Clinical: Prosthesis

Artificial Lumbar Disc Replacement in the Treatment to Recurrent Lumbar Disc Herniation
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Objective: To evaluate the clinical result of Artificial Lumbar Disc Replacement in the Treatment to Recurrent Lumbar Disc Herniation by assessing the retaining of the segmental intervertebral disc’s motion, the retaining of the lumbar spinal physical assignment and its clinical curative effect.

Method: From January 2001 to June 2008, 14 patients suffered Recurrent Lumbar Disc Herniation underwent artificial lumbar intervertebral disc replacement with SB Charite-III disc prostheses. Among these patients, 13 (15 prostheses) were followed up for average 6.8 years (from 1.5 to 9.5 years). There were 8 males and 5 females with an average age of 44 years old (from 40 to 58 years old). The average visual analogue scales score for pain was 9.40 before operation. Meanwhile, the average Oswestry Disability Index was 50.8 before operation. All patients underwent standard Artificial Lumbar Disc Replacement under general anesthesia via anterior approach. One level replacement was done in 11 patients (L45:9 cases, L5S1:2 cases). And 2 patients were treated with two levels (L45 and L5S1) replacements. Clinical and radiographic results of these patients were evaluated at each follow-up time (1, 3, 6, 12, 24 months after operation and the latest follow-up).

Result: The average visual analogue scales score for pain at 1, 6, 12, 24 months after operation and latest follow-up were 4.3, 4.3, 3.7, 3.1, 2.7 respectively. Meanwhile, the average Oswestry Disability Index at 1, 24 months after operation and latest follow-up were 29.6, 13.5 and 9.2 respectively. Motion: the motion was reserved at the latest follow-up, average 5.3°. There were no translocation, loosening and subsidence of the prostheses in all the patients. The satisfied rate was 96%.

Conclusion: The artificial lumbar disc replacement is one of the effective method for the treatment to Recurrent Lumbar Disc Herniation. The patients‘ selection for the surgical indication is critical. And its long-time outcome remains to be verified.