



## Per Freitag

Southern Illinois University School of Medicine, USA

### Changes in lumbar lordosis with AXIALIF interbody fusion

**Introduction:** Axial lumbar interbody fusion [AXIALIF] combined with different posterior stabilization was evaluated to see if the procedure significantly changed the lordosis of the lumbar spine.

**Methods:** The pre- and post-operative lumbar lordosis was measured in 224 patients. 74 patients had AXIALIF at L5-S1 and 150 from L4-S1. Of these, some had the axial rod inserted first, followed by either Medtronic Sextant, or facet screws. The second technique stabilized the posterior pedicle screws first, followed by the axial interbody implant. We examined the change in lordosis with different posterior stabilization techniques done along with AXIALIF procedure.

**Results:** SAS statistical analysis software was used to analysis the results. At L5-S1 [n=5], with the Sextant, there no statistically significant [p=0.75] difference in lumbar lordosis with 0.8 degrees increase post op. At L4-S1 [n=9] it was 1.2 degrees decrease post op and no statistically significant [p=0.72] difference. With use of facet screws for posterior stabilization in L5-S1 [n=10], there no statistically significant [p=0.06] difference in lumbar lordosis with mean 5.4 degrees decrease post op. At L4-S1 [n=2] it was 8 degrees decrease post op. Not statistically significant difference [p=0.07]. Starting with pedicle screws for posterior stabilization at L5-S1 [n=33], there no statistically significant [p=0.1] difference in lumbar lordosis with mean 3.1 degrees increase post op. At L4-S1 [n=90] it was 2.8 degrees decrease post op with statistically significant difference [p=0.003].

**Conclusion:** Axial LIF is an effective minimally invasive way to stabilize lower lumbar levels to sacrum without significant changes in lordosis of spine.

#### Biography

Per Freitag completed his Ph.D. in Anatomy at University of Illinois at the Medical Center in Chicago. He received his M.D. degree from University of Minnesota. He had his orthopaedic training at Northwestern University. He currently is the Director of the E. Shannon Stauffer Spine Fellowship at Southern Illinois University School of Medicine in Springfield, IL, where he actively participates in advanced training in spine surgery for orthopaedic residents and spine fellows.

[pfreitag@siu.edu](mailto:pfreitag@siu.edu)