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MANAGEMENT OF SECONDARY URINARY STRESS INCONTINENCE IN PATIENTS TREATED WITH SACRAL NEUROMODULATION FOR CHRONIC VOIDING DYSFUNCTIONS.

Hypothesis / aims of study

Patients developing secondary urinary stress incontinence after treatment with Sacral Nerve Stimulation (SNS) for chronic voiding dysfunctions, provoke a unique treatment challenge.
As surgical treatment of stress incontinence theoretically might compromise the beneficial effects of SNS applied in patients with chronic voiding dysfunctions, urinary retention and subsequent need for intermittent catheterisation might be expected a consequence of this therapeutic choice.

Study design, materials and methods

We performed a retrospective analysis of SNS treatment for chronic voiding dysfunctions from 1994 till 2005 in our university setting. In this analysis, we especially focused on those patients developing secondary stress incontinence and who underwent surgical intervention in order to resolve the stress incontinence.

Results

Between 1994 and 2005, 53 patients were treated with SNS for chronic voiding dysfunctions in our institution.
Among them, 7 patients (13.2%) developed secondary stress incontinence.

- 5 patients underwent surgical treatment for this event:
  - 1 patient: Burch colposuspension procedure.
  - 2 patients: TVT procedure.
  - 2 patients: TVT-obturator procedure.
- 2 patients didn't receive a surgical treatment yet.

Pt. nr.	Initials	Age	Date SNS*	Date SI**	Date surgery SI	Type surge	Outcome postoperative
1	VCK					Burch	Uneventfull
2	KA	67	24/05/1996	9/10/2000	9/11/2000	TVT	Uneventfull
3	DRS	58	21/09/1995	27/04/1998	12/06/1998	TVT	Uneventfull
4	DD	41	11/12/1998	1/03/2004	15/04/2004	TVT-O	UR - spontaneous recovery after 3 days
5	LL	53	17/04/2003	14/10/2004	18/02/2005	TVT-O	Uneventfull

* SNS: Sacral Nerve stimulation
**SI: Stress-incontinence

In general, the surgically treated patients all gained urinary continence postoperatively. In the immediate postoperative period, no episodes of prolonged urinary retention were observed.

Individual data:

- Patient 1: Urinary retention post hysterectomy → SNS → failure after 1 year → straining + intermittent catheterisation (IC) → development of stress-incontinence (SI)

→ Burch Colposuspension → 2 years later 2nd SNS → perfect voiding and continence for 6 months → SNS failure.

- Patient 2: Stress-incontinence → Colporraphia posterior + Hysterectomy + Colposacropexy + Burch colposuspension → development of urge incontinence + pelvic floor dysfunction + post-voiding residue → SNS → development of stress-incontinence → TVT procedure → perfect continence + voiding till present.
- Patient 3: Cauda Equina syndrome → flaccid neurogenic bladder → SNS → perfect voiding → development of stress-incontinence →TVT procedure → perfect voiding + continence → persistence of good voiding, but several adjustments of neurostimulator needed afterwards.
- Patient 4: Urinary retention post hysterectomy → SNS → 2 revisions of SNS due to failure → recently development of stress-incontinence → TVT-obturator procedure → urinary retention for 3 days but spontaneous recuperation → perfect voiding and continence till now.
- Patient 5: Pelvic floor dysfunction + urinary retention (Fowler Syndrome) → development of stress incontinence →TVT-obturator procedure → perfect continence and voiding till present.

General comment:

It should be mentioned that these patients obtained perfect voiding and continence due to SNS-treatment. As secondary stress incontinence developed -presumably due to chronic straining- SNS was still active and effective. SNS resolves the chronic voiding dysfunction, but has no therapeutic impact on stress incontinence. As such, a second therapeutic action was necessary to manage this stress incontinence component.

Interpretation of results

Observation of the surgically treated patients delivers quite remarkable results.
None of the treated patients developed voiding dysfunctions in the immediate postoperative period. No single prolonged urinary retention was observed during this episode. These findings seem to be consistent, regardless the surgical technique used.

Concluding message

Secondary stress incontinence occurring in patients treated with SNS for chronic voiding dysfunctions is not an unusual finding (up to 13%).

Based on our results, this patient group doesn't need a different approach in treatment of their urinary stress-incontinence. Standard surgical techniques can be applied with good results, which don't seem to differ from results obtained in standard stress-incontinent population.

The risks for recurrence of chronic voiding dysfunctions are minimal, as long as these symptoms are well controlled preoperatively.