



Determining the Minimally Clinical Important Difference(MCID) in Pain, Quality of Life and Disability for Spinal Cord Stimulation for Failed Neck and Failed Back Syndromes

Alexandra Rose Paul; Vigneshh Kumar; Steven G Roth MS; M. Reid Gooch MD; Julie G. Pilitsis MD, PhD

Introduction

With rising health care costs, clinical outcome data is becoming increasingly important. The concept of minimally clinical important difference(MCID) has been shown to be effective in spine surgery to differentiate between clinically insignificant and significant improvements and to measure the patient's perspective of quality of life and disability. We sought to determine the MCID for spinal cord stimulation(SCS) therapy for failed neck and back syndromes, which has not been established to date.

Methods

Preoperative and 6 month outcomes were assessed prospectively, including the ODI, BDI and VAS questionnaires. Patients were asked by a blind investigator:(1)are they satisfied with SCS therapy and (2)would they have the surgery again? Four methods of calculating the MCID were utilized, including the average change approach, the minimum detectable change approach, the change difference and the receiver operating characteristic approach.

Results

Forty eight patients who underwent SCS placement from 2012-2014 were prospectively reviewed. Thirty five(73%) patients stated they were satisfied with SCS therapy and they would have the surgery again. Satisfied patients had an average improvement of 2.9 points on the VAS and 11.5 points on the ODI at 6 months compared to an average decline of 0.78 points on the VAS and 1.8 points on ODI in the patients who were not satisfied with SCS therapy($p=0.005$, $p=0.06$). The 4 calculation methods yielded a range of outcome scores(ODI 8.2-13.3, BDI 3.2-7, McGill 0.3-1.3 and VAS 1.2-3.7).

Conclusions

The MCID for SCS placement was calculated using 4 methods. The results are similar to calculations for the MCID for traditional surgical procedures done for pain. Our results suggest that an improvement of 1.2-3.7 points on the VAS scale and 8.2-13.3 points on the ODI is clinically meaningful to the patient. Further defining the MCID for SCS therapy will remain of utmost importance in order to justify the cost of the procedure.

Learning Objectives

By conclusion of this session, participants should be able to: 1) Describe the importance of MCID in surgeries with subjective outcome 2) Compare the MCID for spinal cord stimulation for failed neck and failed back syndromes compared to the MCID for other common lumbar and cervical procedures.

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