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## Surgical correction of severe kyphotic deformity in spinal tuberculosis

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**Aim:** The aim of this study is to evaluate the clinical and radiological outcome of surgical management of 24 patients with severe Tubercular kyphosis (>60 degrees).

**Materials & Methods:** From 2000 - 2015, 24 patients were surgically treated for tuberculous kyphosis. The average age was 23 years (range 8 – 46 years). The mean kyphosis angle was 70° (60° - 97.7°). Mean vertebral loss was 2.6. Nine patients had significant neurological deficit (Frankel A, B, C). Eleven patients had active disease. A single approach was used in 19 patients and the remaining had staged surgery. Pedicle screws were used in 18 patients and Hartshill rectangle in 6 patients. The anterior column was reconstructed with autologous bone in 9 patients and titanium cage in 15 patients. The average follow up of the patients was 3 years (1-12years). Clinical outcome was based on Macnab's criteria.

**Results:** The average correction of kyphosis was 32°. The loss of correction at final follow up was 8°. All patients had healing of disease. Significant neural recovery was seen in 10 (83%) patients 3 patients had neurological deterioration, of which 2 improved and one patient did not have any recovery in neurology. Graft slippage, graft fracture and implant failure and superficial wound infection was seen in one patient each. The

implant was removed in 2 patients. There was no mortality.


**Discussion:** In spite of adequate chemotherapy patients with tubercular kyphosis may demonstrate worsening deformity resulting in late onset paraplegia and grotesque deformities. This is best avoided by correcting severe deformity in active, healing or healed stages of spinal tuberculosis.

**Conclusion:** Surgical correction of severe tubercular kyphotic deformities involves anterior debridement/release and reconstruction with posterior column shortening and posterior instrumentation with fusion. Though hazardous and technically demanding it yields clinically and radiologically gratifying results.

### Speaker Biography

Justin Arockiaraj have completed his undergraduate (MBBS) and post graduate training (D. Ortho., M.S. Ortho., DNB Orthopaedics) in the field of Orthopaedics, at the Christian Medical College and Hospital, Vellore, India. He is currently working as an Associate Professor in the Spinal Disorder Surgery unit, Department of Orthopaedics. He is interested in academics and teaching. He is also a resource person for Distance Education Program and Post graduate Diploma in Family Medicine. He regularly take classes for under graduate students, post graduate students and spine fellows. Tuberculosis is one among his favorite topics. He has couple of publications both in national and international journals.

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