Efficacy of posterior foraminotomy in patients with monoradicular syndrome of the cervical spine

Objective: to evaluate the effectiveness of posterior foraminotomy in patients with monoradicular syndrome of the cervical spine.

Material and methods: The study included 13 patients with monoradicular syndrome of the cervical spine operated in the period from March 2013 to November 2022. Of these, there were 7 men (53.8%) and 6 women (46.2%) aged 33 to 62 years. Inclusion criteria: unilateral posterolateral soft herniated disc, unilateral radicular symptoms and unsuccessful outcome of conservative treatment for 6 weeks. VAS, NDI were evaluated. Radiography, CT, and MRI of the spine were performed before treatment and in the early postoperative period, as well as during a control examination. The average follow-up time was 3.5 years. The duration of the operation, the volume of blood loss and the length of hospital stay were also evaluated.

The results of the study. During the follow-up period of 12 months, the severity of neck pain according to VAS was 1.4/1 (1;2) points. Pain of a radicular nature was not observed in any patient. Assessment of the degree of functional adaptation after surgery according to the NDI questionnaire showed an improvement in all patients compared to the preoperative value. The average score decreased from 40.0±4 to 10.2±1.5.

The level of C7-Th1 lesion was observed in 5 (38.5%) patients, C6-C7 — in 7 (53.8%), C5-C6 — in 1 patient (7.7%). Instability of the vertebrae according to radiography with functional tests before and after surgery was not detected in any patient. The White — Panjabi instability criterion was 2±1 points. The volume of intraoperative blood loss was 64.8 ± 24.3 ml, the duration of the operation was 90.0±30.1 min. The average length of hospital stay is 5 bed days. No surgical complication was observed.

Conclusion. 1. With posterior foraminotomy, regression of the radicular pain syndrome is achieved, improving the quality of life of patients with monoradicular syndrome of the cervical spine.

2. Posterior foraminotomy is an effective surgical option for the removal of a "soft" hernia of the cervical spine, which, along with the use of microsurgical techniques, ensures the achievement of excellent and good treatment results.