

SUMMARY

Admission

Lumbar discectomy is the most common operation performed on the spine. Despite this, in clinical practice, we do not have standardized evidence-based postoperative rehabilitation protocols or recommendations from large scientific societies in this area. Therefore, postoperative rehabilitation protocols are intuitive and may differ from center to center. There are few scientific reports on the effectiveness of different rehabilitation protocols. Thus, there is a need to develop and test various rehabilitation programs after lumbar discectomy, the greater that postoperative rehabilitation supports the effect of surgical treatment. These studies respond to this need.

Objective

The overall aim of the study was to investigate the impact of two versions of my proprietary postoperative rehabilitation protocol on the improvement of psychophysical fitness in patients undergoing lumbar discectomy due to herniated disc nuclei. The specific objectives were to test the effectiveness of: the basic version of my protocol and the version enriched with manual therapy and to compare their effectiveness.

Material and method of research

Sixty people after lumbar discectomy were examined randomly assigned to one of two rehabilitation protocols: Group I without manual therapy, Group II with manual therapy. Rehabilitation was implemented on the 15th postoperative day after surgery and continued for the next 3 months twice a week. Between the sessions, the patients performed exercises at home according to the instructions given by the physiotherapist of the author of this study. The impact of both rehabilitation protocols on the improvement of the psychophysical state was measured using: the VAS scale of low back pain and sciatica, Oswestry, Rolland-Morris, SF-36 questionnaires, the Schober spine mobility test, and static balance tests on a dynamographic platform. The data obtained from the measurements were subjected to statistical analysis.

Results

In both groups there was a statistically significant reduction of back pain and sciatica after rehabilitation. However, the reduction was significantly greater in group II. Functional quality also improved significantly after rehabilitation in both groups in all quality questionnaires. However, the improvement was greater in group II in the ODI and Sf-36 questionnaires, while in the RMDQ the difference was insignificant. In both groups there was also a significant improvement in spine mobility after rehabilitation, and the differences between the groups in terms of this improvement were

statistically insignificant. After rehabilitation, there was a significant improvement in the static balance in both groups, with the scope of this improvement being significantly greater in the second group.

Conclusions

Both proprietary methods of postoperative rehabilitation had a positive and statistically significant impact on the improvement of psychophysical parameters: low back pain and sciatica, quality of functioning and life according to the ODI and SF-36 scale, range of spine mobility and static balance of the body [AM1]. The rehabilitation protocol supplemented with manual therapy improved these parameters significantly more effectively.

Practical implications

The rehabilitation protocols I have studied can be implemented in everyday clinical practice in postoperative management in patients after lumbar discectomy.