

TEMPORARY INTERNAL DISTRACTION IN SEVERE SCOLIOSIS: MAXIMUM CORRECTION, MINIMUM COMPLICATION, AND A GOOD NIGHT'S SLEEP

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Background:

Severe scoliosis poses significant challenges in surgical correction, often necessitating innovative techniques to achieve satisfactory correction and mitigate potential complications.

Report:

We outline the utilisation of Temporary Internal Distraction (TID) as an adjunct in the surgical management of a 14-year-old female with severe thoracic kyphoscoliosis with underlying syringomyelia with a Cobb angle of 126°, debilitating symptoms and impaired quality of life. Surgical intervention involved a two-stage posterior procedure with a 1-week interval of general ward nursing. The first procedure involved posterior instrumentation from T2 to L3 augmented with TID devices consisting of rods and cross links placed along the concave aspect of the curvature and facetectomy. Graduated distraction force was applied without inciting neuromonitoring drop and a 50% correction was achieved. During the second procedure, more correction was attempted and spinal fusion with definitive dual-rod fixation was performed. Post-operative evaluation demonstrated a reduction in the Cobb angle to 25° (80% improvement).

Conclusion:

Our staged approach allowed large and safe correction severe scoliosis curve without the use of major osteotomy. Graduated distraction and temporisation allowed utilisation of viscoelasticity of the spine, sparing the need for major osteotomy procedure potentially averting associated major complications.