

COMPARATIVE STUDY ON EFFICACY AND CLINICAL OUTCOMES OF MINIMAL INVASIVE SURGERY (MIS) TRANSFORAMINAL INTERBODY FUSION (TLIF) VS. MIS LATERAL INTERBODY FUSION (XLIF)

SUNDARESAN S, GEORGE ES, TAN CN

SPINE UNIT, ORTHOPAEDIC DEPARTMENT, HOSPITAL PUTRAJAYA

Background:

There is a paucity of reports comparing lateral approach surgery to other MIS options in treating degenerative disc disease (DDD).

Objective:

Comparing the clinical efficacy and outcomes between MIS TLIF and XLIF in the treatment of DDD of the lumbar spine.

Methods:

Single institution, retrospective cohort study. 38 patients who undergone surgery for DDD at L4/L5 level were analysed. (18 patients in TLIF; 20 patients in XLIF)

Results:

The XLIF group showed shorter duration of surgery and hospital stay compared to the TLIF group (176 mins vs. 208.3 mins, $P = 0.03$; 5.9 days vs. 9 days, $P = 0.03$). Minimal blood loss intraoperatively (<100cc) was higher in the XLIF group (85% to 58% in TLIF). Disc height restoration and foraminal height was higher in XLIF group respectively (0.56mm vs. 0.39mm, $P = 0.01$; 0.58mm vs. 0.45mm, $p = 0.06$). Symptoms improved in 83% of patients in the XLIF to 87% in the TLIF group. Hip flexion weakness was common in the XLIF group post operatively (40% vs 0%). There was one case of dural tear and surgical site infection in the TLIF group and none in XLIF group. VAS score post-op 6 months showed comparable reduction in both groups. Both groups had ODI improvement of 64% (TLIF) and 70% (XLIF) respectively.

Conclusion:

Lateral approach surgery shows comparable outcomes in resolution of symptoms compared to TLIF. With shorter duration of surgery & hospital stay with minimal blood loss, XLIF is a reasonable MIS option to other MIS techniques in treating lumbar degenerative disc diseases.