

The Use of Epidural Spinal Cord Stimulation in Pain Management of Chronic Failed Back Surgery Syndrome due to Thoraco-Lumbosacral Arthrodesis: A Retrospective Case Series

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Introduction

The most common location of chronic neuropathic pain is the back and legs, and until 40% of patients who have undergone lumbosacral spine surgery experience persistent or recurrent pain. Chronic failed back surgery syndrome (FBSS) result in patients' loss of function, reduced quality of life and increased costs to the society. The spinal cord stimulation (SCS) has been described as a valuable neuromodulation procedure in the management of chronic medically untreated neuropathic pain.

Methods

The authors selected retrospectively, from 2013 to 2017, patients affected by FBSS due to thoraco-lumbosacral arthrodesis (n=70) that were treated by SCS and they were followed-up for minimum periods of 6 months. Furthermore, a bibliographical search from 1950 to 2017 was performed using the indexed databases aiming to based the discussion of results showed in this study.

Learning Objectives

The goal of this study is discuss the risks, complications and results as well as the prognosis of SCS in patients affected by chronic FBSS based on literature review and personal casuistic of the authors.

Results

The authors showed the presence of 36 men (51.4% of the patients) and 34 women (48.6% of the patients) in the study, whose the mean age was 47.9+10.1 years. We showed absence of complication in 83% (n=58) of patients, while 17% (n=12) of patients showed the presence of lead migration (7.1%, n=5), skin infection (7.1%, n=5), CSF leak (1.4%, n=1) and break of lead (1.4%, n=1). The authors showed the presence of significant (p=0,002) reduction of pain intensity rates ranging from 8.8+0.9 to 3.8+1.8 and 2.5+2.0 points in NDS preoperative, postoperative of 15 days and 6 months, respectively.

Conclusions

The SCS is an initial procedure in which substantial assessment demonstrated an effective therapy in patients with medically refractory neuropathic pain in patients affected by FBSS.

References

1.Attal N, Cruccu G, Haanpaa M, Hansson P, Jensen TS, Nurmikko T, et al. (2006) EFNS Task Force. EFNS guidelines on pharmacological treatment of neuropathic pain. Eur J Neurol. 3:1153–69.

2.Bouhassira D, Lanteri-Minet M, Attal N, Laurent B, Touboul C. (2008) Prevalence of chronic pain with neuropathic characteristics in the general population. Pain. 136:380–7.

3.Cameron T. (2004) Safety and efficacy of spinal cord stimulation for the treatment of chronic pain: a 20-year literature review. J Neurosurgery (Spine). 100:254-267

4.Cioni B, Meglio M, Pentimalli L. (1995) Spinal cord stimulation in the treatment of paraplegic pain. J Neurosurg. 82:35–39.

5.Corrêa CF. (2010) Estimulação medular nas neuropatias dolorosas. Ambito Hopitalar. 200:37-58.

6.Cruccu G, Aziz TZ, García-Larrea L, Hansson P, Jensen TS, Lefaucheur JP, et al. (2007) EFNS guidelines on neurostimulation therapy for neuropathic pain. Eur J Neurol. 14(9):952–70.

7.Davies HT, Crombie IK, Macrae WA, Rogers KM. (1992) Pain clinic patients in northern Britain. Pain Clinic. 5:129-135.

8.Dworkin RH, Backonja M, Rowbotham MC, Allen RR, Argoff CR, Bennett GJ, et al. (2003) Advances in neuropathic pain: diagnosis, mechanisms, and treatment recommendations. Arch Neurol. 60:1524–34.