

Preoperative urodynamic study patterns and their correlation with lower urinary tract symptoms: A 13-year retrospective analysis from a tertiary urogynaecology centre

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ABSTRACT

Introduction: Lower urinary tract symptoms (LUTS) are commonly reported among women presenting to the urogynaecology clinic. Pre-operative urodynamic studies (UDS) play a key role in evaluating bladder function and tailoring appropriate surgical management, yet their clinical utility remains debated. **Objective:** This study aimed to describe the distribution of urodynamic diagnoses and assess the correlation between pre-operative UDS findings and reported symptoms among women undergoing evaluation for pelvic floor disorders at MHKL. **Materials and Methods:** We conducted a retrospective review of secondary data from the urogynaecology registry at MHKL, covering cases from 1st September 2006 to 31st August 2019. A total of 1,571 women underwent UDS as part of their pre-operative work-up. Demographic data, LUTS and UDS parameters were analysed descriptively. **Results:** The median age of participants was 58 years (21 to 83). UDS revealed urodynamic stress incontinence (USI) in 613 patients (39.0%), detrusor overactivity in 13 (0.82%), mixed detrusor overactivity and urodynamic stress incontinence in 30 (1.9%), and normal or stable bladder findings in 915 (58.2%). Additionally, 558 patients demonstrated a urinary flow rate more or equal 15 ml/s, while 437 had a maximum cystometric capacity more or equal (MCC) of 350ml. Symptomatically, nocturia (76%) and stress urinary incontinence (53%) were most prevalent. There was a strong correlation between clinically reported SUI and urodynamic USI ($p < 0.05$), and there was a statistically significant association between poor flow and reduced $Q_{max} < 15$ mls/ sec ($p < 0.05$). The rate of occult SUI is 28.4%. **Conclusion:** Pre-operative urodynamic assessment demonstrates good correlation with reported LUTS, particularly poor flow and stress urinary incontinence, supporting their role in refining diagnosis and surgical planning. In addition, the high rate of occult SUI highlights the importance of UDS in detecting hidden bladder dysfunction.