

TO EVALUATE THE ROLE OF PRE-OPERATIVE AND POST-OPERATIVE URODYNAMICS IN WOMEN WITH VESICO-VAGINAL FISTULA.

Hypothesis / aims of study

To evaluate the role of urodynamic study in women with vesico-vaginal fistula (VVF) and to study the difference in findings between obstetrical and surgical fistula (before and after repair).

Study design, materials and methods

Between Jan 2012 and May 2013, 33 women with VVF were evaluated by urodynamic evaluation after collecting data regarding demographic and fistula details (site and size). During urodynamics the fistula was obliterated by passing a foley catheter through the vagina into the bladder via the fistulous tract and the balloon inflated to prevent leakage of filling medium. After fistula repair, women with successful repair and those who were willing for urodynamic evaluation were re-evaluated (25 women). Each woman filled AUA symptom score and was subjected to urodynamic study after minimum of 3-months follow-up. Data was analysed using unpaired t-test to compare groups.

Results

The mean age was 32.5 years (range, 21-53). The etiology was obstructed labor (Group A) in 23 and post-surgical in 10 (Group B). The mean fistula diameters in Group A and B were 2.01 ± 0.15 and 1.1 ± 0.23 cm ($p=0.0001$). In Group A, the pre-operative urodynamic findings with respect to capacity (mL), compliance (mL/cm H₂O), detrusor pressure at Q_{max} (cm H₂O) and maximum flow rates (mL/s) were 132.13 ± 51.1 , 80.16 ± 36.11 , 21.24 ± 16.22 and 11.61 ± 9.19 , respectively; while in Group B, the values were 239.4 ± 60.09 ($p=0.0001$), 61.2 ± 23.03 ($p=0.13$), 29.13 ± 13.76 ($p=0.19$) and 19.11 ± 10.17 ($p=0.45$), respectively.

After a mean of 5.83 months (range, 3-8), re-evaluation of 25 women could be completed. The etiology were obstructed labor in 16 (Group A) and post-surgical in 9 (Group B). The mean fistula diameters were 2.21 ± 0.21 and 0.97 ± 0.11 cm, respectively ($p=0.0001$). In Group A, the pre-operative urodynamic findings with respect to capacity (mL), compliance (mL/cm H₂O), detrusor pressure at Q_{max} (cm H₂O) and maximum flow rates (mL/s) were 378.21 ± 59.19 , 69.58 ± 20.24 , 40.13 ± 21.01 and 31.11 ± 10.02 , respectively; while in Group B, the values were 430.76 ± 78.22 ($p=0.07$), 85.71 ± 29.13 ($p=0.11$), 31.27 ± 19.18 ($p=0.30$) and 34.01 ± 6.13 ($p=0.44$), respectively. Of 25 women, 9 had AUA symptom score ≥ 8 . Of these, 6 women had storage symptoms, 2 had voiding symptoms while 1 had stress incontinence. Of the 6 women with storage symptoms, 3 had cystometric capacity < 200 mL, 2 had low compliance and 1 showed unstable contraction (overlap in some women) while 2 women showed no urodynamic abnormality. Both women with voiding symptoms had high pressure detrusor contraction at the time of voiding (AG number > 40). 3 additional women had urodynamic abnormality (1 had overactivity; 2 had high detrusor pressure during voiding). It was difficult to interpret the findings of urodynamic study done during pre-operative period because of leakage of filling medium and should be interpreted with caution.

Interpretation of results

The literature regarding systematic study of urodynamic abnormalities in women with successful repair are lacking. Similarly, there is only 1 urodynamic study before surgery. Our study will fill this gap in the literature.

Concluding message

Urodynamic abnormalities are not uncommon after VVF repair. More studies should be done to understand the bladder behavior after repair. Although, described previously, urodynamic study in pre-operative period is difficult.

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Institutional Ethics Committee, Research Cell, King George Medical University, Lucknow, India **Helsinki:** Yes **Informed Consent:** Yes