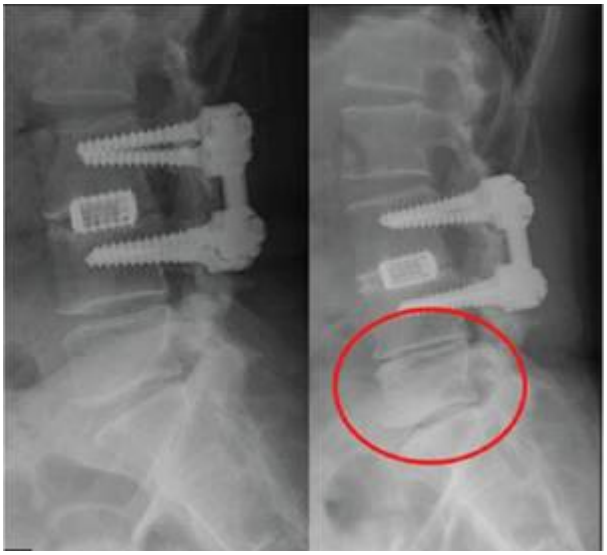
Lumbar adjacent segment disease



Instrumented posterior lumbar fusion has been widely applied as an effective procedure for treating patients with spinal lumbar degenerative disease. The development of pathology at the mobile segment adjacent to the lumbar spinal fusion has been termed as adjacent segment disease (ASD).

Risk factors

Many surveys have been distributed about the risk factors for adjacent segment degeneration (ASD) after lumbar fusion. Despite myriad of risk factors recognized for ASD evolution, study results have been inconsistent and there is not an agreement regarding which are the most important.

Although the paraspinal muscles play an important role in spine stability, no study has assessed the relationship between paraspinal muscle atrophy and the incidence of ASD after lumbar fusion.

Adjacent segment degeneration could seriously affect the long-term prognosis of lumbar fusion. Dynamic fixation such as the interspinous fixation, which is characterized by retaining the motion function of the spinal segment, has obtained satisfactory short-term effects in the clinical setting. But there are few reports about the biomechanical experiments on whether dynamic fixation could prevent adjacent segment degeneration [1].

Is an alternative to rigid fusion in neurogenic claudication patients in the absence of macro instability. Actually, it plays an important in the management of adjacent segment disease in previously fused lumbar spine, but also as a preventive measure in patients necessitating rigid fusion [2].

see Lumbar adjacent segment disease after TLIF.

Case series

Lumbar adjacent segment disease case series.

References

1)
Li CD, Sun HL, Lu HZ. Comparison of the effect of posterior lumbar interbody fusion with pedicle screw fixation and interspinous fixation on the stiffness of adjacent segments. Chin Med J (Engl). 2013;126(9):1732-7. PubMed PMID: 23652059.

2)
Nachanakian A, El Helou A, Alaywan M. The interspinous spacer: a new posterior dynamic stabilization concept for prevention of adjacent segment disease. Adv Orthop. 2013;2013:637362. doi: 10.1155/2013/637362. Epub 2013 Apr 10. PubMed PMID: 23662209; PubMed Central PMCID: PMC3639665.