

SELECTED ARTICLES

We hereby present comments on a selection of articles recently published in internationally acclaimed medical journals. We believe these papers deserve special attention due to the quality and importance of the conclusions reached by the studies. Our objective is to keep an open look on new aspects of scientific research or review articles that may, in turn, update aspects of our own medical specialty.

Also, the Editorial Committee will consider suggestions on recent articles that the readers think deserve to be commented in this section (revista@caccv.org.ar).

SPINAL CORD STIMULATION IN NON-SURGICAL CRITICAL ISCHEMIA OF THE LOWER LIMBS **G. S. PIEDADE, J. VESPER, ET AL. SPINAL CORD STIMULATION IN NON-RECONSTRUCTABLE CRITICAL LIMB ISCHEMIA: A RETROSPECTIVE STUDY OF 71 CASES.**

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Patients with critical peripheral arterial disease who receive primary treatment with vascular reconstruction (surgical or endovascular) have an estimated 30% risk of amputation and 25% of 1-year mortality. The need for amputation is much higher in people with diabetes.

Spinal cord stimulation (SCS) is a therapeutic option for critical peripheral arterial disease when vascular reconstruction is impossible or has failed. However, data on the efficacy of this type of treatment are dissonant. The mechanism of action of SCS still needs to be fully elucidated, and its method is estimated to be complex and multicausal; it has been reported to induce vasodilation in the peripheral microcirculation, antidromic activation of sensory fibers, and reduction of sympathetic tone.

Neurosurgeons from the universities of Wuppertal and Düsseldorf and vascular surgeons from the academic teaching hospital of the Ruhr University Bochum conducted a retrospective study of patients with this clinical situation in whom an SCS system was implanted in July 2010.

Those with active infection or a life expectancy of less than one year were excluded. Of the 72 patients included in the study, 35 were classified as inoperable, and 37 had previous unsuccessful or only partially successful vascular procedures. Twenty-one patients (29.2%) were classified as Fontaine stage III and the

remaining 51 (70.8%) were classified as Fontaine stage IV. In addition, 19 cases were diabetic (26.4%), of which 2 were Fontaine III. An octopolar SCS was implanted in all cases. One of the patients died of myocardial infarction before pacing treatment could be started and was therefore not considered in the final statistics. Other minor complications were successfully treated and did not require discontinuation of treatment. Follow-up lasted from 1.6 to 39.6 months, with a mean of 17.1 months. At the last control, 42 patients (59.2%) were alive without major amputation; 23 (32.4%) were alive with amputation; of the six deceased, two had been amputated. The proportion of patients alive without amputation was highest in the Fontaine III (18 of 21 patients, 85.7%) and lowest in the Fontaine IV (24 of 50 patients, 48%). In the subgroup of the 19 patients with diabetes, of whom 17 were Fontaine IV, no deaths were recorded, and in 10 cases (52.6%), amputation was unnecessary.

The interpretation of these data is limited by their retrospective and uncontrolled nature, although the favorable results compared with similar results from previous studies. The authors conclude that SCS is an appropriate, safe, and effective method as an additional treatment in patients with no possibility of surgical reconstruction in critical ischemia and that the best results are observed in patients with Fontaine stage III.