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# RETROSPECTIVE CHART REVIEW OF PATIENTS TREATED WITH SANS (STOLLER AFFERENT NERVE STIMULATION) AND OR TENS (TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION) FOR THE TREATMENT OF INTERSTITIAL CYSTITIS / PAINFUL BLADDER SYNDROME (IC/PBS).

Hypothesis / aims of study

TENS is an effective; essentially non-invasive, simple, affordable treatment option for many IC/PBS suffers. The aim of the chart review is to ascertain if TENS treatment for IC/ PBS suffers is as effective as SANS treatment is.

Study design, materials and methods

A retrospective chart review was conducted to analyze the success rate of the two treatment modalities. One hundred and five charts were reviewed, dating from January 2000 to October 2007.The charts were broken down in several ways. The first in diagnostic groups, with the main focus on those with IC/PBS. Next into treatment type groups: patients who received SANS treatment only, those who received SANS and then were switched to TENS and those who received TENS only. Charts were reviewed and information gathered regarding pre and post treatment symptoms. The following items were included in the chart review : Intake and Output charts, Pain/ Urgency Scale, CES-D Scale (Depression Scale) and King's Health Questionnaire (where completed). Subjective as well as objective data was extrapolated from the all of the charts reviewed. Treatment effectiveness was then compared from group to group. (ie SANS group, SANS and TENS group and TENS group).

Results

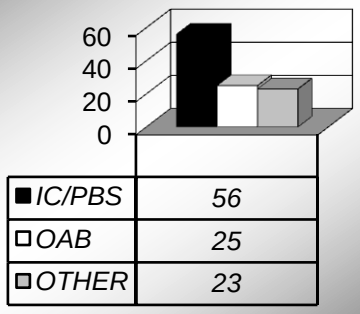
The charts were broken down in several ways: first in diagnostic groups, with the main focus on those with IC/PBS. There was 56/105 (53%) patients that fell into this category (Chart 1). Next into treatment type groups: patients who received SANS treatment only, 22/56 (39%), those who received SANS and then were switched to TENS, 14/56 (25%) and those who received TENS only, 20/56 (36%). The male to female breakdown was 2/56 (3.6%) male and 54/56 (96.4%) female. The Average age was 44.82 years with a minimum age of 18 and maximum age of 73.

The results for each treatment group were as follows: SANS alone 11/22 (50%) were treated successfully, 9/22 (41%) were unsuccessful and 2/22 (9%) had questionable results (appeared to have some improvement but did not pursue treatment). SANS and then TENS 13/14 (93%) were treated successfully, 1/14 (7%) was unsuccessful. TENS alone 12/20 (60%) were treated successfully, 5/20 were unsuccessful and 3/20 had unknown results

(treatment regime was not completed) (Chart 2). Treatment was considered as successful if: there were positive changes (improvement) in the Pain/Urgency Scale of one or greater; there was an increase in bladder capacity and average void or a decrease in number of voids per 24 hours on the post treatment Intake and Output charts; there was improvement in the post CES-D Scale and or King's Health Questionnaire scores. The patient's subjective findings with symptom improvement and willingness to continue with treatment for a period of time was also taken into account.

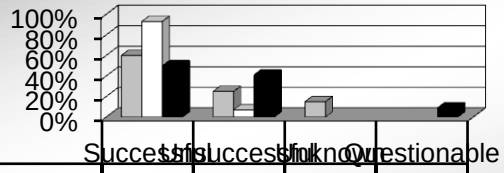
It should be noted that of the 11 patients that the SANS alone treatment worked for, seven were eventually lost to follow up as they missed numerous appointments and did not follow up with the clinic and rebook to return for treatment. One chose to have her bladder removed, two had too many other health issues to continue coming into clinic for treatment and one chose to try medications again.

Chart 1. Diagnostic Groups




| | |
|---|---|
| IC/PBS | 56 |
| OAB | 25 |
| OTHER | 23 |

Chart 2. Treatment Efficacy

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|---|---|---|---|---|
| TENS | 60% | 25% | 15% | |
| SANS/TENS | 93% | 7% | | |
| SANS | 50% | 41% | | 9% |

Interpretation of results

This retrospective chart review has demonstrated that TENS treatment was 10% more effective than SANS in the treatment of IC/PBS. There was also a better rate of compliance in the TENS group as these patients continued on with treatment once they were placed on a home treatment program.

Concluding message

The main goal of this study was to see if TENS treatment was as effective for this patient population as SANS treatment had been. Upon review of the data extrapolated from the retrospective chart review, it was demonstrated that TENS treatment in this group of patients was slightly more effective than the SANS alone group. To this end, TENS should be viewed as an effective; essentially non-invasive, simple, and affordable treatment option for many IC/PBS suffers.

Longer follow up within a double blind study is recommended in the future in the hope that TENS therapy will continue to demonstrate equitable results. These results justify conduct of a full scale study on a larger sample size internationally.


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| ***Specify source of funding or grant*** | **Unfunded.** |
| ***Is this a clinical trial?*** | **No** |
| ***What were the subjects in the study?*** | **HUMAN** |
| ***Was this study approved by an ethics committee?*** | **Yes** |
| ***Specify Name of Ethics Committee*** | **AHSC Research Services** |
| ***Was the Declaration of Helsinki followed?*** | **Yes** |
| ***Was informed consent obtained from the patients?*** | **No** |