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Epidural Steroid injections in treatment of Chronic Lower Back Pain caused by Degenerative - Dystrophic Spinal Damage

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Introduction: High prevalence of Degenerative-dystrophic spinal damage and variability of findings concerning the efficacy of steroid injections into epidural space for treatment of chronic lower back pain makes investigation on its treatment with epidural steroid injections only a topical issue of contemporary neurosurgery.

Objective: The aim of the study was to enhance the efficacy of treatment of patients with chronic lower back pain caused by Degenerative-dystrophic spinal damage by monotherapy: with epidural steroid injections only.

Materials and methods: The long-term outcomes of the treatment of 120 patients aged 39 to 86 years with chronic lower back pain with epidural steroid injections only (main group) were analysed. The control group involved 36 patients aged 45 to 80 years with lower back pain treated conservatively. Epidural steroid injections were applied only after conventional therapy failed. The technique of middle interlaminar access without fluoroscopic imaging was used (minimally invasive interventions at an outpatient unit). One or two injections of corticosteroid into the epidural space at a 15-20-day interval were administered. The number of epidural injections depended on the clinical manifestations (relief of pain syndromes). The average number of epidural steroid injections per patient was 1.93 ± 0.12 (112 patients had two injections and 8 patients – one). Besides epidural steroid injections, the main group of patients did not receive any other treatment. At the end of monotherapy, the patients were recommended therapeutic exercise to form a muscular corset. 36 patients (19 female and 17 male aged 45 to 80 years) of the control group were treated with non-steroidal anti-inflammatory drugs; vascular, restorative and dehydration therapy, physiotherapy, exercise therapy, massage, acupuncture. The groups are comparable in age, sex, disease duration and structural changes at the lumbar spine (intervertebral disc herniation, spondyloarthritis, spinal stenosis, spondylolisthesis). The results of treatment were analysed by pain regression assessment by means of the Visual Analogue Scale (VAS), as well as assessment of the functional status by the Oswestry index. These parameters

were assessed twice: before treatment and in six months its completion.

Results: In the main group of patients the average rate of pain by VAS before treatment was 7.12 ± 0.14 points ($n = 120$), and in the control – 6.61 ± 0.21 ($n = 36$); after treatment this indicator was 3.42 ± 0.12 points ($n = 96$) in the main group, and 5.67 ± 0.18 ($n = 30$) – in the control. Assessment of the functional state of patients of both study groups by the Oswestry index showed that before treatment it was 49 ± 0.6 points ($n = 120$) in the main group, and 51 ± 0.5 ($n = 36$) – in the control; after treatment this indicator was 30 ± 0.5 points ($n = 96$) in the main group, and 47 ± 0.4 ($n = 30$) – in the control. Thus, a significant difference has been established regarding the long-term treatment results between the main and the control groups of patients according to both the Oswestry Disability Index and the Visual Analog Scale in favour of the monotherapy method with epidural steroid injections.

Conclusion: The study has proved a high efficacy of monotherapy with epidural steroid injections in treatment of chronic lower back pain caused by Degenerative-dystrophic spinal damage. Epidural steroid injections are indicated in intervertebral disc herniation, spondyloarthritis, spinal stenosis, spondylolisthesis that cause chronic lower back pain after conventional therapy failed. The results of the study of the effectiveness of the technique of median interlaminar access without fluoroscopic imaging allow recommending it for treatment of lower back pain.

Speaker Biography

Kvasnitskyi Mykola Vasyliovych an Honoured Doctor of Ukraine is the Senior Research Associate of the Miniinvasive Surgery Department, Scientific and Practical Center of Preventive and Clinical Medicine of the State Administration Department. He is the author of 116 scientific works, monographs, lectures, practice notes and guidelines. He has been involved in neurosurgery and neurology for more than 40 years. His area of expertise is multiple tumours of nervous system, neurotrauma, Degenerative diseases of spine, pain syndromes.

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