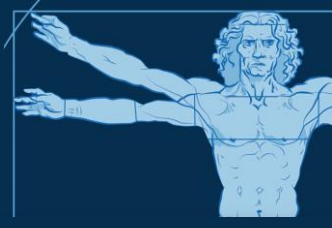
Intermittent sacral root neuromodulation (ISRN): a novel therapy for the treatment of chronic pelvic pain syndrome (CPPS)



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Hypothesis / aims of study

We evaluated the efficacy of intermittent sacral root neuromodulation (ISRN), a novel therapy for the treatment of symptoms in patients with chronic pain syndrome (CPPS), non- responders to conservative therapy.

Study design, materials and methods

A prospective cohort study was carried out on 22 patients with CPPS, candidate to the test phase (first stage procedure) of the sacral nerve neuromodulation (SNM) on the side where they reported the pain, between February 2012 and March 2016 in a single center. We also included also 9 more patients (3 male and 6 female), mean age 45±1.3 years, previously implanted for CPPS with permanent sacral neuromodulator (Interstim II®) and partial responders to continuous neuromodulation therapy, in order to evaluate if the new parameters of stimulation could improve their outcome. A quadripolar permanent lead was placed under local anesthesia for a one-month test stimulation. A permanent generator (second stage procedure) was implanted if the patient had at least 50% relief from the presenting pain and urinary symptoms. Pain intensity was evaluated by a VAS score in association with SF-36 questionnaire before and during the first and the second stage procedure. In addition all patients filled in the McGill Pain questionnaire.

Results

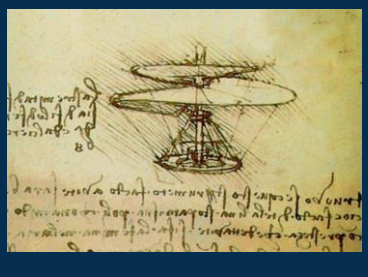
Overall 22 consecutive adult patients (5 male, 17 female), mean age 43±2.4 years, affected by CPPS, non-responders to conservative therapy were suitable to perform a first stage procedure; 19 out of 22 (86.3%) underwent a permanent implant after a satisfactory test phase. Eighteen naive patients out of nineteen (94.7%) maintained the benefits of the first stage at a mean follow up of 21.3 months; 7 out of 9 already implanted patients (77.7%) improved their pain control in a significant way, reducing pain by 50% or eliminating drugs. Neither infection nor other complications were observed up to date. VAS scale, McGill and SF-36 questionnaires improved consistently in all domains with a 95% satisfaction rate

Interpretation of results

The trans-foraminal sacral nerve root stimulation, currently used to treat voiding dysfunction, is not specifically indicated for treatment of pelvic pain. However a number of publications stated the ability of such stimulation to relieve pain, as well as relieving voiding symptoms in pelvic pain patients treated for coinciding voiding dysfunction. This is the first study demonstrating the effectiveness of ISRN in the management of CPPS in patients refractory to conventional treatment or only partially responding to continuous sacral nerve stimulation, with more than 85% improvement in naïve patients and up to 77% in patients already implanted.

Concluding message

Although this study is small, it has a quite long follow up and ISRN appears to be efficacious in treating CPPS in both naïve and previous implanted partial responder patients. Our study provides the first evidence of the role of ISRN in the management of CPPS, a debilitating pathology still difficult to treat. Definitely the results show a significant improvement in CPPS when ISRN is used.



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