



-Instrumented circumferential fusion for tuberculosis of the dorso lumbar spine. A single or double stage procedure?

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Abstract:

Purpose The purpose of this study was to present our experience in treating dorso-lumbar tuberculosis by one-stage posterior circumferential fusion and to compare this group with a historical group treated by anterior debridement followed by postero-lateral fusion and stabilization. **Methods** Between 2003 and 2008, 32 patients with active spinal tuberculosis were treated by one-stage posterior circumferential fusion and prospectively followed for a minimum of two years. Pain severity was measured using Visual Analogue Scale (VAS). Neurological assessment was done using the Frankel scale. The operative data, clinical, radiological, and functional outcomes were also compared to a similar group of 25 patients treated with anterior debridement and fusion, followed 10-14 days later by posterior stabilization and postero-lateral fusion. **Results** The mean operative time and duration of hospital stay were significantly longer in the two-stage group. The mean estimated blood loss was also larger, though insignificantly, in the two-stage group. The incidence of complications was significantly lower in the one-stage group. At final follow-up, all 34 patients with pre-operative neurological deficits showed at least one Frankel grade of neurological improvement, all 57 patients showed significant improvement of their VAS back pain score, the mean kyphotic angle has significantly improved, all patients achieved solid fusion and 43 (75.4%) patients returned to their pre-disease activity level or work. **Conclusion** Instrumented circumferential fusion, whether in one or two stages, is an effective treatment for dorso-lumbar tuberculosis. One-stage surgery, however, is advantageous because it has lower complication rate, shorter hospital stay, less operative time and blood loss.

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