

Abstract #1026.doc

Introduction

Cervical laminoplasty is an effective and safe surgery for cervical canal stenosis and cervical OPLL. The Centerpiece mini-plate is an instrument used to secure the laminae and maintain cervical canal expansion.

Materials and Methods

In 2014, 60 patients received unilateral open-door cervical expansive laminoplasty at our hospital. The group included 20 females and 40 males, with mean age of 71 (41-90) years. Between July and November, Group A (30 Pts) was using the mini-plate. Between January and June, Group B (30 Pts) was using suture suspension. We compared open angles group A and B in post operative CT.

Surgical technique

After receiving general anesthesia, the patient is positioned prone with the head secured in a Mayfield three-pins head-holder. The head and neck are held in flexion. The spinous processes are then amputated at their bases from C3 through C6. The opening side is made on the left side. On the open side, we create a trough by completely removing the ventral cortex. Hinges are created by making another trough on the right side. The dorsal cortex and the cancellous bone are removed. The lamina is opened carefully. In group A for the mini-plate fixed C4 and C6 laminae, the appropriately sized laminoplasty plate for each level is selected using the trials. We use the drill bit to make two screw holes on the lateral mass, and then insert two 5-mm screws to anchor the plate to the lateral mass. In group B, the laminae are fixed using Hirabayashi's classic open-door laminoplasty techniques.

Result

C5 open angle was 36 ± 0.48 degree in group A, 46 ± 1.7 in group B ($p < 0.001$). No significant differences were found between group A and B in pre- and post ope JOA scores. In C5 plasy, three in group A, two in group B. Three screws were back out. Two in group B were performed re-operation caused laminae closure.

Discussion and Conclusion

The mini-plate can keep same open angle and might be possible to prevent re-operation.