

Radiographic outcomes of the Prone Transpoas Lateral Lumbar Interbody Fusion for Degenerative lumbar Spine Disease: A Multicentre Study

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INTRODUCTION

Prone transpoas lateral lumbar interbody fusion (PTP) is a novel modification of standard lateral lumbar interbody fusion (standard-LLIF). To date, no study has compared the vascular or visceral complications between the PTP and standard LLIF.

Objective

This study aimed to compare the vascular and visceral complications between the PTP and standard-LLIF.

METHODOLOGY

A retrospective electronic medical records review was conducted across ten centers to compile the patient-, procedural-, and outcomes data related to patients who underwent PTP. Among the data collected from consecutive cases at each site was itemization of intraoperative and postoperative complications.

From those, we highlighted the intraoperative vascular and visceral complications in order to compare these outcomes in PTP procedures to the historical results of a published survey (Uribe et al. Eur Spine J 2015;24:S386-96) about vascular and visceral complications following standard-LLIF.

RESULTS

The PTP cohort included a total of 364 patients, and the published standard-LLIF study referenced 13,004 patients. In the PTP cohort, there were no (n=0) visceral injuries and one (n=1) vascular (left common iliac vein) injury. There was no significant difference between the PTP group (n=1) and the published standard-LLIF in terms of vascular injuries (n=13) (p=0.3) or visceral injuries (n=11) (p=0.6).

CONCLUSION

There was no significant difference in the incidence of vascular or visceral injuries between this multi-center cohort of PTP procedures versus what was previously published on standard-LLIF. This comparison may be premature given that PTP is a more recently adopted procedure with a significantly lower case volume denominator; however, the safety profile of the early experience has not been concerning, and as PTP case volumes increase, these centers will continue to track and report these important outcomes.

FIGURE – Pre- and Post-Operative images

