

Symptomatic Adjacent Segment Disease (ASD) After Lumbar Or Lumbosacral Minimally Invasive Interbody Fusion

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Background:

Because of the increase in fusion surgery in recent years, ASD become an important topic in spine surgery. The development of motion preservation technologies and minimally invasive interbody fusion theoretically should lead to a decrease in this pathology.

Methods:

We performed a retrospective cohort study based on medical record review. From 2012 to 2017, 126 cases of minimally invasive interbody fusion were performed by the authors. Clinical ASD was the principal judgment criterion; the length of follow-up time and initial spinal disease were also recorded.

Results:

Only 67 patients met the recruitment requirements or were able to follow (29 M, 38 F) with an average age of 56 (24-84), Minimum 6 month follow up, (average 32 month, range 61-6).

As preliminary results the incidence of ASD, following MI lumbar fusions in our serie was 5,9 % (four patients), two with prior adjacent degenerative disease. Probably the incidence will increase with a longer follow up.

Conclusions:

Multiple studies have explored the risk factors contributing to ASD that include; Damage to the posterior ligamentous complex, fusion length (especially, three or more levels), sagittal imbalance, high degree of pelvic incidence, facet injury, advanced age, and prior adjacent degenerative disease.

We found a trend toward decreased risk of ASD compared to the published open group. This suggests that MI LIF may be associated with decreased long-term morbidity regard ASD compared to the open approach.