

Postoperative C4 radiculopathy may result in axial pain after cervical laminoplasty

Objective:

Axial pain, the pain from the neck to shoulder, after cervical laminoplasty is a burdensome complication. Although it has been suggested that the posterior muscle plays a pivotal role in axial pain, the pathogenesis has not been fully elucidated. The study suggested that postoperative axial pain may be involved in postoperative C4 radiculopathy, which is caused by a pathomechanism similar to that of C5 palsy.

Methods:

We describe the case of a 48-year-old woman underwent C4-6 double-door laminoplasty for cervical myelopathy. On the second postoperative day, hypoesthesia on the left side of the wound and neck pain predominantly on the left side were observed. Postoperative MRI showed the left C3-4 foraminal stenosis and slight posterior shift of the cord. The side of the pain and hypoesthesia was localized to a region of the left C4 dermatome. Then, a left C4 nerve root block was performed using 1.0 mL of 1% mepivacaine hydrochloride on the eighth postoperative day.

Results:

The neck pain was improved from 7 to 2 of numerical rating scale after the root block, and did not worsen thereafter.

Conclusions:

C5 palsy is a known complication after laminoplasty caused by the posterior shift of the cord. A recent anatomical study demonstrated that the C4 root are likely vulnerable to traction, compared with the caudal roots such as the C5, 6, 7, and 8 roots. This study suggests that the postoperative C4 root disorder may contribute to axial pain, and provides a new perspective on axial pain.