

SACRAL NEUROMODULATION AND FEMALE SEXUALITY: REVIEW

Hypothesis / aims of study

Female sexual dysfunctions may occur in concomitant with voiding, bowel dysfunctions and pelvic pain. An up-to-date review on impact on sacral neuromodulation (SNM) implant (Medtronic, Minneapolis, Minnesota, USA) on female sexual function. The most specific questionnaire assessing female sexual function was the Female Sexual Function Index (FSFI).

Study design, materials and methods

Internationally published clinical studies and case reports evaluating the impact and/or safety of permanent SNM on FSF were selected¹⁻³. Single case reports were included as well. Opinion, abstracts, and non English articles were excluded.

At the beginning we searched MEDLINE through OVID and Pubmed, using the key words: sacral neuromodulation combined with the following words: sexual, sexuality, pelvic pain, genital pain and female sexuality. Subsequently, sacral neurostimulation was associated with the same words used for SNM.

Studies were identified by cross referencing from relevant articles as well.

Results

Ten articles were selected reporting the impact on sexual response when the intent of SNM was to resolve pelvic function disorders. Most menopause ages were included. Follow-up post-SNM varied from 3 to 36 months. Seven authors used the FSFI questionnaire. Of those 6 showed always statistically significant improvement ($p < 0.05$) at least in 2 domains of the FSFI compared to baseline. Table 1. Two out of 6 authors using also a question for detecting the self-perception of overall changes in sexual function only from 9 to 43% of women answered that the device positively impacted on their sexual function. Two more authors using validated questionnaires alternative to FSFI and/or nonvalidated tools showed statistically improvement ($p < 0.05$) of the female sexual function post-SNM compared to baseline. Neurological aetiology of lower urinary tract symptoms, sexually active women, and no hysterectomy women were predictable parameters of SNM success on sexual function (all $p < 0.05$). Statistically significant correlation between bladder symptoms improvement and sexual function was demonstrated only by one author ($p < 0.05$).

Meta-analysis of efficacy-results was not possible for the heterogeneity of the females and for several outcome of measures used. In one more article selected loss of libido and reduction of vaginal lubrication were resolved in one female after the removal of SNM implant.

Table 1: Statistically significant improvement reached after SNM for each domain of the FSFI

Authors (n° of pts)	Follow-up (months)	FSFI domains (p value*)						
		Total	Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain
Zabihi et al (36)	6	0.05	/	0.03	0.03	0.04	/	/
Gill (8)	3.2	0.023	/	0.047	/	/	0.031	/
Pauls (11)	5.7	0.02	0.04	/	0.005	0.0043	0.007	0.015
Ingber (27)	6	/	/	/	/	/	/	/
Yih *(152)	12	<0.01	<0.01	/	/	0.001	0.001	0.0130
Signorello (12)	36.3	0.012	0.019	0.031	0.012	/	0.040	/
Lombardi (11)	3	/	/	/	/	/	0.018	/

*only P value ≤ 0.05 are reported

Interpretation of results

Most authors reported statistically significant improvement on all subset of female sexual response: desire, arousal, lubrication, orgasm and pain using validated questionnaires mainly the FSFI tool in women submitted to permanent SNM implant.

Actually, 2 studies reported that the statistically significant improvement on sexual function was maintained between a period between 1 to 3 years follow-up post-surgery as well.

However, actual data are still insufficient to assert definitely the positive role of SNM on female sexual function because some possible bias of their results are reported by the same authors in their discussion. The most relevant limit concerns the small female sample included in the present studies.

The inclusion in some topics of sexually inactive together with sexually active females represented another potential bias in that sexually inactive women couldn't completely answer the questionnaires administered.

Concluding message

The potential clinical benefits of SNM on sexual function have yet to be explored. Collaboration between multiple centres to provide good quality prospective, cross-over studies with larger sample and using validated questionnaire for female sexual function may limit the bias that might lead to more detailed results favoring subsequently the exclusive use of SNM on selecting females with peculiar sexual dysfunction.

References

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Disclosures

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