

Sagittal Balance Correction In Cervical Compressive Myelopathy- Is It Helpful?

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Background:

Imbalance of the spine in the sagittal plane is an important factor for clinical symptoms in degenerative cervical spine. Addressing the pathology it's equally important to maintain or reinforce disturbed sagittal balance.

Material And Method:

This is ongoing study in single centre at tertiary care hospital. Group 1: Patients underwent cervical laminectomy and lateral mass fixation without junctional fixation. Group 2: Patients undergoing cervical laminectomy and lateral mass fixation including C7-T1 transfacet junctional fixation. Comparison of pain (Denis pain score) and neurological outcome (Modified Japanese orthopedic association score) and changes in sagittal balance of cervical spine.

Result And Outcome:

There was a significant pain reduction at three month post operatively in both group, but we didn't find any significant difference in outcome of pain in both groups ($p=0.198$). Improvement in neurological outcome between two groups post operatively at 3 month in form of MJOS statically significant ($p=0.047$). In our Group 1 we observed pre operative T1 slope range 18-52 degree and post operative range 21-48 degree. In Group 2, pre operative T1 slope was 16-48 degree and post operative it is normalizing to 12-28 degree. We observed statically significant difference in reduction of T1 slope between two groups

Conclusion:

Normalizing sagittal balance in patients of Compressive cervical myelopathy by cervical laminectomy and posterior fixation including cervical thoracic junction (C7-T1 transfacet junctional fixation) significantly improves the neurological outcome compared to Posterior fixation without junctional fixation.