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BILATERAL UPPER LAMINAR WEDGE CUTTING DURING OPEN DOOR LAMINOPLASTY: A PROSPECTIVE COMPARATIVE CLINICAL TRIAL

Introduction/Aim

Open door laminoplasty (ODLP) was devised as a motion sparing surgical procedure for cervical myelopathy. However, there has been also concerned regarding critical drawbacks, including limited range of motion (ROM) and persistent neck pain. In literature, the drawbacks may be caused by impingement of the posterior bony arch by an alteration of laminar direction. Therefore, the authors aimed to introduce the upper laminar cutting procedure for eliminating impingement and to compare the clinical outcomes.

Materials and Methods

55 patients who received ODLP and followed up for more than six months after surgery were included. To compare the two surgical techniques, clinical outcomes based on the pain intensity using visual analog scale (VAS) for posterior neck pain and 12-item short-form health survey (SF-12) and modified JOA for the functional status, radiological outcomes based on the extent of cervical spine ROM in flexion and extension lateral radiographs at preoperative and each follow-up time, and surgical outcomes were evaluated.

Results

Of Fifty-five patients, Conventional group (group A) was 21 patients and modified group with laminar cut (group B) was 34 patients. The mean range of motion is 45.8° preoperatively, 26.7° at postoperative three months, and 30.8° at six months in the group A and 44.9°, 29.7° and 36.6° in the group B. Mean VAS for posterior neck pain is 4.6 at postoperative one month, 3.0 at postoperative three months, and 2.1 at six months in group A and 3.9, 2.3 and 1.0 in group B. SF-12 and m-JOA at each follow-up time, and surgical outcomes were also similar.

Discussion

There has not been reported the modification method of ODLP for improving range of motion and reducing persistent neck pain.

Conclusion

The current study demonstrated that performing additional laminar cutting procedure group may associate with more preserved cervical ROM after surgery compared to the conventional ODLP procedure. There was no significant difference between the groups, in terms of pain intensity and clinical outcomes.