Keyhole anterior approach with cage fixation in cervical spondylosis and OPLL

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Introduction: Surgical strategies in management of cervical spondylotic myelopathy (CSM) and radiculopathy remain controversial, especially when it is associated with ossification of the posterior longitudinal ligament (OPLL) and surgical methods are widely different even among spinal neurosurgeons.

Methods: From 1997 to 2014, among 752 cases of cervical degenerative disorders, 524 cases of cervical spondylosis and discs are treated by anterior approach in 441 (84.2%) and by posterior approach in 77 (14.7%), while in 228 cases of OPLL, anterior approach was in 159 (69.7%) and posterior in 65 (28.5%). Combined approach was used only in 10 cases (1.3%) altogether. 600 cases were treated mainly by keyhole anterior approach with inter-body cylindrical cage fixation, 441 (73.5%) with cervical spondylosis and 159 (26.5%) with OPLL. The level was one-level in 48.9%, two-level in 47.5% and three-level in 3.6%.

Results: Surgical results were satisfactory (excellent and good) with a few complications in 88% and fusion rate at one-year follow-ups was 90%. In the cases of severe cervical radiculopathy due to foraminal discs and stenosis on the right side, transuncal foraminotomy on right is a useful, effective and less invasive method in the right-sided approach for right-handed surgeons.

Conclusions: Keyhole micro-discectomy with cage fixation is a less invasive and effective method in CSM and segmental OPLL at one and two levels. Right transuncal foraminotomy is also an effective procedure in right-sided approach by right-handed surgeons in addition to cage fixation.

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