'E').

There was complete resolution of disease radiologically. Disease healed completely and there was no central compression of dura at L3L4 level. Mild segmental kyphosis still persisted.

## Conclusion

Spinal TB requires multidisciplinary team for its management. Early detection, timely and judicious surgical intervention are the key to surgical management and prevention of complications.



Fig 1. Pre-operative MRI



Fig 2. Pre-operative CT



Fig. 3, 4

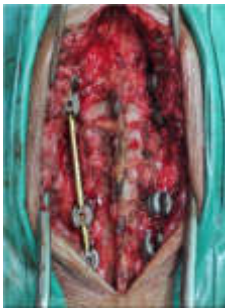


Fig. 5, 6, 7. Intra op and post op picture



Fig 8-Post operative clinical picture

## References

1. Benzagmout, M., Boujraf, S., Chakour, K., & Chaoui, M. E. F. (2011). Pott's disease in children. *Surgical neurology international*
2. Garg RK, Somvanshi DS. Spinal tuberculosis: a review. *J Spinal Cord Med.* 2011;34(5):440-54. doi: 10.1179/2045772311Y.0000000023. PMID: 22118251; PMCID: PMC3184481.
3. Teo, H. E., & Peh, W. C. (2004). Skeletal tuberculosis in children. *Pediatric radiology*, 34(11), 853-860.
4. Frankel HL, Hancock DO, Hyslop G, Melzak J, Michaelis LS, Ungar GH, Vernon JD, Walsh JJ. The value of postural reduction in the initial management of closed injuries of the spine with paraplegia and tetraplegia. I. Paraplegia. 1969 Nov;7(3):179-92. doi: 10.1038/sc.1969.30. PMID: 5360915.