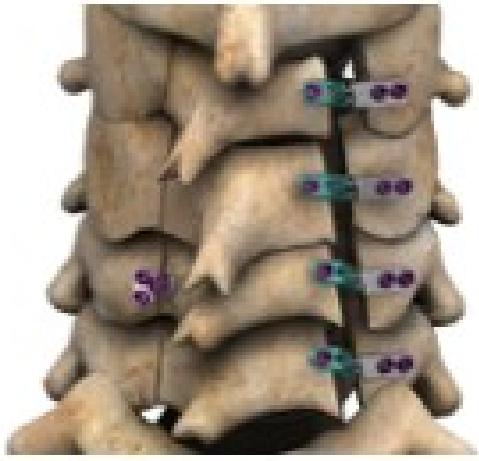
CERVICAL LAMINOPLASTY

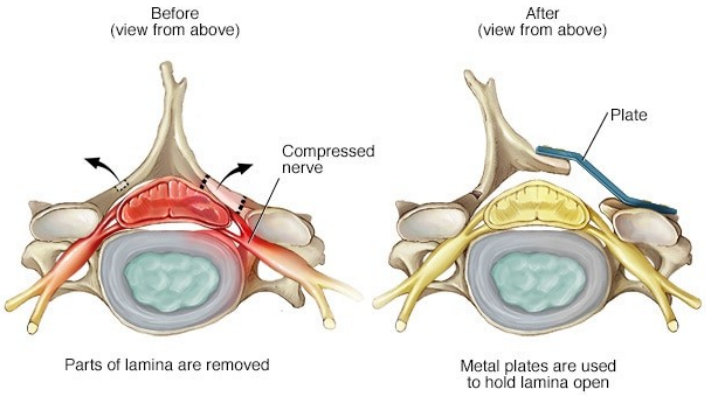
Cervical laminoplasty is a type of motion preserving surgery done for typically multilevel spinal cord compression of the cervical spine. It is done from the back hence the mean posterior. Typically, it allows to decompress multiple levels all in one surgery. It has been around for more than 30 years that came from Japan originally, where the prevalence of spinal cord compression due to ossified posterior longitudinal ligament is quite high. Since then, it has been used all over the world for spinal cord compression due to degenerative stenosis also know as cervical spondylotic myelopathy, stenosis from ossification of posterior longitudinal ligament, and congenital stenosis to name few others.

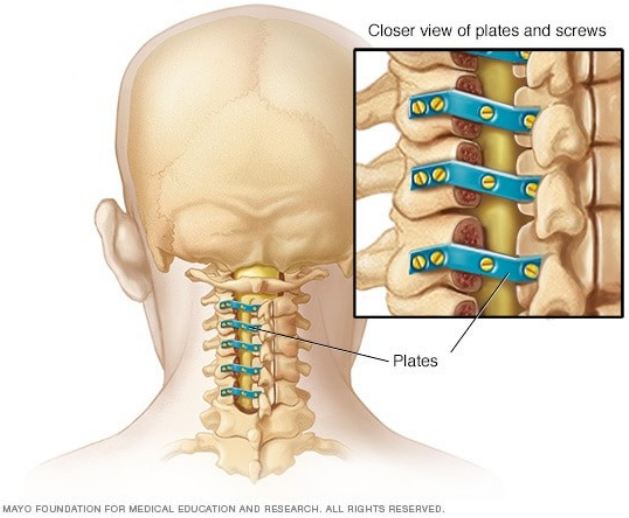
There are two main techniques - open door, also know as Hirabayashi technique and French-door technique. The majority of surgeons including surgeons in our practice prefer the open-door technique. It involves creating an hinge on one side of the roof of the spinal canal column and hinging "the lamina open." It is different from laminectomy when the roof of the spinal canal or lamina is completely removed. It is also different from a fusion in addition to laminectomy or removal of the roof of the spinal canal. Screws and rods are inserted on either side of the spine. Laminoplasty does involve insertion of mini plates to prevent the hinge closure. It is different from a fusion since those plates are not bridging several levels. The only purpose of the mini plates is to ensure that the open lamina does not close again.



The main limitations are laminoplasty are persistent axial neck pain. It is due to persistent arthritic changes in the cervical spine. Laminoplasty being a motion preserving procedure does not fuse levels and hence does not eliminate the pain from arthritis in the facet joint or arthritis in the disc also know as degenerative disc disease.

Complications of laminoplasty are similar to complications of posterior cervical laminectomy or posterior cervical laminectomy and fusion include, but not limited to risk of infection, risk of bleeding, risk of dural tear that may cause postoperative headache, risk of stenosis at another level, risk of postoperative kyphosis or hunching forward and risk of C5 palsy. Neurologically, C5 palsy manifesting as weakness of deltoid muscles and it is probably the most common occurrence either seen in 5% of people or one in 20. It is typically temporary. To ensure absolute neurological safety the surgery was done under neurological monitoring, but despite of it there is still 5% chance of typically transient weakness of the deltoid. The spinal cord injury is very uncommon but had been reported. The risk of that would be estimated to be around 1% or 2%.





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