MAXIMUM URETHRAL CLOSURE PRESSURE AS A PREDICTOR OF SUCCESS WITH SACRAL NEUROMODULATION (ABSTRACT 330)

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BACKGROUND

Sacral neuromodulation (SNM) is an established treatment for refractory overactive bladder (OAB) syndrome and voiding dysfunction (VD).
All patients are subjected to a test phase that determines if the patient is likely to benefit from a permanent SNM implant.
There are no known predictors for success for this therapy.

AIM OF STUDY

Determine if a high maximum urethral closure pressure (MUCP) correlates with sacral neuromodulation success in female patients with voiding dysfunction.
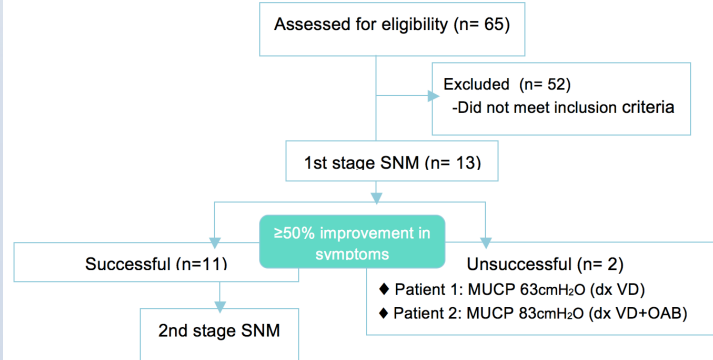
METHODS

Retrospective observational study of prospectively collected data from 65 patients who underwent static urethral pressure profilometry (UPP) as part of urodynamic investigations before sacral neuromodulation placement (2012-2017).
We selected female patients with VD in UDS and postvoid residual urine (PVR) more than 100mL, who where candidates for SNM.
Sacral neuromodulation test phase success was defined by 50% improvement in symptoms at the outpatient clinic.
We used an MUCP cut-off of 90 cmH2O, based on clinical judgment. Logistic regression analysis was performed to identify perioperative factors associated with sacral neuromodulation success.

Demographics and characteristics

Age (years)	27.3 (± 10.5)
Diagnosis (no. patients)	
VD	8
VD + OAB	4
VD + pelvic pain	1

RESULTS

Assessed for eligibility (n= 65)

Excluded (n= 52)
-Did not meet inclusion criteria

1st stage SNM (n= 13)

≥50% improvement in symptoms

Successful (n=11)

2nd stage SNM

Unsuccessful (n= 2)
♦ Patient 1: MUCP 63cmH2O (dx VD)
♦ Patient 2: MUCP 83cmH2O (dx VD+OAB)

A maximum urethral closure pressure value of 101 was calculated with ROC curve with the best AUC of 0.86.
On univariate analysis, MUCP ≥90 cmH2O was associated with SNM success, with an OR of 5.5 (p= 0.027).
A MUCP of 90 cmH2O or above, confers 5.5 more chance of having a successful clinical response with SNM in VD.

SUCCESSFUL SNM

- 38.5% MUCP < 90 cm H2O
- 61.5% MUCP ≥ 90 cm H2O
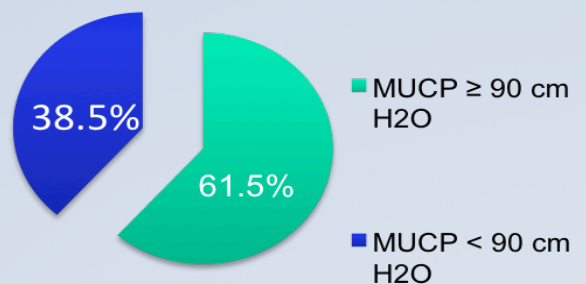
CONCLUSIONS

MUCP appears to be a useful tool for predicting success of sacral neuromodulation therapy in women with voiding dysfunction.
Further studies with larger populations are warranted to confirm this observation.

REFERENCES

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