

Open-Door Cervical Laminoplasty with Preservation of Posterior Structures

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Abstract

Objective To demonstrate that preservation of all posterior structures during open-door laminoplasty (ODL) is associated with a significant preservation of motion.

Methods Fifteen patients underwent cervical ODL by one surgeon for treatment of cervical spondylotic myelopathy. An open-door technique was employed, and the laminae on the open side were reconstructed using miniplates with allograft strut bone graft. All spinous processes and interspinous and supraspinous ligaments were preserved within the operative levels and between supra- and subjacent levels in all patients. Postoperative radiographs were obtained 1.5, 3, 6, and 12 months. Computed tomography scans were obtained at 12 months.

Results There were no significant intraoperative or perioperative complications. Postoperatively, the neutral angle was 6.8 ± 11.5 degrees (95% confidence interval: 0.5 to 13.1), representing a loss of lordosis of 3 degrees (not significant). The difference between the preoperative and postoperative arc range of motion was 5.96 ± 11.9 degrees (confidence interval: -0.62 to 12.5). The average percent loss of motion was $3.5\% \pm (0.1$ to 6.9%). Four patients had an increased range of motion postoperatively.

Conclusion Open-door laminoplasty with preservation of all posterior structures provides greater preservation of motion than has been previously described.

Keywords

laminoplasty - open-door laminoplasty - cervical spondylotic myelopathy - range of motion - alignment

開門頸椎椎板成形術並保留後部結構

目的 為了證明保存在開門頸椎椎板成形術（ODL）中保留後部結構是與明顯能保留的活動有關。

方法 15 位由同一位外科醫生進行頸椎 ODL 治療頸椎退化性脊髓病變的患者。使用開門式技術，用迷你骨板及異體骨移植在開放位置重建椎板。所有病者在手術節段和手術以上及以下相鄰節段的所有棘突，棘突間和棘突上韌帶均被保存。在手術後 1.5，3，6 和 12 個月進行了放射線檢查。在 12 個月電腦斷層掃描。

結果 沒有顯著性的術中或術期間併發症。術後的中位角度為 6.8 ± 11.5 度（95%信賴區間：0.5 至 13.1），失去前凸 3 度（不顯著）。術前和術後的圓弧關節活動度之間的差異為 5.96 ± 11.9 度（信賴區間：-0.62 至 12.5）。損失活動的平均百分比為 3.5%， \pm （0.1%至 6.9%）。4 名患者於手術後增加了活動度。

結論 比較以往的描述，開門椎板成形術並保留後部結構能保留更大的活動度。