



Title	Effectiveness of Two Therapeutic Options in the Treatment of Peripheral Vascular Disease: Sympathectomy and Spinal Cord Stimulation
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Reference	Report no. 6/2008. ISBN 978-84-691-7792-1. www.juntadeandalucia.es/salud/servicios/contenidos/aetsa/pdf/AETSA_2008_6_Simpatectomia.pdf

Aim

To check scientific evidence on the effectiveness of lumbar sympathectomy and spinal cord stimulation in treating peripheral vascular disease of the lower extremities.

Conclusions and results

We found 103 references, including 8 articles on lumbar sympathectomy and 1 on medullar stimulation. Their quality was generally low.

In comparing lumbar sympathectomy and usual treatments we found no differences in mortality, amputations, and seriousness of on-off backing down in II Fontaine stage patients. Patients at more advanced stages of the disease showed greater clinical improvement with lumbar sympathectomy, but the low quality of the studies calls for caution in applying these results. In comparing sympathectomy to E1 prostaglandin, again we found no differences. Comparing surgical and chemical sympathectomy, the chemical alternative showed better results in terms of mortality and hospital stay.

Medullar stimulation showed better results in treated patients compared to patients receiving conventional care (RR 0.74, IC 0.57-0.94). More patients reached Fontaine stage II; the effect size was 33% in terms of differences of proportions. The most frequent complications were re-interventions (12%), initial problems of implantation (8%), and infections (3%).

Evidence on efficacy of lumbar sympathectomy, based on clinical trials and observational studies of low quality, shows no differences between the two techniques and usual care in stage-II patients. Sympathectomy shows some advantages in patients at stages III and IV. Chemical sympathectomy yielded better results than the surgical option in terms of mortality and amputations, but the results are not statistically significant. Compared to conventional treatment, electrical medullar stimulation reduces the risk of amputations, improves the clinical state of patients, and relieves pain.

Methods

In systematically reviewing the literature (1996-2007), we focused our initial search strategy on systematic reviews and found 1 on spinal cord electrical stimulation that included references from 2005. We updated this review, adding references from the past 2 years.

The final systematic search was run by inserting MeSH terms, sympathectomy and spinal cord stimulation, in the following databases: MEDLINE, EMBASE, Cochrane Library, INAHTA, CRD, and other resources on Internet, eg, ECRI and Biomed Central.

Inclusion criteria: Adult patients with chronic non-revascularizable ischemia of lower extremities.

Outcomes: Recovery or preservation of extremities, clinical improvement, treatment of ulcers, complications, use of analgesics, hospital stay, mortality, and quality of life. Quality was assessed with CASPe criteria for clinical trials and an ad hoc questionnaire for observational studies.