Biomechanics Among Various Techniques of the Cervical Laminoplasty

Dewa Putu Wisnu Wardhana, Mahadewa Tjokorda GB, Maliawan S

ABSTRACT

The nature of cervical spine motions consists of multiple components of the cervical spine, intervertebral disc, ligaments, and adjacent facet joints. Cervical spinal stenosis is disabling and this chronic degenerative disorder commonly occurs in middle age–elderly persons. Surgical options for those spinal cord disorders generally are the anterior or posterior approach. Historically, a conventional multi-level laminectomy was performed to decompress the spinal cord but there is a high rate of late biomechanical complications such as segmental instability, and kyphosis. Laminoplasty was developed to relieve the spinal cord compression and maintain the posterior elements. Lately, there are various techniques of the cervical laminoplasty, the biomechanical impact of these techniques will be described.