



The detection rate of different prolapse reduction tests to detect urodynamic stress incontinence in women with pelvic organ prolapse



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Aim of study

Up to 50% of women with pelvic organ prolapse (POP) may have urinary incontinence (UI). It was noted that up to 6-40% of women required subsequent continence surgery after undergoing surgery for POP alone. Some women with POP may have “occult stress urinary incontinence (SUI)”. A prolapse reduction tests to unmask occult SUI is essential when assessing women with POP, especially when planning for surgery for POP.

This study aims at evaluating the sensitivity of different prolapse reduction tests to detect urodynamic stress incontinence in women with POP.

Study design, materials and methods

This is a retrospective observational study on prospectively collected data in a tertiary university hospital. Patients with POP and UI attended for cystometry from January 2023 to March 2024 conducted by one investigation team were reviewed. Stage of prolapse according to Pelvic Organ Quantification (POP-Q), age, urinary incontinence symptoms including stress urinary incontinence (SUI), urgency urinary incontinence (UUI) or voiding dysfunction were included.

The cystometry investigations were conducted in the standard manner and to determine if patient had urodynamic stress incontinence. USI was assessed i) after the bladder was filled up and before prolapse was reduced, ii) when prolapse reduction tests were performed to reduce the prolapse by digital reduction of prolapse, and followed by iii) placement of ring pessary. USI at anytime moment were recorded. Valsalva leak point pressure was

recorded when there was USI, also the peak flow rate and any presence of detrusor overactivity.

The detection rate of the three mentioned methods in diagnosing USI were analyzed.

Results

88 patients were included. Their mean age was 63 years old (SD=9.98). In all, 22(25%), 45(51%), 11(13%), 10(11%) of them had stage I,II,III and IV POP, respectively. Overall, 81(92%), 69(78%), 57(65%) had prolapse over anterior, apical and posterior compartment, respectively. Among them, 72(82%) had symptoms of SUI, in which 60/72(83%) also complained of symptoms of UUI. 45(51%) patients reached a diagnosis of urodynamic stress incontinence (USI). Without prolapse reduction test, USI was demonstrated in 34/45 (76%) patients. Upon digital reduction of prolapse, USI was demonstrated in 18/45 (40%) patients. After placement of ring pessary, 23/45 (51%) patients demonstrated USI.

Interpretation of result

The detection rate in demonstrating USI was 76%,40% and 51% in patients without prolapse reduction test, with digital reduction of prolapse and with placement of ring pessary, respectively.

Moreover, digital reduction of prolapse failed to show higher detection rate in USI comparing with placement of ring pessary.

Concluding message

Assessment of urinary incontinence in patients with pelvic organ prolapse are essential, especially when planning for operations. Urodynamic stress incontinence should be tested while prolapse in both non-reduced and reduced position, and preferably reduction by ring pessary.

Disclosure: None