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Clinical Results of Total Lumbar Disc Replacement Regarding to Various Aetiologies of the Disc Degeneration: A Study with a 2 Year Minimal Follow-up
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Study design and objectives: The aim of this study is to analyse clinical results of total lumbar disc arthroplasty according to the type of disc degeneration. Summary of background data: Lumbar disc degeneration can be associated with different causes of disc disease. Therapeutical management of such pathologies is still controversial between spinal fusion and arthroplasty. Non fusion techniques have been developed to allow a treatment of disc degeneration with a preserved intervertebral mobility. Material and methods: 221 patients with a mean age of 42 years were included in this study with a prospective data collection. 54 patients were classified as H0 (primary disc degeneration without previous surgery), 98 were classified as H1 (disc degeneration with associated herniation, without previous surgery), 36 were as H2 (disc degeneration with recurrence of disc herniation, with previous surgery) and 33 patients were H3 (post-discectomy syndrome with previous surgery). Clinical evaluation was based on Oswestry Disability Index (ODI), Lumbar and Radicular Visual Analogic Scale (VAS), each measurement was performed preoperatively, and at 3, 6, 12 and 24 months postoperatively. Results: Mean follow-up of the series was 30 months [24-72 months]. A significant (p< 0.05) clinical improvement was found between preoperative and the last follow-up evaluation for each group. On a multivariate analysis between different groups, a significantly higher ODI was found in the group classified as H3 (post-discectomy syndrome) at the final follow-up. Conclusion: Total lumbar disc arthroplasty provides a significant clinical improvement for patients with disc degenerative disease, with a 2 year minimal follow-up. The poorest results were found in patients with previous surgical procedure on the concerned level (post-discectomy syndrome). These results can be helpful for selection of total disc arthroplasty indications and for the information that a surgeon must give to his or her own patient on the expected result after disc replacement.