

Overactive Bladder Syndrome After Artificial Urinary Sphincter Implantation – Is It Harder to Treat?

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Abstract

Objective. The overactive bladder syndrome developed after implanting and artificial urinary sphincter seems to be more challenging from a therapeutic perspective if compared to idiopathic cases. Our aim is to compare the clinical features of the overactive bladder (OAB) in the patient with an artificial urinary sphincter (AUS) implant with a similar population with non-neurogenic OAB.

Material and Methods. We performed a retrospective study focused on the evolution of post-surgical treatment of OAB in patients with an AUS implant. For analysis purpose we used data from our experience with a similar series of patients with OAB after prostate surgery (non-neurogenic) and no AUS. In the AUS group, urodynamic studies were available before and twice after the implant. The OABq questionnaire was used. After the diagnosis of *de novo* OAB, treatment was started as per our standard of care, with antimuscarinics alone or in combination with $\beta 3$ agonists. T-test analysis was performed for comparison of OABq and urodynamic parameters in both series.

Results. A total of 12 patients with OAB post AUS implantation were included, aged 49 to 88 years old. In all cases, an overactive detrusor was confirmed by urodynamics. We could not identify any predictive factor for *de novo* OAB in the pre-implant urodynamic evaluation. After treatment, in the AUS group, we noticed no statistical significant variation of the OABq and urodynamic parameter, while in the control group all parameters were improved.

Discussion. Post prostatectomy urinary incontinence in the male patient is one of the most bothersome late complications of this surgery. Our experience shows that severe incontinence might develop regardless of the initial indication for surgery, e.g. prostate cancer or BOO. The AUS remains the ultimate treatment in this case, even if some significant drawbacks still persist. Post AUS complications include this particular and redutable type of OAB syndrome, which has suboptimal response to treatment. Unfortunately, even if the AUS has been around for almost half a century, the experience with it remains limited and there is an almost desperate need for large studies of metanalyses in order to better understand its long term behavior.

Conclusion. *De novo* OAB has a poor response to treatment when compared to typical OAB cases. In some cases, the lack of response is confirmed both by the questionnaire (symptoms) and urodynamics (objective parameters). We were unable to identify predicting factors for *de novo* OAB. Pre-operative OAB does not correlate with any postoperative parameter. The patient has to be informed about the possibility that he will develop treatment refractory OAB after the AUS implant.

Introduction

- The overactive bladder in a patient with an artificial urinary sphincter seems to be more difficult to treat if compared to idiopathic OAB.
- We aim to compare the clinical features of OAB in AUS patients with a similar series of non-neurogenic OAB.

Methods and Materials

- Retrospective study
- We reviewed data from our patients with OAB after AUS implant
- Data was compared to a similar series of patients with non neurogenic OAB after prostatic surgery (non-neurogenic).
- Urodynamics before and after surgery
- OABq questionnaire
- Patients were treated with antimuscarinics alone or in combination with mirabegron
- T test analysis for OABq and urodynamic parameters.

Results

- ❖ 12 men with OAB post AUS, aged 49 to 88 years old
- ❖ Urodynamic diagnosis of detrusor overactivity in ALL cases !
- ❖ We could not identify any predictive factor in the pre surgery urodynamic evaluation
- ❖ In the AUS group we could not identify any statistically significant improvement of the symptom score or urodynamic parameters.
- ❖ In the control group, ALL parameters were improved.

Discussion

- ❑ Post prostatectomy urinary incontinence in the male patient is one of the most bothersome late complications of this surgery.
- ❑ Our experience shows that severe incontinence might develop regardless of the initial indication for surgery, e.g. prostate cancer or BOO.
- ❑ The AUS remains the ultimate treatment in this case, even if some significant drawbacks still persist.
- ❑ Post AUS complications include this particular and redutable type of OAB syndrome.
- ❑ Unfortunately, even if the AUS has been around for almost half a century, the experience with it remains limited and there is an almost desperate need for large studies of metanalyses in order to better understand its long term behavior.

Conclusions

- *De novo* OAB has a poor response to first line medication when compared to “typical” OAB.
- The lack of response is confirmed both by the symptom score (subjective) and by urodynamics (objective)
- We could not identify predicting factors for *de novo* OAB
- The patient has to be informed about the potential development of a treatment refractory OAB after the implantation of an AUS.