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Predisposing factor for adjacent-segment failure following lumbar fixation for degenerative instability

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Aim: Adjacent-segment failure is a well-known risk of lumbar fixation. The aim of this retrospective study was to identify risk factors for next-segment failure in lumbar fixation for degenerative instability.

Method: We retrospectively evaluated 122 patients who underwent of lumbar fixation for degenerative instability from 2011 to 2014 in Faculty of Medicine, Cairo University. All procedures were performed by a single surgeon. The patients with next-segment failure underwent neurological assessment, radiographic studies and sequential follow-up examinations. The mean follow-up period for this group was 30 months.

Results: 33 patients of 122 fusion procedures were performed in women who were postmenopausal. A total of 19 patients of 125 patients developed symptomatic next-segment degeneration at a previously asymptomatic level; 15 were postmenopausal women. All women were postmenopausal, and 50% received bisphosphonate drugs and calcium supplementation preoperatively for osteopenia. 20% of all patients with next-segment failure were cigarette smokers. Next-segment diseases included spondylolisthesis (52%), spinal canal stenosis due to disc herniation and/or facet hypertrophy (33%), stress fracture (12%), and scoliosis (3%). Patients may have more than one degenerative process at the next segment.

Conclusions: Postmenopausal women show the highest risk of adjacent-segment failure for patients in whom lumbar fusion with rigid instrumentation is performed to treat degenerative instability.

Biography

Mohamed Shaban is working as Special Surgeon at Cairo University, Egypt. He has published many research works.

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