

SPINAL CORD STIMULATION DEVICE EXPLANTATION IN PATIENTS AFFECTED BY DEGENERATIVE LUMBAR SPINE DISEASES: INSTITUTIONAL EXPERIENCE AND REVIEW OF THE LITERATURE

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INTRODUCTION

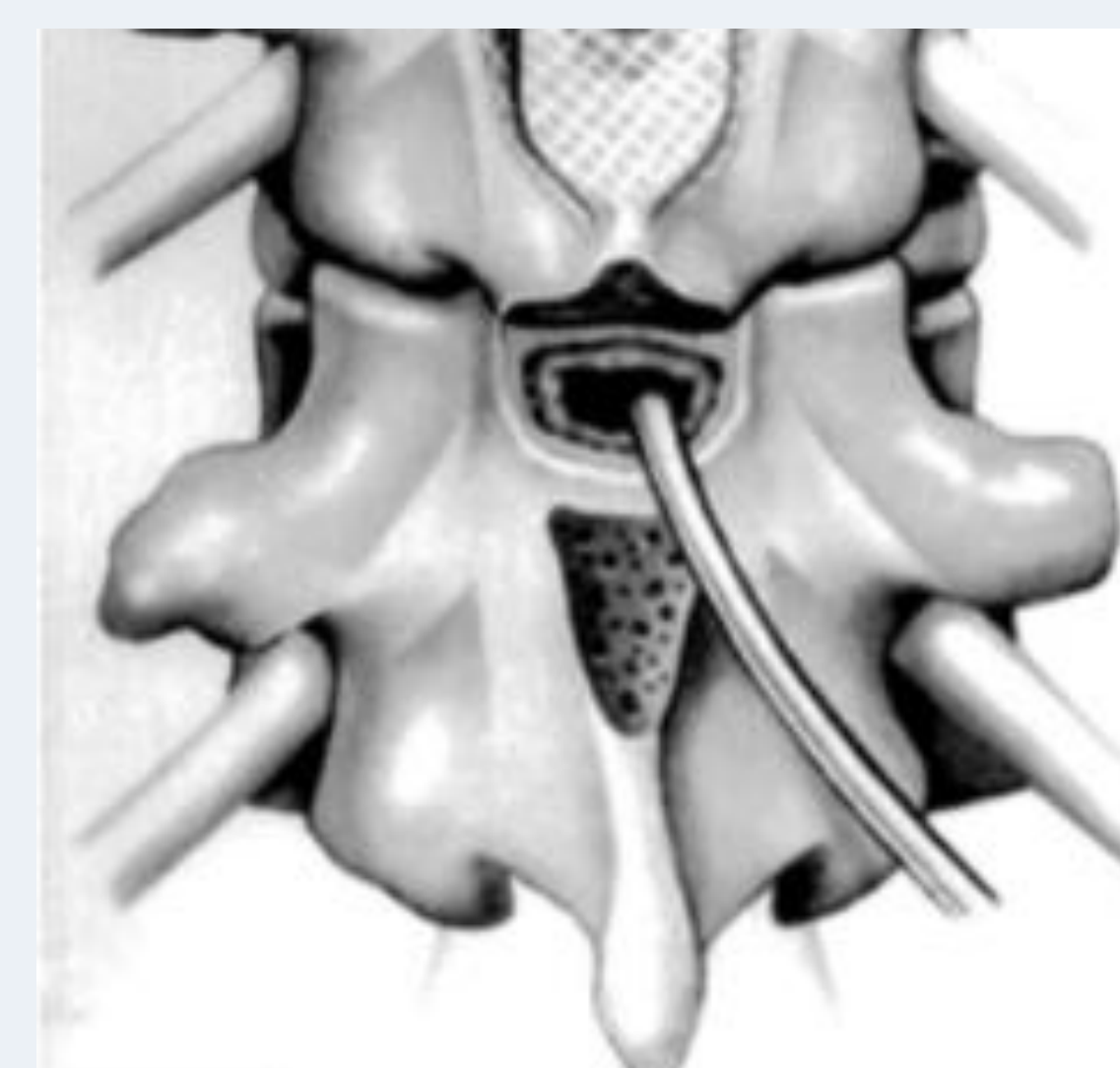
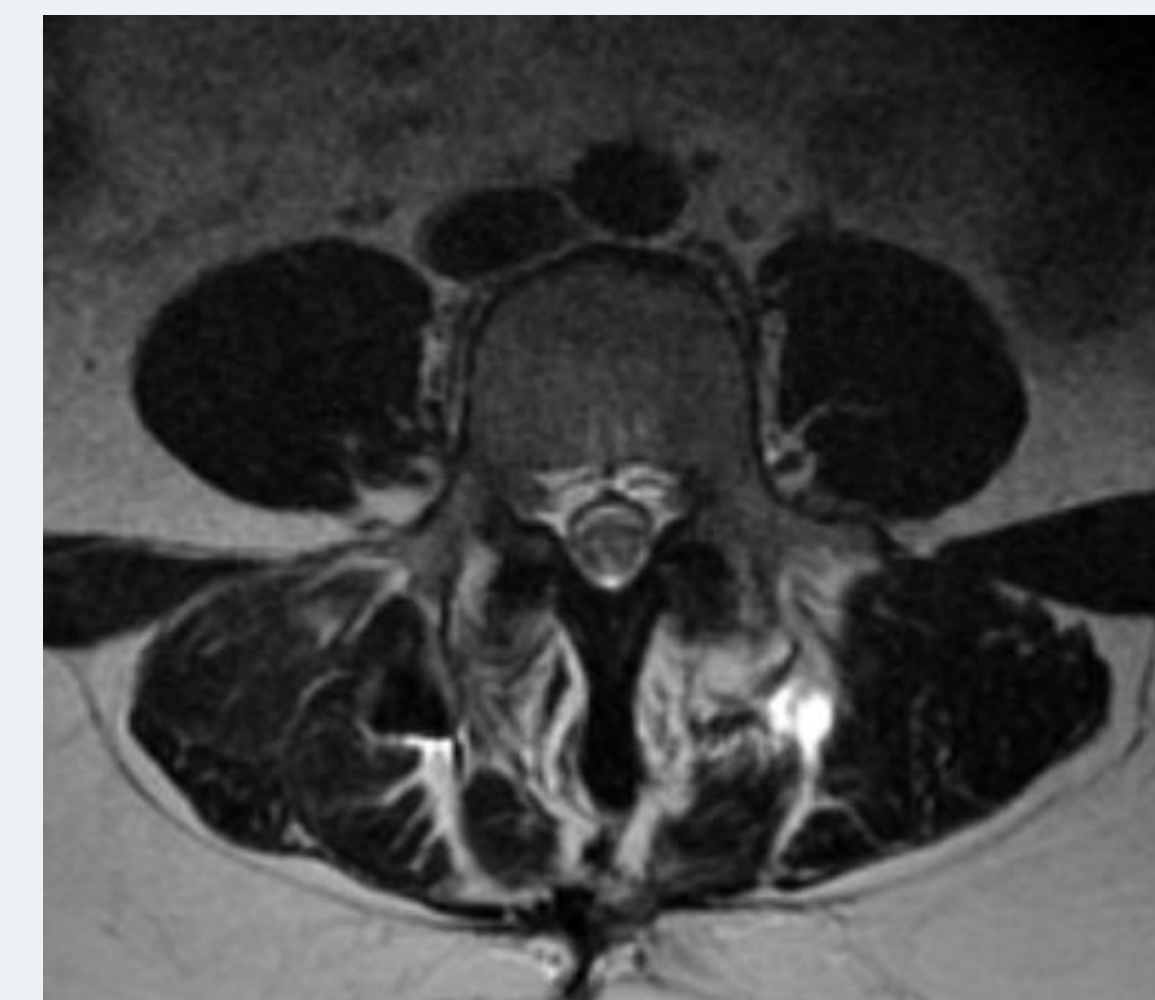
Patients affected by degenerative lumbar spine diseases and neuropathic pain can benefit from spinal cord stimulation (SCS). However, SCS inefficacy in some patients requires its removal.

METHODS

In this retrospective single-center review, in 10 years (2010-2020), 37 patients underwent explantation of SCS and following spinal surgery. SCS failure (malfunctioning, migration, infections) was excluded. Clinical records, implantation indication and imaging were reviewed

OBJECTIVE

Underline the efficacy of spinal surgeries in presence of an underlying chronic lumbar pain organic cause.



RESULTS

The main diagnosis were postsurgical failed-back surgery syndrome (PFBS) (73%) and neuropathic pain (23%). The pre-implantation radiological findings in non-operated patients showed the preexistence of structural alterations such as stenosis, herniated disc with foraminal compression, whereas, in patients who already underwent surgery and were diagnosed with PFBS, imaging data revealed residual herniated fragments, mispositioned fixation systems, partial posterior decompression. The treatment aim was to address the underlying pathology, possibly explaining the lack of stimulation efficacy. The following step was a surgical procedure: 6 unilateral foraminotomies, 19 laminectomies, 6 fixations, 4 hemilaminectomies, 2 fixation system revisions. 35 out of 37 patients reported a pain relief in post-operative evaluations (mean follow-up 14.3 months) and post-surgical imaging showed a satisfying nervous structures decompression.

CONCLUSIONS

The authors' findings provide insight regarding the necessity of a global and multi-disciplinary evaluation of patient with lumbar back pain, which could involve the neurosurgeon when in presence of an organic and promptly treatable cause. Ultimately, this study may shed light on potential ways to avoid the implantation of a hardware whose complications and indications are yet to be explored.