

Identifying voiding dysfunction in women with lower urinary tract symptoms (LUTS) following continence surgery

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Background and aim

When de novo voiding LUTS are reported after a patient is treated with stress urinary incontinence (SUI) surgery, newly increased urethral resistance or pre-existing detrusor underactivity may account for symptoms. The aim of our study is to assess voiding parameters of women with de novo voiding lower urinary tract symptoms after SUI surgery .

Study design, materials and methods

We reviewed the post-SUI surgery urodynamic studies of 40 consecutive patients with new on set voiding LUTS (poor flow, straining to void and a feeling of incomplete emptying). We documented the SUI surgery, P_{det.Qmax}, Q_{max} and post void residual. We classified the voids as obstructed or unobstructed using the Solomon-Greenwell nomogram cut off $P_{det.Qmax} = 2.2 * Q_{max} + 5$.

Results

The mean (± SD) age for the 40 patients reviewed was 55.7 ± 11.5 years. 12 patients (30%) demonstrated urodynamically obstructed voiding. The P_{det.Qmax}, Q_{max} and post void residual for both the obstructed and unobstructed patients is shown in table 1 below. Our results suggest 70% of de novo voiding LUTS are due to detrusor underactivity. In 30% of cases, the post-operatively increased urethral resistance results in urodynamically obstructed voiding. In these obstructed patients, significant post void residuals are demonstrated (mean 150 ml). Although there is statistical no difference in the distribution of SUI procedure between the two groups, the ratio suggests a colposuspension is less likely to result in obstruction.

Void	n	Mean (±SD) Pdet.Qmax (cmH2O)	Mean (±SD) Qmax (ml/s)	Mean (±SD) PVR (ml)	SUI surgery
Obstructed	12	25.0 ± 6.4	21.1 ± 7.1	31 ± 64.5	TVT n=10 TVT-O n=2
Unobstructed	28	44.1 ± 12.4	9.1 ± 4.0	150 ± 103	TVT n=15 TVT-O n=3 Colposuspension n=9 Bulking agent n= 1
Total = 40					

Table 1: The Pdet.Qmax, Qmax and post void residual for both the obstructed and unobstructed patients as well as the SUI procedure

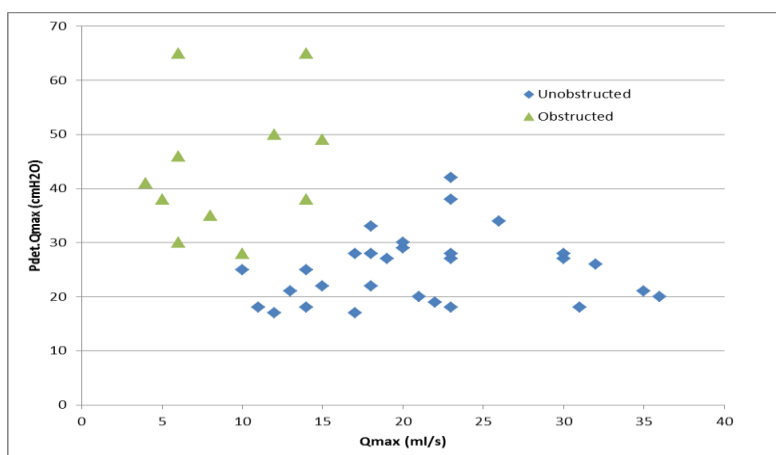


Figure 1: The Pdet.Qmax and Qmax value for patients with de novo voiding LUTS after SUI surgery

Concluding message

Detrusor underactivity and bladder outlet obstruction accounts for 70% and 30% of de novo voiding LUTS after SUI surgery respectively. Voiding parameters before SUI surgery may identify patients who have a higher risk of developing de novo voiding LUTS so may be appropriately counselled and followed-up.