

Original Article

The Outcomes of Anterior Spinal Fusion for Cervical Compressive Myelopathy—A Retrospective Review

壓迫性脊髓型頸椎病之前路手術治療效果的回顧分析

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Abstract

Background

This study examined the prognostic factors that affect the surgical outcome of anterior spinal fusion in patients with cervical compressive myelopathy (CCM).

Methods: A retrospective review of the result of surgical treatment in 49 cases of CCM using anterior spinal fusion surgical techniques. The study period was from June 1990 to June 2008, with a mean follow-up of 6.57 years. Seven patients died during the follow-up period because of other medical diseases. The Japanese Orthopaedic Association score for cervical myelopathy and recovery rate were used to assess the functional results of the remaining 42 cases.

Results: A mean Japanese Orthopaedic Association score improvement from 10.21 to 14.23 points after the operation was observed. The overall recovery rate was 65.38%, with excellent or good results of 80%. After a year of follow-up, we did not find significant improvement or deterioration on the neurological status on further follow-up. Acute complications were not common. One patient underwent re-operation because of slipping of the graft during resuscitation after early post-operative acute myocardial infarction. This patient showed post-operative neurological deterioration. Two patients had subsidence of the graft, three had pseudo-arthritis, and two had graft resorption. There were also three patients with degenerative changes of the adjacent vertebra. No re-operation was done for patients with these late complications in this review.

Conclusion: Anterior cervical decompression with bone fusion is a viable surgical option for patients with one level of anterior cervical cord compression, especially for patients with kyphosis or straight canal spine. For patients with two- to three-level involvement, anterior cervical decompression with bone fusion provides good functional result in proper selection of cases. We also identified some prognostic factors (male sex,

symptoms less than 1 year, and age less than 70 years) in predicting a favourable outcome of anterior spinal fusion for CCM.

中文摘要

背景: 本研究探索經前路手術(ASF)處理頸椎壓迫性脊髓病 (Cervical Compressive Myelopathy) 的一些影響手術結果之預後 因素

方法: 本研究回被包括 1990-2008 年間曾採用盆骨移植前路手術(ASF)處理頸椎壓迫性脊髓病 (Cervical Compressive Myelopathy) 病例共 49 宗, 平均隨訪時間約 6 年半。當中七名病人在研究期間因其他內科疾病去世。其餘 42 名病人在手術前後採用日本骨科學會的頸椎脊髓病評分方法(JOA score)評估功能復原結果。

結果: 術後的平均 JOA score 評分由 10.21 改善到 14.23 分, 平均復原率為 65.38%, 百分之八十病人有良好或以上功能之復原。手術一年後隨訪, 病人的神經的功能已經沒有顯著改變。手術後初期引致急性的併發症並不常見。只有一名病人因急性心肌梗塞需要心肺復甦術而引致在術後盆骨移植物移位而要重做手術, 她是唯一術後功能比手術前差的個案。在隨訪其間, 骨融合不完全而引至假關節及附近頸椎有提早退化跡象各有三例, 另外有骨移植物吸收及下陷各有兩例, 但沒有病人因以上延遲的併發症需要再做手術。

總結: ASF 適用於一節段頸椎前路脊髓受壓的病人, 尤其是患者有頸椎後凸畸形或直的頸椎管, 是其中一種可行的手術。患者有兩或三節段頸椎脊髓受壓時, 術後亦有良好的功能性復原, 但需要經過適當地選擇個案。我們亦發現一些影響手術結果之預後因素, 如男性、70 歲以下及病徵 1 年以內的病人會有較佳的復原。

Keywords: *anterior spinal fusion, cervical myelopathy, prognostic factors*