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AGE HAS NO IMPACT ON THE EFFECT OF SACRAL NERVE STIMULATION IN PATIENTS WITH FAECAL INCONTINENCE: A RETROSPECTIVE EVALUATION OF 123 PATIENTS FROM A SINGLE CENTRE

Hypothesis / aims of study

Sacral nerve stimulation has in many studies been shown to be effective in treating patients with severe faecal incontinence with a high impact on quality of life (1). In a recent retrospective study high age was related to failure of treatment (2). The treatment is minimally invasive and can be performed in local anaesthesia.

The aim of this retrospective study from a single centre was to evaluate efficacy of sacral nerve stimulation (SNS) in a large series of patients with faecal incontinence as well as the impact of age and anorectal physiology measurements.

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Study design, materials and methods

Sacral nerve stimulation was performed in 123 consecutive patients, 106 women and 17 men, between April 2004 and October 2008. Median age of the patients was 60 years (range 23 – 87 years). The aetiology was: 54 patients with idiopathic faecal incontinence, 38 previous anal sphincter rupture, 15 patients with neurological disorder, 11 patients previous anal or rectal surgery and 6 patients other conditions (irradiation injury, anal atresia). All patients were received best conservative care before operation. Incontinence diaries with history of the number of defecations, urge and incontinence episodes as well as passive incontinence was recorded for 2 weeks both at baseline, during testing and 3 months after operation. St. Marks incontinence score and anorectal physiology testing including anal manometry and rectal volume tolerability was performed at baseline and 3 months after operation.

Results

123 patients underwent testing for 3 weeks with temporary wires. In 25 patients the test was inconclusive, why the test was repeated with temporary wires in 4 patients and tined lead in 21 patients. Patients with reduction of incontinence episodes of more than 50% were offered implantation of a permanent stimulator. Overall, in 97 patients (78%) a definitive implantation of a stimulator was performed. 89 patients who were 70 years or younger, 73 (82%) had a permanent implant whereas in 34 patients 71 years or older, 24 (71%) had a permanent implant, p=0.22 (Fishers Exact test).

In patients who were implanted, St. Marks incontinence score decreased from 17.8 (12.0-23.6, 95% C.I.) at baseline to 7.9 (0-17.6) p< 0.001, t-test. No difference in decrease of St. Marks score was found between patients 70 years or younger or patients 71 years or older, 10.0 vs. 10.4, t-test.

Incontinence diary showed a decrease in the number of defecations in 2 weeks from 37.9 (17.8-58.0, 95% C.I.) at baseline to 26.1 (6.0-46.2) after implantation, p<0.001 (t-test). Incontinence episodes in 2 weeks decreased from 7.8 at baseline to 2.3 after implantation, p<0.001 (t-test).

Results of anorectal physiology measurements are summarised in table 1.

Complications to implantation was removal of the stimulator in 4 patients (2 infection and 2 no function), 8 patients had the stimulator repositioned due to pain and in 4 patients the electrode was replaced due to pain or decreased function.

Table 1

Anal physiology	Baseline (95% C.I. for mean)	After SNS (95% C.I. for mean)	P (t-test)
Resting pressure (mmHg)	75 (67-83)	80 (72-88)	0.39
Squeeze pressure (mmHg)	101 (89-113)	119 (107-131)	<0.05
First sensation of content	40.1 (33.1-47.1)	27,2 (20,2-34,2)	<0.01
Desire to defecate	78.9 (70.3-87.5)	65.3 (56.7-73.9)	<0.05
Max. Volume	132 (120-144)	118 (106-130)	0.14

Interpretation of results

Sacral nerve stimulation was found to be successful in treating patients with severe faecal incontinence irrespective of age. Overall, 78% of patients will benefit from this treatment and more than 70% of patients over the age of 70 years will gain from this treatment. After implantation of the stimulator, incontinence score decreases significantly in all age groups. Also the number of defecations and defecation episodes decreases significantly. This explains the improvement in quality of life in this patient group found in other studies.

Anal manometry showed an increased in squeeze pressure, which may partly explain the improved continence. Rectal volume tolerability showed a decrease in first sensation and desire to defecate, which contributes to continence especially in patients with passive incontinence, increasing awareness of content in the rectum.

Concluding message

Sacral nerve stimulation for treatment of severe faecal incontinence is effective in all age groups, why this treatment should be offered without limitations.

References

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**This is a retrospective study**
Was the Declaration of Helsinki followed?	**No**
This study did not follow the Declaration of Helsinki in the sense that	**This is a retrospective study**
Was informed consent obtained from the patients?	**No**