

EUROSPINE 2016 
5-7 OCTOBER, BERLIN, GERMANY

**Clinical outcomes of total lumbar disc
replacement implanted through an oblique
approach:
A prospective analysis with 2-year follow-up**

Eduardo Hevia MD¹, Juan Solaz MD², Carlos Barrios MD²,
Alberto Caballero MD¹, Jesús Burgos MD³

¹Hospital Central La Fraternidad, Madrid, Spain

*²Instituto de Investigación en Enfermedades Musculo-Esqueléticas, Valencia,
Spain*

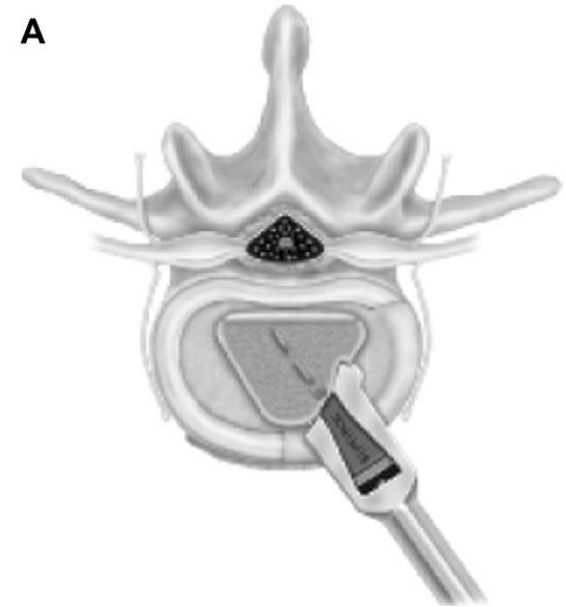
³Hospital Ramón y Cajal, Madrid, Spain

*None of the authors has any potential conflict of interest



Introduction

- Despite good clinical short and mid-term results, the anterior TDR implantation entails technical difficulties especially above the segment L5/S1 due to the vessel configuration
- Recently, oblique implantable TDRs have been developed primarily to facilitate the implantation of TDR, especially in the segment L4/5.
 - the anterior longitudinal ligament (ALL) and the lateral annulus fibers are only partially resected,
- To date, the literature is very scarce concerning the clinical impact of the oblique implantation of TDRs.

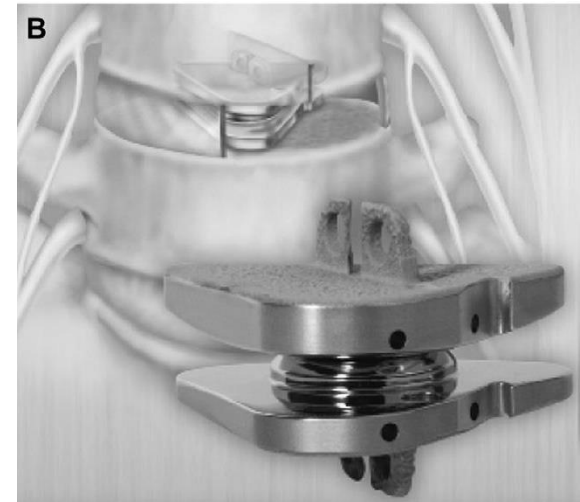


Purpose

To analyze and report the mid-term clinical efficacy, perioperative complications, and reoperation rates of L4/5 TDR using an oblique approach.

Design

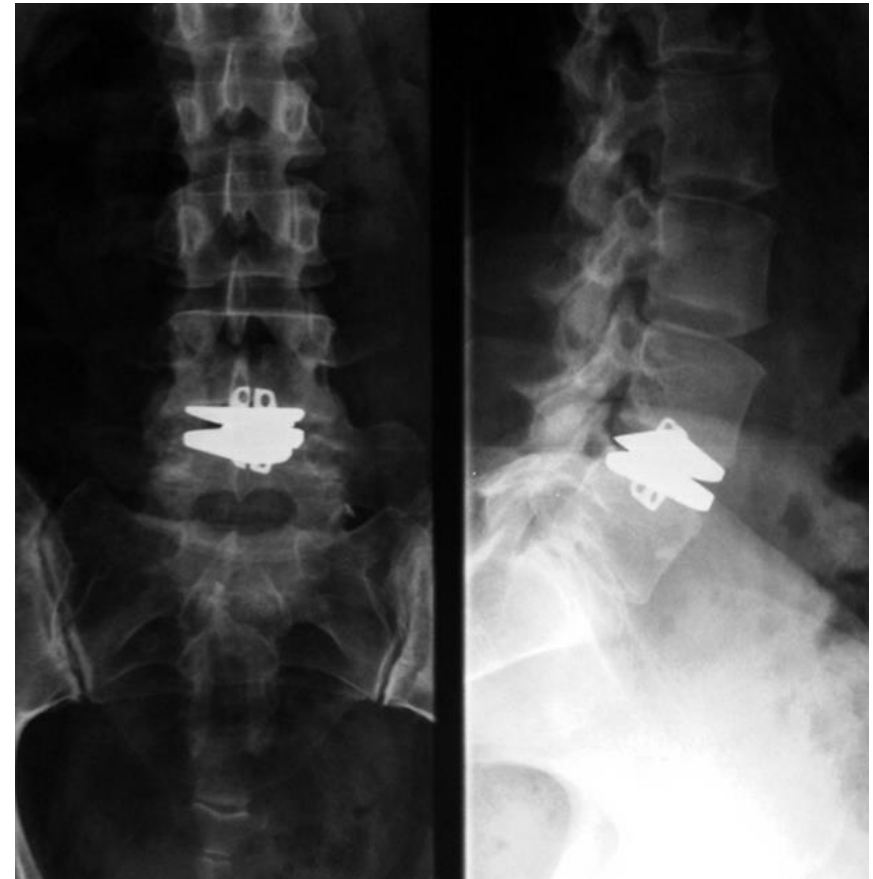
Prospective single-center investigation assessing the 2-year FU outcome of L4/L5 TDR implanted by an oblique approach



Methods

- A series of 52 patients with a minimum of 2-year FU was evaluated
- *Clinical Outcomes:*
 - ✓ Visual analog scale (VAS)
 - ✓ Oswestry Disability Index (ODI)
 - ✓ Health quality of life (SF-12),
 - ✓ Patient satisfaction rate
- Patients were examined preoperatively, 3, 6, 12 and 24 months after surgery

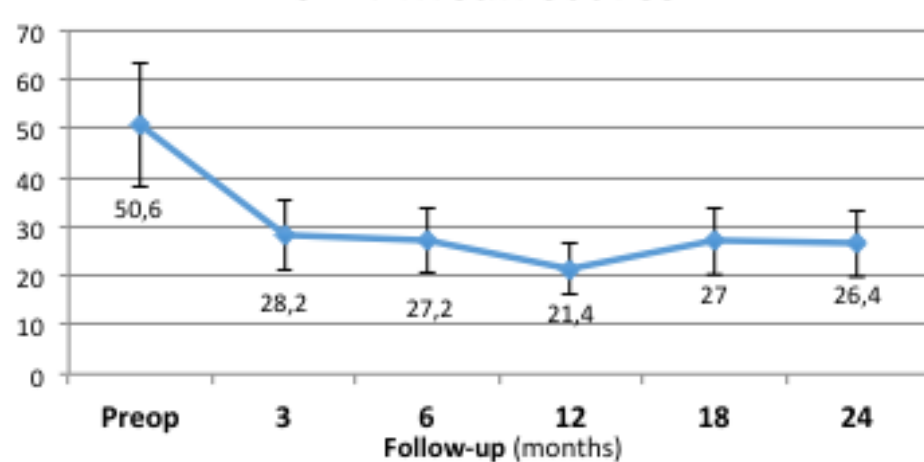
Variables	Mean ± SD	Min-Max
Age (years)	42.8 ± 9.5	25 - 68
Weight (Kg)	79.9 ± 17.7	49 - 123
Height (cm)	171.1 ± 9.1	149 - 188
BMI (Kg/m ²)	27.2 ± 5.0	18.2 - 44.6



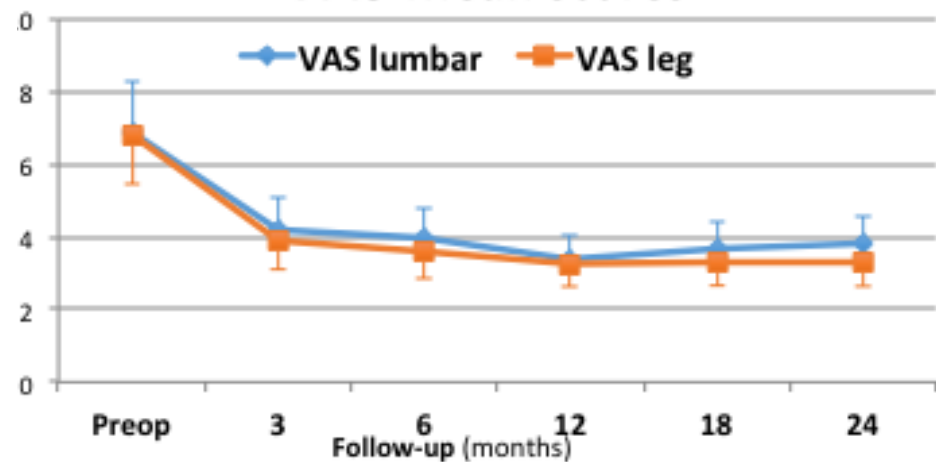
Results

- Highly significant improvement from baseline VAS and ODI levels at all postoperative FU stages ($p < .0001$)

ODI Mean scores



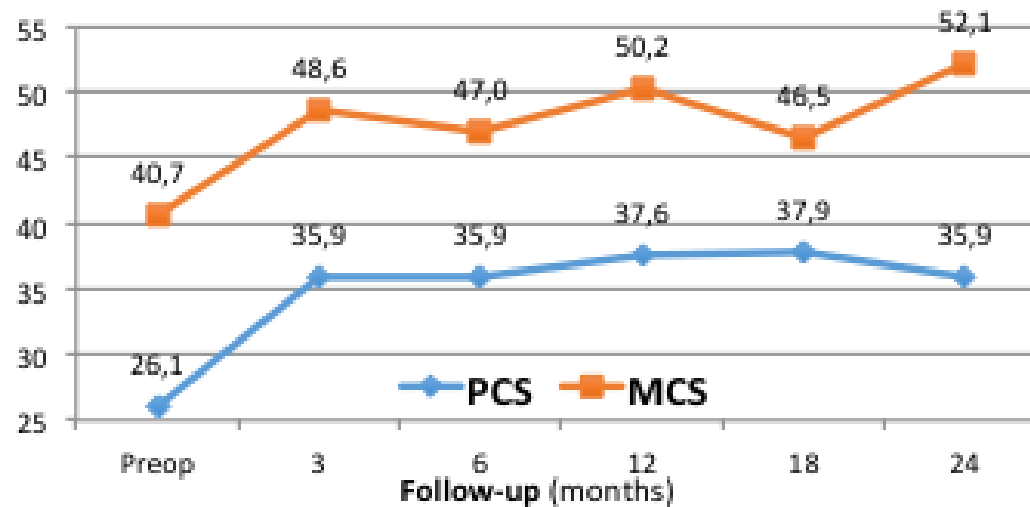
VAS Mean scores



Results

- Patient satisfaction rates remained stable with 75% of patients reporting a highly satisfactory outcome and 15.9% a satisfactory outcome

SF-12 (Physical and Mental Domains)



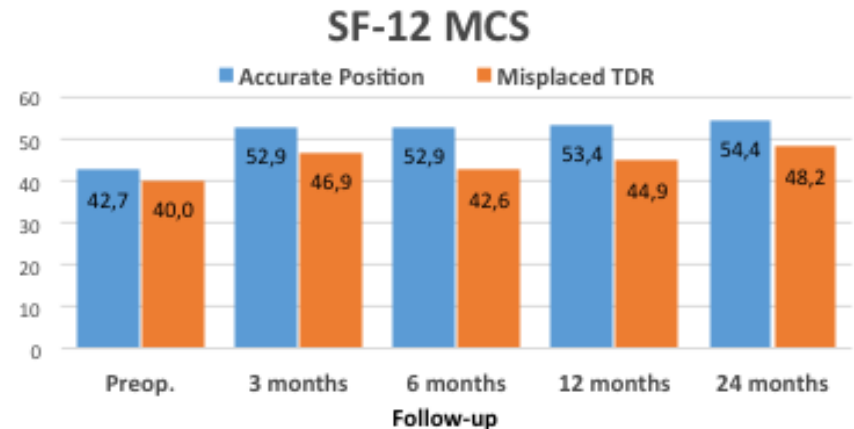
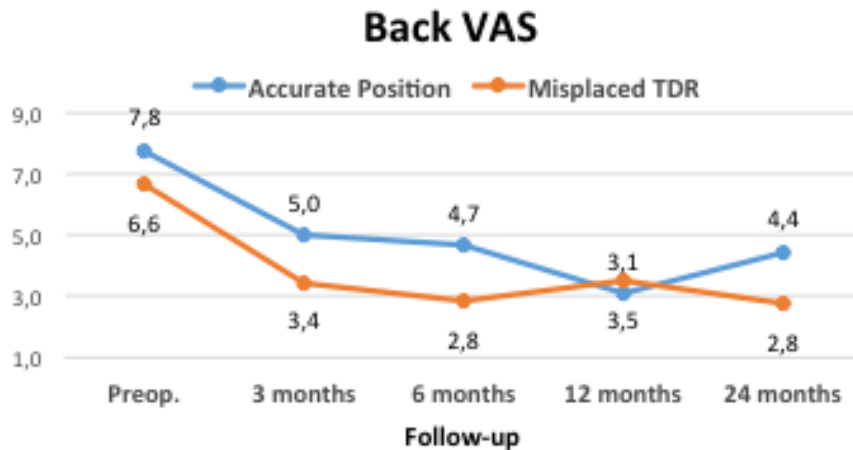
Results

- Vascular complication rate was 9,5%
- Other minor complications rate was 21,2% (superficial wound infection, haematoma, UTI, ileus)

- The overall complication rate was 30.7%
- There were no revision surgeries for general and/or device-related complications

Results

- TDRs showing **unsatisfactory implantation** in the radiological studies demonstrated similar improvement of VAS, ODI and SF-12 scores in comparison to properly implanted TDRs ($p < .05$).



Conclusions

- Despite the fact that the current data comprises the early experiences and learning curve associated with the oblique implanted TDR technique, the results demonstrate satisfactory mid-term clinical results after 2-year FU.
- Patient safety was proven with no reoperations related with the implant.
- Further studies should evaluate whether these findings remain stable at long-term follow-up.

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