1697 - C5 Palsy after Cervical Laminectomy: Natural History and Risk Factors in a 10 Year Series

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Introduction

Palsy of the fifth cervical nerve (C5) is a well-known complication of cervical laminectomy, occurring in 1-30% of cases.

Objective

To determine the rate, prognosis, and risk factors of C5 palsy after first time cervical laminectomy in a large 10 year series.

Methods

A retrospective chart review identified patients undergoing first time cervical laminectomy for degenerative spine pathologies at a single institution between January 2008 and July 2018. Patients were included if a complete laminectomy was performed at C4 or C5 and had completed pre-and postoperative upright lateral x-rays. Patients with a history of prior cervical spine surgery, concurrent anterior surgery, intradural pathology, spinal tumor, or spinal trauma were excluded. Patient history, surgical specifics, and neurologic function were recorded.

Results

A total of 189 patients were treated by 13 surgeons; 53 patients (28.6%) developed C5 palsy postoperatively. Of patients with C5 palsy, 40 (75.5%) recovered to baseline strength, 46 (88.7%) had at least grade 4 strength at last follow up, and 4 (7.5%) had strength worse than baseline and grade less than 3. Mean time to recovery was 9.7 months (max 7 years). Age, gender, preop motor score, number of levels decompressed, smoking history, and comorbidities were not associated with a significant increase in risk of C5 stretch. Fusion to the upper thoracic spine was associated with increased risk of C5 palsy (40.0% vs 23.1%, p = 0.19). No significant associations were found with failure of C5 palsy to recover.

Conclusions

In this series of patients undergoing first time posterior cervical decompression fusion to the thoracic spine was associated with an increased risk of C5 palsy. Overall prognosis of C5 palsy is good, however, risk of this condition may be greater than previously reported.