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Principles of Lumbar Spine Stabilization

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– Abstract –

Study Design : Review of the literatures.

Objectives : To provide the principles of fusion and internal fixation for the degenerative lumbar disc diseases.

Summary of Literature Review : Lumbar spine stabilization can be achieved with fusion that eliminates the motion of the lumbar motion segment.

Materials and Methods : Fusion only or fusion with internal fixation, anterior or posterior approach, additional use of interbody fusion and cages as well as decompression have been used for the treatment of degenerative lumbar disc diseases.

Results : Various radiological and clinical results, fusion rates and complications have been reported on each fusion techniques and internal fixation devices in the literatures.

Conclusions : Stabilization is considered to be useful therapeutic option for degenerative lumbar disc diseases but not absolute one. Therefore, careful consideration should be required for its applications of degenerative lumbar disc diseases.

Key Words : Stabilization, Degenerative lumbar disc diseases

(Lumbar Posterolateral Fusion)

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(Posterior Lumbar Interbody Fusion: PLIF)

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(Lumbar Circumferential Fusion, 360 Degree Fusion)

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- ease with posterior lumbar interbody fusion: instrumented versus non-instrumented groups. *J Korean Spine Surg*, 2: 106-113, 1995.
- 16) **Shin BJ, Know YB, Suh YS, Lee BI, Kim YI, Rah SK and Choi CU** : Complications and problems related to pedicle screw fixation of spinal column. *J Korean Spine Surg*, 1:206-215, 1994.
 - 17) **Shin BJ, Min KD, Kwon H, Lee BI, Kim YI, Rah SK and Choi CU** : Surgical result of isthmic spondylolisthesis: comparison of posterolateral fusion vs. PLIF. *J Korean Spine Surg*, 3:61-68, 1996.
 - 18) **Ahn JS** : Biomechanics of lumbar spinal fusion. *J Korean Spine Surg*, 7:126-132, 2000.
 - 19) **You JW** : Posterolateral fusion of lumbar spine. *J Korean Spine Surg*, 7:169-175, 2000.
 - 20) **Lee CS** : Surgical treatment of spinal stenosis without instrumentation(decompression only). *J Korean Spine Surg*, 7:117-118, 2000.
 - 21) **Jang EC, Seo JH, Song KS and Ryu HS** : A biomechanical study of two kinds of tapered pedicle screws in osteoporotic lumbar spine. *J Korean Orthop Assoc*, 34:955-962, 1999.
 - 22) **Jahng JH, Baek DH, Chang H, Bahk WJ, Eun SP, Sohn JM and Lim GS** : Anterior interbody fusion and posterior instrumentation for degenerative lumbar spondylolisthesis. *J Korean Orthop Assoc*, 33:359-366, 1998.
 - 23) **Chang HG** : Indication of lumbar fusion. *J Korean Spine Surg*, 7:133-144, 2000.
 - 24) **Chung JY, Seo HY and Kim JS** : The results & affecting factors of posterior lumbar interbody fusion with TPM cages in spondylolisthesis. *J Korean Spine Surg*, 7:586-596, 2000.
 - 25) **Ha KY, Kim KW, Chang CH and Won JY** : Multiple operated lumbar spine. *J Korean Spine Surg*, 4:329-336, 1997.
 - 26) **Ha KY, Moon MS and Paek SY** : Effect of instrumented stabilization and fusion of degenerative lumbar scoliosis on unfused adjacent segment. *J Korean Spine Surg*, 2:270-278, 1995.

