

The presacral retroperitoneal approach for axial lumbar interbody fusion - a prospective study of clinical outcomes, complications and fusion rates at a follow-up of two years in 26 patients

W.D. Tobler and L.A. Ferrara.

Journal of Bone and Joint Surgery - British Volume, Vol 93-B, Issue 7, 955-960.

doi: 10.1302/0301-620X.93B7.25188

ABSTRACT:

The presacral retroperitoneal approach for axial lumbar interbody fusion (presacral ALIF) is not widely reported, particularly with regard to the mid-term outcome. This prospective study describes the clinical outcomes, complications and rates of fusion at a follow-up of two years for 26 patients who underwent this minimally invasive technique along with further stabilisation using pedicle screws. The fusion was single-level at the L5-S1 spinal segment in 17 patients and two-level at L4-5 and L5-S1 in the other nine. The visual analogue scale for pain and Oswestry Disability Index scores were recorded pre-operatively and during the 24-month study period. The evaluation of fusion was by thin-cut CT scans at six and 12 months, and flexion-extension plain radiographs at six, 12 and 24 months. Significant reductions in pain and disability occurred as early as three weeks postoperatively and were maintained. Fusion was achieved in 22 of 24 patients (92%) at 12 months and in 23 patients (96%) at 24 months. One patient (4%) with a pseudarthrosis underwent successful revision by augmentation of the posterolateral fusion mass through a standard open midline approach.

There were no severe adverse events associated with presacral ALIF, which in this series demonstrated clinical outcomes and fusion rates comparable with those of reports of other methods of interbody fusion.