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FATE OF OVERACTIVE BLADDER AFTER ARTIFICIAL URINARY SPHINCTER IMPLANTATION FOR POST-PROSTATECTOMY URINARY INCONTINENCE

Hypothesis / aims of study
Not a few patients are diagnosed with overactive bladder (OAB) after artificial urinary sphincter (AUS) implantation, even with improvement of incontinence[1,2]. However the clinical course of overactive bladder after artificial urinary sphincter implantation is not clearly known. Hereby, we have investigated the fate of patients with overactive bladder after artificial urinary sphincter implantation.

Study design, Materials and methods
This study was performed based on the retrospectively collected patient data. Virgin cases of AUS implantation from May 2007 to November 2016 by a single surgeon (JHK) for treatment of post-radical prostatectomy urinary incontinence were reviewed. Cases requiring device revision or explantation were excluded. Post-AUS OAB was defined as a condition with OAB symptom score ≥3 with an urgency score ≥2. The cases requiring medication for treatment of OAB symptom were also regarded as OAB regardless of the point of symptom score. Post-AUS De Novo OAB was defined as post-AUS OAB diagnosed within 6 months after device activation without OAB symptom before AUS implantation.

Results
A total of 109 patients had been evaluated. Median age at AUS implantation was 73.5 (IQR,69.3-76.4) years. 74 (67.9%) patients had OAB before AUS implantation. During the median follow up period of 25.9 (IQR,11.3-49.2) months, 51(46.8%) patients had persistent post AUS OAB, 23(21.1%) showed improvement in OAB symptom after AUS implantation without medical treatment. 12(11.0%) patients corresponded to the criteria of Post-AUS De Novo OAB, and 3(2.8%) was lately diagnosed with OAB more than 12 months after AUS implantation. In comparison of the clinical courses according to the type of OAB, Table 1 describes the data in detail. Although not significantly different, more proportion (57.1%) of patients had responded to the medical treatment then the patients with persistent OAB group (28.2%).(Table 1)

Interpretation of results
We could not find out statistically significant difference in the incidence of symptom improvement or in treatment duration needed for symptom improvement between the groups. However, in De Novo OAB group more portion of patients showed response to the medical treatment.

Concluding message
Our results suggest that there are plenty of patients with post AUS overactive bladder who need proper medical treatment. Further assessment to solve out the characteristics or risk factors associated the treatment response in going to be followed.

Table 1. The condition of patients with overactive bladder after artificial urinary sphincter implantation

	Persistent OAB (N=51)	**De Novo OAB (N=12)**
Age (years, IQR)	74.4 (69.2-77.4)	69.4 (65.8-73.0)
Follow up period (months, IQR)	32.2 (14.2-56.7)	38.1 (22.0-48.7)
Patients who received medical treatment (N,%)	39 (76.5)	7(58.3)
Patients, whose symptom improved with medical treatment (N,%)	11 (28.2)*	4 (57.1)*
median duration of medical treatment among patients with symptom improvement (months, IQR)	10.7(8.7-53.4)	15.5(9.6-27.6)
median duration of medical treatment among patients with symptom refractory to medication (months, IQR)	12.4(4.8-32.4)	4.4 (2.0-4.4)

* the percentage value was calculated among the patients who received medical treatment in each group

References
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