

Epiduroscopy alleviates pain and reduces sensory nerve dysfunction in Patients with chronic sciatica

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Background and objective. Recently, epiduroscopy has been shown to offer significant diagnostic and therapeutic interventions for patients with chronic low back pain and sciatica. Although previous studies have shown that adhesiolysis in epidural space and targeted steroid injection during epiduroscopy is useful for pain relief in these patients, there are currently very few studies that show the effect of these procedures on sensory nerve function. The present study was carried out to evaluate the effect of adhesiolysis followed by the injection of steroid and local anesthetic during epiduroscopy on sensory nerve function, pain, and functional disability in patients with chronic sciatica.

Methods. After institutional approval was obtained along with written informed consent, epidural adhesiolysis using epiduroscopy followed by the injection of steroid and local anesthetic were scheduled in 19 patients with chronic sciatica refractory to lumbar epidural block. Sensory nerve function in the legs was tested with a series of 2000-Hz (A β -fiber), 250-Hz (Ad-fiber) and 5-Hz (C-fiber) stimuli, using the current perception threshold (CPT), and CPT values and intensity of pain and Roland Morris Disability Questionnaire (RMDQ) scores were assessed before and 1 and 3 months after the epiduroscopy.

Results. At all frequencies, the CPT values in the affected legs of patients before the epiduroscopy were significantly higher than those in the unaffected legs. Epidural adhesiolysis was successfully performed in 16 out of the 19 patients. In these patients, the CPT values at 2000 and 250 Hz, and pain and RMDQ scores 1 and 3 months after the epiduroscopy were significantly lower than those before the epiduroscopy, while the CPT value at 5 Hz did change.

Conclusions. Epidural adhesiolysis followed by the injection of steroid and local anesthetic during epiduroscopy alleviated pain, functional disability, and reduced dysfunction of A β and Ad fibers in patients with chronic sciatica.