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DOES THE DIAGNOSIS OF DETRUSOR OVERACTIVITY AFFECT THE LONG TERM PROGNOSIS OF PATIENTS TREATED WITH A RETROPUBIC MIDURETHRAL SLING?

Hypothesis / aims of study
There are limited long term studies on the mid urethral sling procedure (MUS) in patients with preoperative detrusor overactivity (DO) and there is debate regarding the usefulness of pre-operative cystometry. Large studies in highly selected populations seem to show no benefit from preoperative cystometry [1]. The argument for cystometry is that it gives useful prognostic information about complications and efficacy [2].This study was designed to provide long term efficacy and safety data for the Advantage MUS and to compare outcomes in patients with pure urodynamic stress incontinence (USI) to patients with mixed USI and DO.

Study design, materials and methods
This was a retrospective consecutive case series study of 100 patients with USI matched to a consecutive group of a further 100 patients with preoperative USI and DO treated with a retropubic MUS. The retropubic tape was performed under the supervision, or directly by, the senior author at a single centre. All patients reported failure of pelvic floor exercises. The clinical notes, urodynamic traces and reports, operative and post-operative notes of all patients were obtained and reviewed. Patients were mailed the patient global impression of improvement (PGI-I) and KHQ questionnaires. Patients not responding to the initial questionnaires were contacted by telephone.

Results
After a mean follow up of 6 years more patients in the pure USI group described themselves as “very much better” or “much better” (86% pure USI vs 57% mixed: p 0.007) see table 1. Follow up data was available in 86% of patients. There was no difference in the patient demographics between the two groups. Quality of life is improved at 6 years from baseline in both groups. Patients in the mixed group were more likely to complain of urgency (69% vs 42%: p=0.0007) which was more likely to be severe (34% vs 10%: p=0.004) see table 2. One percent of patients had been treated with a repeat MUS with 0.6% needing surgical excision for persistent troublesome pain.

Table 1. PGI-I data

	USI only n=88 (%)	Mixed USI DO n=84 (%)	P value
Very much better	57 (65)	34 (41)	0.002*
Much better	18 (21)	23 (28)	0.37
A little better	6 (7)	14 (17)	0.06
No change	2 (2)	7 (8)	0.09
A little worse	2 (2)	2 (2)	1.0
Much worse	0 (0)	1 (1)	0.50
Very much worse	3(3)	3 (3)	1.0

*= statistically significant

Table 2. Post operative symptoms:

	USI only (%) (n =88)	Mixed USI + DO (%) (n=84)	P value
Persistent SUI			
- none	59 (67)	50 (60)	0.34
- mild	17 (19)	10 (12)	0.22
- moderate	4 (5)	10 (12)	0.10
- severe	8 (9)	14 (16)	0.17
Any OAB symptoms			
- none	50 (58)	26 (31)	0.0007*
- mild	18 (20)	15 (18)	0.71
- moderate	10 (11)	14 (17)	0.38
- severe	10 (11)	29 (34)	0.004*

*statistically significant

Interpretation of results

This study is important because it reaffirms that the diagnosis of DO before an MUS predicts the outcome in the longer term. This reinforces the view that pre-operative cystometry allows prognostic utility to inform patient outcomes and counselling, contrary to the view that urodynamic evaluation confers no extra benefit over simple clinical evaluation [1]. The information in this paper challenges the view that urodynamic parameters are not predictive of OAB symptom change after surgery [3].

Six years after surgery a significant proportion (34%) of the patients in the mixed group are having troublesome persistent severe OAB symptoms. This may reflect our difficulty in finding effective treatments for OAB but longer term surveillance and treatment of persistent symptoms is warranted in this group. There was no control group who did not have a MUS so it is difficult to ascertain whether the development of OAB was related to the MUS or not.

This study suggests that the Advantage MUS gives a subjective cure of SUI of over 60% after 7 years. The study was unable to record objective cure rates of USI. Patient reported outcomes suggest higher satisfaction in the USI only group compared to the mixed group. Eighty-six percent of patients in the USI only group described themselves as “very much better” or “much better” compared to 57% in the mixed group. Quality of life is improved at 7 years from baseline in both the USI only group and the mixed USI and DO group

This is one of the first studies assessing the long-term outcomes of the Advantage MUS. It demonstrates a low level of complications. This study suggests that the Advantage MUS is a suitable treatment of USI and also has significant long term quality of life improvements in patients with mixed DO and USI.

Concluding message

This study confirms that pre-operative DO predicts a poorer long term patient perceived outcome following MUS. However, most patients treated with MUS have significant long term quality of life improvements.

References

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Disclosures

Funding: The study was partially supported by a grant from Boston Scientific. **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** The research and development department of Medway Maritime Hospital. **Helsinki:** Yes **Informed Consent:** Yes