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## Comparison of Two Surgeries in Active Thoracolumbar Tuberculous Spondylitis: One Stage Anterior Debridement with Anterior Instrumentation and Two Stage Operation of Anterior Debridement and Posterior Instrumentation

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### – Abstract –

**Study Design:** Thirty-eight patients with thoracolumbar spinal tuberculosis were evaluated according to the surgical treatment method, either a one or two stage anterior debridement, with anterior or posterior instrumentation, respectively.

**Purpose:** The aim of this study was to compare the effects of the one stage anterior debridement, with anterior instrumentation, to the two stage anterior debridement, with posterior instrumentation

**Materials and Methods:** Thirty-eight patients, with tuberculous spine, were divided into two groups depending on the surgical method. One group consisted of 21 patients treated with anterior debridement combined with anterior instrumentation, and the other group consisted of 17 patients treated by a two stage operation of anterior debridement combined with posterior instrumentation. The clinical outcomes were evaluated from the hematological laboratory findings, bone union in radiographs, change of kyphotic angle, duration of hospital stay and the medical cost during hospitalization.

**Results:** There were no recurrences of infection in either group and bone union was obtained within 6 months of the operation for all cases in both groups. The preoperative, postoperative and final follow-up kyphotic angle in the two groups were 18/20, 7/9 and 10/11 degrees, respectively. There was no significant difference in the decrease of the kyphotic angle between the two groups ( $p>0.05$ ). However, group I was superior to group II in relation to the duration of hospital stay and the medical cost.

**Conclusion:** We concluded that the one stage operation was the better of the operative methods for the treatment of active tuberculous spondylitis in a thoracolumbar spine.

**Key Words:** Tuberculous spondylitis, anterior instrumentation, Posterior instrumentation.

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10,11)



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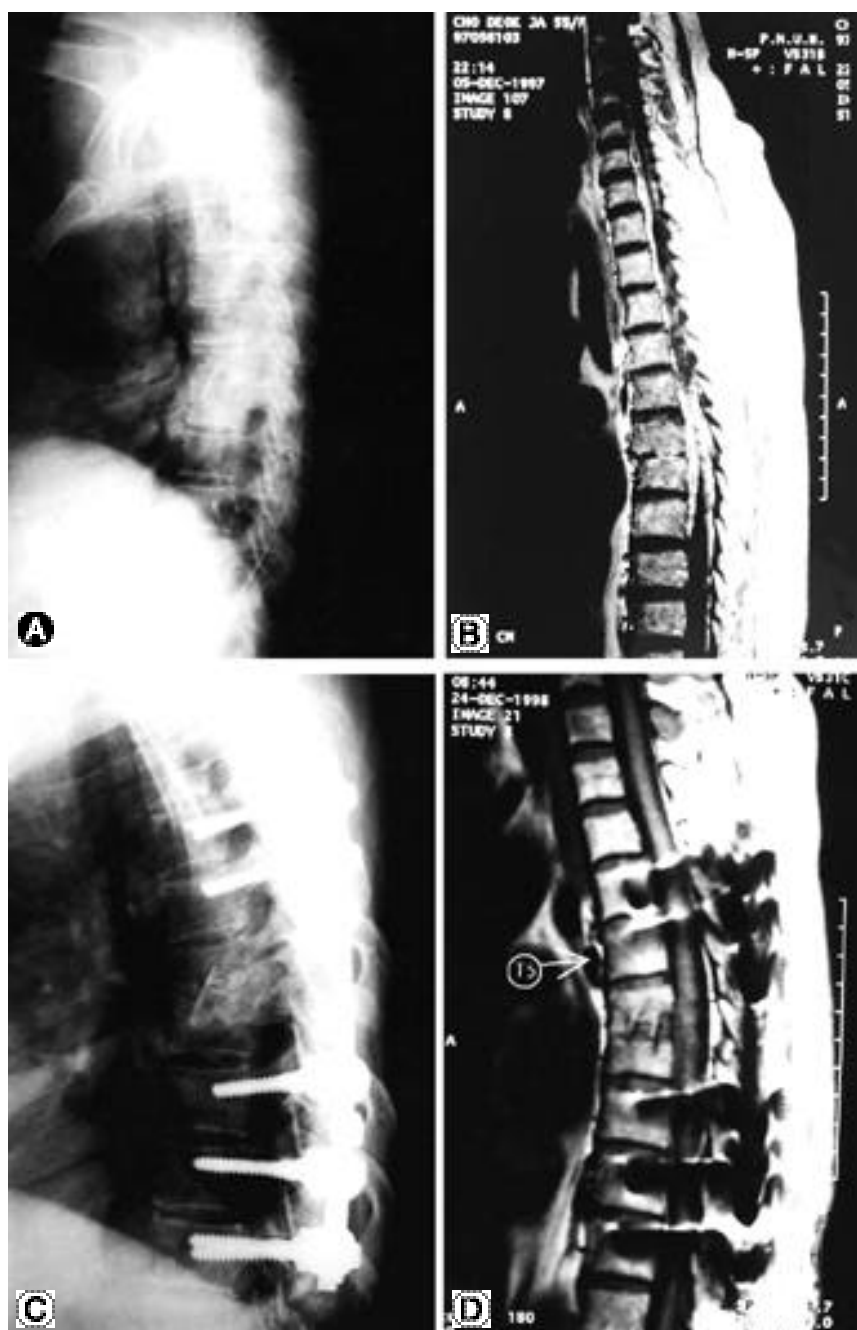
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(Fig. 1A-F) ,



**Fig. 1. E & F.** At postoperative 13 months, plain radiograph and T2-weighted sagittal MR image showed bony union with satisfactory maintenance of corrective kyphotic angle and didn't show any recurrence of infection.



**Fig. 2. A & B.** Preoperative radiograph and T1-weighted sagittal MR image of 55-year-old woman showed T6-7 tuberculous with extended inflammatory discharge into spinal canal.  
**C.** Postoperative radiograph after two stage operation-posterior instrumentation following anterior decompression of involved body and anterior interbody fusion.  
**D.** At postoperative 12 months, T1-weighted sagittal MR image shows no recurrence of tuberculosis infection.

**Table 1.** Changes of kyphotic angle

	Preoperative ( ° )	Postoperative ( ° )	Final follow up ( ° )
Group I	18 °	7 °	10 °
Group II	20 °	9 °	11 °

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 (p<0.05). , II  
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 II 71 mm/hr (51~103 mm/hr)  
 6.5 (3~9 ) ( :1~10, :1~15  
 mm/hr) . C ( ; < 1.0 mg/dL) I 가 가  
 1.5 (1~3 ), II <sup>29)</sup> 1934 Ito <sup>13)</sup>  
 1.6 (1~3 ) . (radical debridement)  
 (fusion) , 1956 Hodgson  
 Stock<sup>12)</sup>

2.

가

4 (3~6 )

3.

<sup>14,29)</sup>

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<sup>16)</sup> Nussbaum <sup>22)</sup>

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. 1990	Louw <sup>19)</sup>	1992	Oga <sup>23)</sup> , 1995
<sup>9)</sup> , 1996	Boachie	Sguillante <sup>3)</sup>	1999 <sup>5)</sup>

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