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## IMAGING OF TRANSOBTURATOR SUBURETHRAL SLING POSITION, TENSION, TWISTING AND ITS ASSOCIATION WITH SURGICAL OUTCOME

### Hypothesis / aims of study

To determine the correlation between tape location, tension, tape twisting and bladder neck mobility with surgical outcome after transobturator suburethral tape (TOT) placement.

### Study design, materials and methods

This is a retrospective study which included a total of 65 women who underwent TOT placement at our pelvic floor unit. Patients having more than one suburethral tape were excluded. A standardised medical history, physical examination and 4D translabial ultrasound were carried out and patients completed a validated questionnaire (Sandvik Incontinence Severity Index). Stored 4D TLUS volumes were analysed at a later date blinded to all clinical data. Ultrasound parameters determining tape position were tape percentile and symmetry of the tape. To determine tape tension we measured on maximum Valsalva the sling-pubis gap, sagittal tape-urethra distances at the upper end (sTUDu), centre (sTUDc), and lower end (sTUI) of the tape at rest (1), axial urethral central echolucent area at the tape's level, the shape of the tape both on rest and Valsalva (2) and the tape angle in the sagittal view (3). Tape twisting and bladder neck descent were also analysed. Estimated postvoid residual higher than 100ml were recorded.

### Results

Symptoms of stress urinary incontinence were present in 17%, with urge incontinence in 22%, and with symptoms of voiding dysfunction in 23%. Subjective surgical outcome were: cured in 82%, better in 17% and no improvement in 2% (n=1). Asymmetry of the tape was associated with overactive bladder (p=0.003), while tape shape and angle on Valsalva was associated with SUI (p=0.044; p=0.048) and UUI (p=0.017; p=0.022). We found that sTUDc was associated with SUI (p=0.027). The shortest tape-urethral distances and sTUDI were associated with high postvoid residuals (p=0.022; p=0.003) although no associations were found with symptoms of voiding dysfunction. No correlations were found between the validated questionnaire Sandvik and subjective cure rates with ultrasound parameters.

### Interpretation of results

In our population, only one patient referred having no improvement after surgery and not a patient referred being worse. Of course, this makes finding any association between ultrasound parameters described in the past with patient symptoms difficult due to the low complications and high cure rates.

### Concluding message

Of the many ultrasound parameters described in medical literature few correlate well with patient symptoms. Neither tape location nor tape twisting seem to affect clinical outcome as long as it is located beneath the urethra acting as a fulcrum. We found that tape tension evaluated by tape shape and tape angle on Valsalva correlated best with patient symptoms of stress urinary incontinence and urge incontinence in our population, as did the sagittal tape-urethra distance centre with stress urinary incontinence.

### References

1. Ultrasound Obstet Gynecol 2011; 38; 210-216
2. BioMed Research International Volume 2015, Article ID 538391, 5 pages
3. Int Urogynecol J (2011) 22;493-398

### Disclosures

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