How to treat Stress Urinary Incontinence in patients with Underactive Bladder

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Underactive bladder

• Reduced strength of detrusor contraction resulting in prolonged bladder emptying or in a PVR

• Often linked to sensory dysfunction: **diminished sensitivity** to bladder volumes, **hypotonicity**

• **It is** described by symptoms of hesitancy, poor or intermittent stream, or incomplete bladder emptying.

Failure to void
Age-related symptoms such as urinary retention, weak stream, and/or incontinence have been attributed to UAB and suggest that Detrusor Underactivity has age-associated prevalence.

Half of elderly men and ¾ of elderly women With Detrusor Underactivity have other urologic conditions such as OAB, BOO, or SUI.
Failure to void (UAB) with failure to store (SUI)

- UAB is associated with voiding LUTS, particularly poor flow.
- SUI is associated with storage LUTS, particularly “superflow”

- A state of Bladder underactivity with Urethral sphincter underactivity

- The combination of SUI with UAB is clinically beneficial for UAB symptoms.
- Theoretically, treating SUI could interfere with bladder emptying and could result in severe voiding difficulty and urinary retention.
Management of SUI in patients with UAB

• Treatment should be stepwise and tailored according to basic UAB and SUI severity:

• If UAB is severe and the patient is already treated by CIC- treat SUI as Genuine SUI. In the rare case of a successful Sacral neuromodulation therapy - treat SUI as Genuine SUI.

• If UAB is mild/moderate , applying the crede maneuver with/without medications (alpha blockers/cholinergics/combination) could alleviate bladder emptying . SUI could then be treated by pelvic floor rehabilitation (contraction and relaxation).
Management of SUI in patients with UAB

• If results are unsatisfactory, and SUI is mild to moderate, introducing a vaginal insert is appropriate (Impresa, Diveen, Nolix)
Surgical interventions for the treatment of SUI with UAB

• Basically, several studies have shown that lower Qmax before surgery (which is consistent with DU) and patient age are unfavorable predictors for an unfavorable outcome after MUS.

• Some studies show that the continence rate after MUS in patients with DU was lower than in patients with normal detrusor function, and was associated with 36% voiding difficulty and significantly increased PVR.
Should we treat these UAB + SUI patients with a mid urethral sling?

- The problematics - applying the sling too loose - persistent SUI, and applying normal tension may cause postoperative voiding difficulty

- Tension-free aims to enhance the support of the urethra, as opposed to the sling procedure (which aims to compress the urethra or raise urethral resistance)

- TVT and urethral resistance \( R = \frac{P}{Q^2} \)
Alternatives to TVT

• Bulking agents, laser therapy

• An adjustable sling could be a reasonable option - allows control over tension according to the postoperative urine leak or voiding difficulty.

• Some studies show high objective and subjective cure rates with adjustable slings, prospective long-term follow-up RCT data are still needed.
Take home messages

• UDS should be performed to confirm the presence of DU
• UDS may demonstrate false-positive underactivity and may falsely prevent the patient from undergoing MUS. Consider obstructing the bladder outlet to demonstrate true bladder contractility
• Better patient preparation, detailed explanation and meeting expectations regarding lower success rate of MUS should be done.
• Treatment should be tailored to each patient's main symptom.
• Pelvic floor exercise, proper medication and intra vaginal anti SUI devices are all valid optional treatments.
• The risk of voiding difficulty after surgery suggests that the use of an adjustable sling should be considered.