TA052
Clinical Usefulness of Electrodiagnostic Study to Predict Surgical Outcomes in Lumbosacral Disc Herniation or Spinal Stenosis

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Introduction/Background: Although surgeries have been performed for the treatment of lumbar disc herniation (LDH) or lumbar spinal stenosis (LSS), not all patients who undergo surgery are satisfied with the outcome. There have been studies that relate the prognostic values of radiological studies, including magnetic resonance imaging (MRI), to surgical outcomes, but results were not determined. Compared with MRI, electrodiagnostic study (EDX) can assess the physiological functions of nerve roots with higher specificity and relate better with clinical manifestations. Therefore, we hypothesize that EDX could be useful method to predict patients prognosis after surgery. The purpose of this study was to examine how EDX can predict surgical outcomes in patients with LDH and LSS and to compare the predicted values of EDX with other clinical factors and MRI findings. Material and Methods: Patients (n=448) diagnosed with LDH or LSS without neurological deficits, who underwent EDX before lumbar surgery, were selected and analyzed. Patients were divided into groups of successful and unsuccessful surgical outcomes according to a modified MacNab classification. We obtained preoperative clinical data, radiological results, and EDX results. Excellent and good responders were considered as successful outcomes, and fair and poor responses as unsuccessful outcomes. Results: Using EDX, radiculopathy was found in 236 patients (52.7%) in the study population. Before surgery, the visual analog scales for back and leg pain as well as the Oswestry disability index were not significantly different between the successful and unsuccessful surgical outcome groups. Age, diagnosis, type of surgery, and root compression on MRI were not significantly associated with surgical outcome. Radiculopathy on EDX was significantly related only to unsuccessful surgical outcomes. The association of spon-

da/lotherapy showed the trends towards unsuccessful surgical outcome, despite statistical insignificance. Conclusions: EDX detected functional abnormalities of nerve roots that did not show clinical manifestations and did not appear compressed on MRI. These abnormalities were important predictive factors for surgical outcomes in patients with LDH or LSS. Therefore, preoperative EDX is a clinically useful method to predict surgical prognosis.

TA053
Is There a Relationship between Lumbar Spine Proprionection and Non-Specific Low Back Pain? A Systematic Review with Meta-Analysis

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Introduction: Non-specific low back pain (NSLPB) is a common problem. Impairment in lumbar spine proprioception has been proposed as a mechanism for the development and perpetuation of NSLPB. The aim of this study was to investigate whether there is a relationship between lumbar spine proprioception and the development or presence of NSLPB. Methods: Four electronic databases were systematically searched for studies measuring lumbar spine proprioception in NSLPB patients. To be included, studies either compared lumbar proprioception between NSLPB patients and healthy controls or prospectively evaluated the relationship between lumbar proprioception and the development of NSLPB. Two reviewers independently extracted data and assessed the quality of included studies with standardised assessment forms. Where possible, meta-analysis was performed to determine any differences in proprioceptive acuity between NSLPB patients and healthy controls. Results: Twenty-four studies were included in the review. The included studies were of moderate quality. Studies measured lumbar proprioception via joint repositioning sense (QRS), threshold to detection of passive motion (TTPDM) or both methods. Active QRS was worse in NSLPB patients than in healthy controls when participants were measured in sitting (standard mean difference 0.27, 95% CI 0.43 to 1.52). Active QRS measured in standing (standard mean difference 0.41, 95% CI -0.07 to 0.89) and passive QRS measured in sitting (mean difference 0.62, 95% CI -1.21 to 2.48) were not significantly different between groups. However, specific subgroups of NSLPB patients showed larger proprioception deficits than the whole NSLPB cohort. Meta-analysis was not possible in TTPDM studies, but no study found significant differences in TTPDM between NSLPB patients and healthy controls (p=0.05). Two prospective studies showed no significant predisposition of participants with poorer lumbar proprioception to the development of NSLPB (p=0.05). Conclusion: Patients with NSLPB had either impaired or no significant differences in lumbar proprioception compared with healthy controls, depending on the method of measuring proprioception. Larger deficits in certain NSLPB subgroups highlight the dangers of labeling NSLPB patients as a homogenous group. However, these results must be considered in light of the variability in age and pain levels of participants included in the different studies, and the inherent problems of variability with the methods of measuring proprioception.

TA054
The Evaluation of Scales for Neuropathic Pain in Patients with Low Back Pain Syndrome

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Introduction/Background: Chronic low back pain (LBP) is characterized by a combination of nociceptive and neuropathic mechanisms of pain generation. We aimed to determine whether there is a neuropathic component in LBP patients and it is related with physical disability. Material and Methods: 102 patients with LBP consented to participate in the study and were assessed using the dif-