

Neurologic Recovery after Anterior Cervical Discectomy and Fusion

Study Design Retrospective review.

Objective The objective of this study is to describe the natural history of neurologic recovery after anterior cervical discectomy and fusion (ACDF).

Methods Patients between 18 and 80 years of age, diagnosed with cervical radiculopathy, who underwent single-level ACDF and were followed for a minimum of 2 years were identified from a single-center database. Sensory and motor deficits were documented and graded based on physical examination findings at preoperative and postoperative visits, and used to calculate deficit rates.

Results One hundred eighteen patients were included in the study. Mean age was 46 ± 9.2 years and mean follow-up time was 3.8 ± 2.1 years. At the time of surgery, 66% had a sensory deficit. Recovery of sensory function was seen in 85% of patients within 1 year. At final follow-up, new sensory deficits had developed in 30% of patients, 60% of whom had adjacent-level sensory deficits. Patients with preoperative sensory deficits tended to be more likely to develop a new deficit postoperatively ($p = 0.05$). At the time of surgery, 55% had a motor deficit. Recovery of motor function was seen in 95% of patients within 1 year, and 14% developed new postoperative motor deficits by final follow-up. Of those patients who developed a new motor deficit postoperatively, 76% did so at an adjacent level.

Conclusions In our series, a high percentage of patients recovered neurologic function during the first year after ACDF. Adjacent-level and remote-level degeneration were large contributors to neurologic deficits that occurred in subsequent years.

頸椎前路椎間盤切除和融合後神經功能恢復

研究設計 回顧性分析

目的 本研究的目的是描述頸椎前路椎間盤切除及融合術（ACDF）後神經功能恢復的自然史。

方法 從單一個中心的數據庫中被診斷為頸椎神經根病變的 18 和 80 歲之間的患者，接受了單節段 ACDF，並跟進至少 2 年。記錄了感覺和運動障礙，並根據體檢結果在術前和術後的會面評級，並用於計算的障礙率。

結果 118 個患者被納入本研究。平均年齡為 46 ± 9.2 歲，平均跟進時間為 3.8 ± 2.1 年。在手術時，66% 有感覺障礙。在 1 年之內，85% 的患者恢復感覺功能。在末次隨訪時，30%

的患者發展出新的感覺障礙，其中 60%有相鄰節段的感覺障礙。術前已有感覺障礙的患者往往是更容易在術後發展出新的障礙（ $P = 0.05$ ）。在手術時，55%已有運動障礙。在 1 年以內，95%的患者恢復運動功能，在末次隨訪時，14%發展出新的運動障礙。那些術後發展出新的運動障礙患者中，有 76%同樣出現在相鄰節段。

結論 在我們的系列中，高比例的患者在 ACDF 後的第一年恢復神經功能。相鄰節段和遠程節段退化是在隨後幾年出現感覺障礙的很大原因。