

The usefulness of Selective Nerve Block in Lumbar Spinal Stenosis in cases with inconsistent MRI findings and clinical presentations

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Statement of the Problem: MRI is known to be highly accurate for diagnosing spinal stenosis, but few studies have investigated the diagnostic accuracy of MRI for spinal canal stenosis. In addition, the most suitable treatment of patients with inconsistent clinical and MRI findings has not been established. This study analyzed the diagnostic and therapeutic usefulness of Selective Nerve Root Block (SNRB) in patients with spinal stenosis who show inconsistencies between Magnetic Resonance Imaging (MRI) and clinical findings (e.g., dermatomes).

Methods: This single-center, retrospective cohort study was conducted among 93 patients treated between January 2013 and December 2018, who underwent at least two SNRBs for single-level spinal stenosis on MRI with clinical discrepancies. Seventeen patients who were diagnosed with other causes of pain (e.g., spondylolisthesis, sacroiliac joint dysfunction, lower leg arterial occlusion) were excluded. The first SNRB targeted the lesion found on MRI. One week later, patients were assessed using a Visual Analog Scale (VAS) and a second procedure was performed on the dermatome-indicated level if there was no improvement. VAS scores were also obtained 3 months after the procedure.

Results: In total, 45 patients had central stenosis and 31 patients had foraminal stenosis. The average VAS score before the SNRB was 7.4 ± 1.4 . After the first procedure, the average VAS score was 5.2 ± 2.6 . After the second procedure, the average VAS score was 2.4 ± 1.3 , and after 3 months, it was 3.6 ± 1.9 . Of the patients with foraminal stenosis, 77.4% did not respond to the first block (based on MRI) but responded well to the second procedure (based on clinical symptoms) ($p < 0.05$).

Conclusions: SNRB targeting the level corresponding to clinical symptoms may be useful for locating the symptomatic nerve root and providing pain relief in patients with foraminal stenosis on MRI with discordant clinical findings.

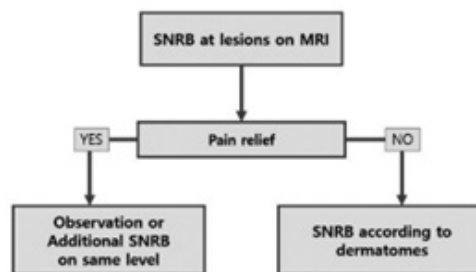


Fig. 1. Therapeutic protocol in this study.

Biography

Byung-Taek Kwon is a Korean Orthopedic Surgeon who has expertise in the improvement of Spinal Diseases and pain caused by the Spine. He studies Spinal Diseases, surgical procedures and non-invasive treatments such as Selective Nerve Root Block to evaluate the effective diagnosis and treatment.

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