278

Wik A K[1], Mørkved S[2], Rydning A[3]

1. *Department of Surgery, St. Olavs Hospital, Trondheim University Hospital, Norway,* ***2.*** *Clinical Service, St. Olavs Hospital, Trondheim University Hospital and Department of Public Health and General Practice, Norwegian University of Science and Technology, Norway,* ***3.*** *Department of Surgery, St. Olavs Hospital, Trondheim University Hospital and Department of Medicine, Norwegian University of Science and Technology, Norway*

ANAL INCONTINENCE AND QUALITY OF LIFE IN PATIENTS TREATED WITH SACRAL NERVE STIMULATION

Hypothesis / aims of study

The aim of this study was to assess the effect of severe anal incontinence (AI) on quality of life (QoL) measured by Short-Form Health Survey (SF-36) in patients with AI (St. Marks score >15) before and after treatment with sacral nerve stimulation (SNS).

The secondary aim was to explore differences in health burdens between 1) patients included in the study, 2) a Norwegian population, and 3) patients with rheumatoid arthritis (RA) (all matched for age and sex)

Study design, materials and methods

In this prospective, non-randomized study, 25 patients with severe AI (St. Mark's Score > 15) (1) were included; 23 women and 2 men with mean age 53 (range, 27 – 72) years. In all patients conventional treatment has been tried and shown insufficient. The patients were assessed before a test operation, a percutanous nerve stimulation (PNE) in S3 or S4. The electrode was stimulated by an extern pacemaker. If the test improved continence with 50 % during a three weeks test period, the patients were offered a permanent SNS treatment with implantation of a pacemaker (2). The effect on continence was assessed by the St. Marks Incontinence Score before and 3, 6, 12, and 24 months after implantation. Health burden was quantified as quality of life, assessed by the eight categories of the SF-36 questionnaire (3) before and three months after permanent nerve stimulation. Every patient served as his/her own control.

Comparisons of the SF-36 scores of the patients with AI were made between the scores from a general Norwegian population to investigate differences in quality of life and between a population with a chronic disease, rheumatoid arthritis (RA) to explore differences in health burdens in the two different kinds of disorders.

Results

Twenty-three patients (21 women and 2 men) mean age 53 (range, 27 – 72) years, had a permanent pacemaker implanted and started SNS treatment. 2 patients did not have sufficient effect of the PNE test, and left the study before implantation. In 6 of the patients the pacemaker was removed during the observation period: three because of dislocation / insufficient effect, one pain, one psychosis and one rectalprolapse. 17 patients (74%) continued the treatment. Compared to preoperative values the St. Marks mean score decreased significantly from 20.2 (± 2.9) to 8.5 (± 5.8), ($p < 0.001$) three months after implantation (Fig.1).

The quality of life significantly improved in five of the eight scales in SF-36. Compared to the general Norwegian population, patients with AI had significantly lower SF-36 scores in all except the scales for "bodily pain" and "vitality" (Fig.2). The patients with RA had significantly lower scores in all the eight SF-36 scales than the general Norwegian population. Our patients with AI reported different health burdens from the population of RA according to the SF-36 scores.

Interpretation of results

Improvement in St. Marks Score after SNS treatment is significant and stabile over time.

Improving severe anal incontinence has an impact on improving quality of life in most aspects except for bodily pain and vitality.

Concluding message

Continence improved significantly in patients with severe AI after SNS, and their QoL improved significantly in most of the SF-36 subscales.

We found that our population with AI had lower QoL than the general Norwegian population, and they had different health burdens from patients with RA .

After three months with SNS our patients had restored a quality of life similar to the background population.

References

1. Vaizey C, Carapeti E, Cahill J, Kamm M. Prospective comparison of faecal incontinence grading systems. Gut. 1999;44(1):77-80.
2. Matzel KE, Stadelmaier U, Gall FP, Hohenfellner M. Electrical stimulation of sacral spinal nerves for treatment of faecal incontinence. The Lancet. 1995;346:1124-7.
3. Ware JE, Snow KK, Kosinski M, Gandek B. SF-36 Helath Survey, Manual and Interpretention Guide: Lincoln, RI; QualityMetric Incorporated; 1993, 2000.

Disclosures

Funding: No funding or grant **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** The Regional Committees for Medical and Health Research Ethics (REC), Health Region "Midt Norge" **Helsinki:** Yes **Informed Consent:** Yes

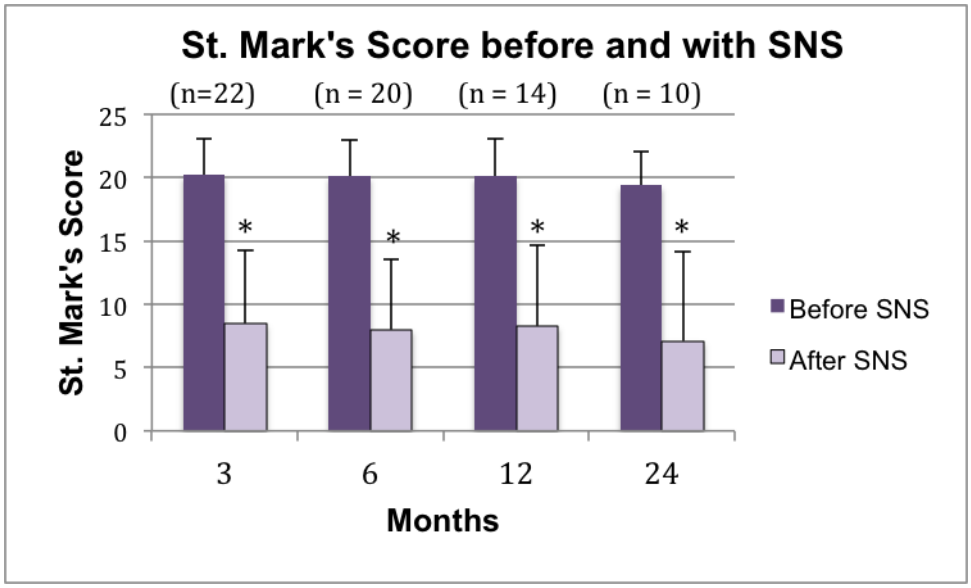

Figure 1: St. Mark's Score in patients with AI before and after SNS implantation Mean (±SD) Measurements before and after SNS treatment for the same patient (p < .000). Different N is due to difference in follow up time. *signifikant improvement, Wilcoxon Signed Rank Test

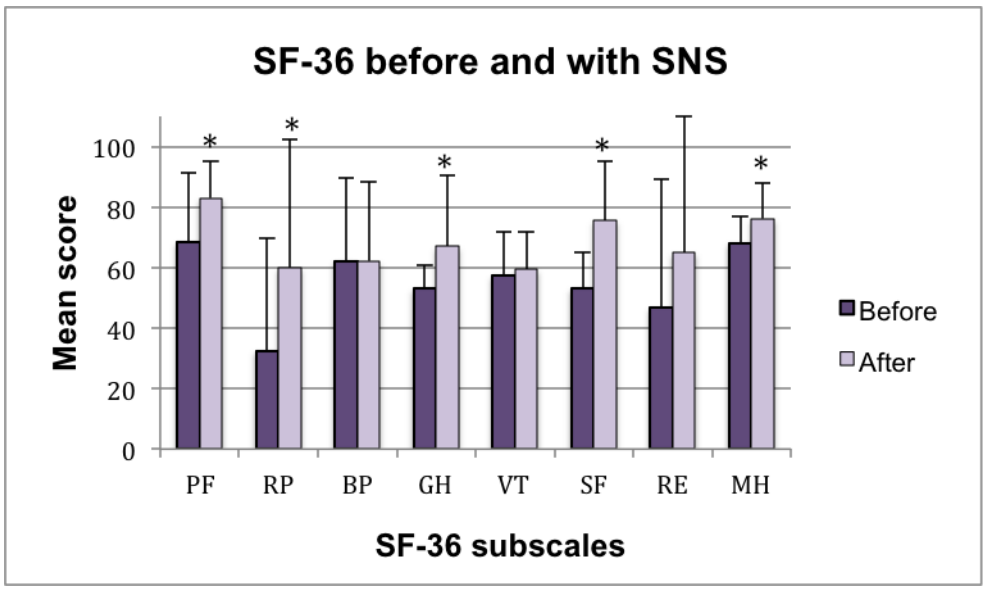

Figure 2: The mean (±SD) score of SF-36 underscales for patients with AI compared from before to three months being treated with SNS (N = 20), * = sig. improved from before to after SNS, p < .05, Wilcoxon Signed Ranks Test.