

Lumbar symptomatic pseudarthrosis

In the case of [symptomatic pseudarthrosis](#), the presentation is usually one of worsening axial [back pain](#). The pain may be a worsening of the original pain of the operation ("never got better") or may be new-onset. Scoliosis patients may complain of worsening deformity although this is not common. In the case of [Ankylosing Spondylitis](#), patients may be sensitive to their visual horizon. Neurological symptoms are unusual unless the segmental deformity is considerable.

It is not necessary to intervene for all patients in whom [symptomatic pseudarthrosis](#) is detected at 1 year postoperatively because only 11.9% of them will show persistent symptomatic pseudarthrosis. However, early revision surgery should be considered when severe symptomatic pseudarthrosis associated with diabetes, smoking, and fusion at more than 3 levels is present. Level of Evidence: 4 ¹⁾.

Intraoperative microbiological samples should be routinely obtained to exclude or identify occult infection in all revision surgeries for symptomatic pseudarthrosis of the spine, as this information can be used to guide postoperative antibiotic treatment ²⁾.

Jung et al. investigated the prognosis of symptomatic pseudarthrosis observed at 1 year after lateral lumbar interbody fusion (LLIF) surgery and analyzed the risk factors for persistent pseudarthrosis for 2 years postoperatively.

Summary of background data: Few papers have evaluated the prognosis of symptomatic pseudarthrosis following LLIF surgery.

Methods: One hundred fifty-two patients with a minimum follow-up of 2 years were screened. Fusion status was assessed at 1 year postoperatively, and unfused segments were re-evaluated at 2 years postoperatively. Dynamic X-rays and CT images were acquired to evaluate the fusion status. Demographic data were evaluated to identify the risk factors associated with persistent pseudarthrosis. Clinical outcomes, including the visual analog scale (VAS) for back/leg pain and the Oswestry disability index (ODI), were evaluated preoperatively and at 1 and 2 years postoperatively.

Results: Symptomatic pseudarthrosis was detected in 42 patients at 1 year postoperatively. Among them, 23 patients (54.8%) exhibited solid bony fusion 2 years postoperatively without further intervention. Fourteen patients (33.3%) showed asymptomatic pseudarthrosis, and the remaining 5 patients (11.9%) showed symptomatic pseudarthrosis. Multivariable analysis showed that diabetes (adjusted OR: 2.817, $p = 0.007$), smoking (adjusted OR: 6.497, $p = 0.008$), and fusion at more than 3 levels (adjusted OR: 2.525, $p = 0.031$) were risk factors for persistent pseudarthrosis. Improvements in the VAS scores for back pain and ODI scores were significantly lower in the persistent pseudarthrosis group than in the final solid fusion group at 2 years postoperatively.

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Jung JM, Chung CK, Kim CH, Yang SH, Ko YS. Prognosis of Symptomatic Pseudarthrosis Observed at 1 Year After Lateral Lumbar Interbody Fusion. Spine (Phila Pa 1976). 2021 Feb 3. doi: 10.1097/BRS.0000000000003980. Epub ahead of print. PMID: 33534522.

2)

Burkhard MD, Loretz R, Uçkay I, Bauer DE, Betz M, Farshad M. Occult infection in pseudarthrosis revision after spinal fusion. Spine J. 2020 Oct 17:S1529-9430(20)31172-4. doi: 10.1016/j.spinee.2020.10.015. Epub ahead of print. PMID: 33080375.

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