



# Abstract #532: Correlation between ultrasound measurements of transobturator mesh position and complications

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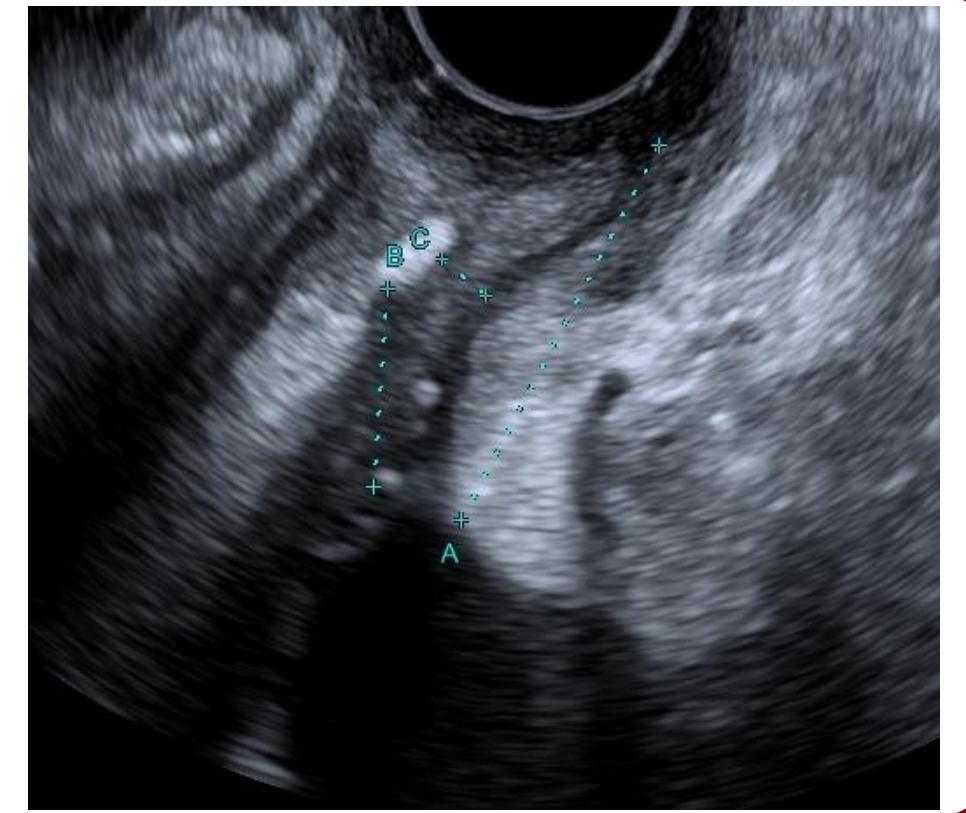
## Hypothesis / aims of study

It is well known that the position of incontinence meshes is important for both the outcomes and the complications regarding this kind of surgery<sup>(1)</sup>. We wanted to assure if, in our institution, the position of the meshes measured from the bladder neck and the longitudinal smooth muscle urethral complex was directly related to the results. We were specially focused on the recurrence or persistence of the stress incontinence, and the onset of de novo urinary urgency, voiding dysfunction, dyspareunia, pain or recurrent urinary tract infections (UTI). The aim of the study is to assess if we can improve our results in this surgery.

## Study design, materials and methods

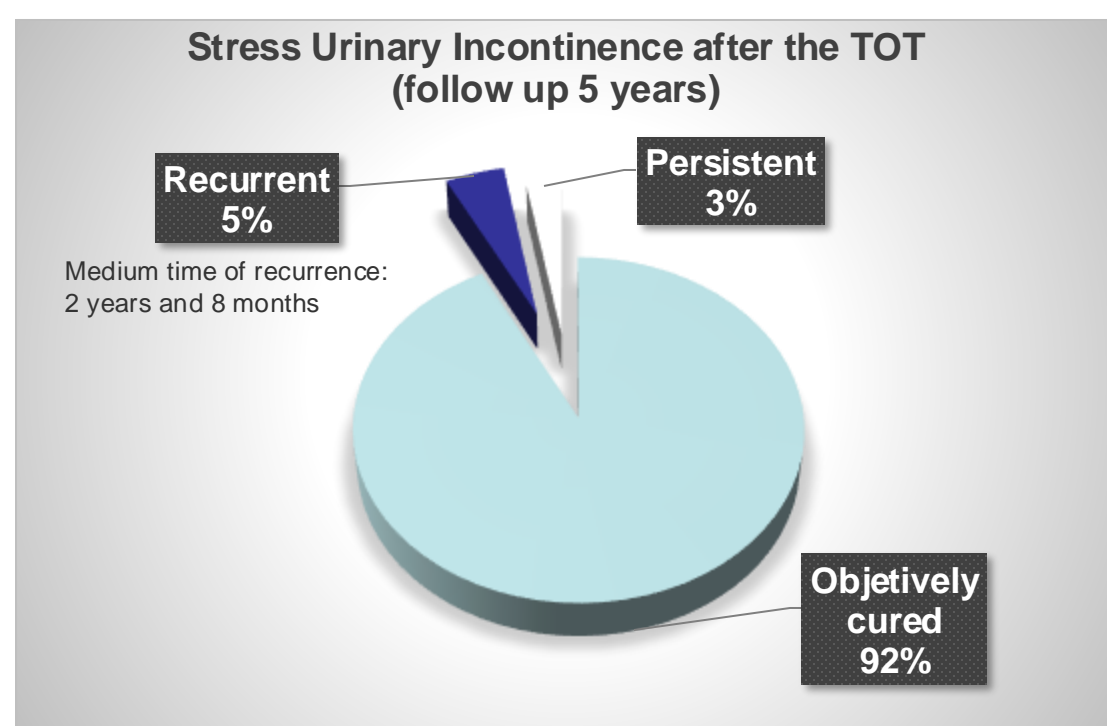
For this retrospective study, we focused on just one type of mesh, transobturator tape Contasure KIM (Neomedic), performed at our hospital between 2012 and 2018, studying a total of 614 patients. We followed the patients for a minimum of 5 years, and we performed a 2D introital ultrasound (US) using a Xario 100G with transvaginal probe, always performed by the same three gynecologists with specialization on pelvic floor disorders at our urogynecology unit.

We measured the distance of the mesh to the bladder neck (B) and the distance to the urethral complex (C). Based on other published papers<sup>(1)</sup>, we decided to fix a cut-off point of 15 mm from the superior part of the mesh and the bladder neck position (setting it as the proximal urethra, thinking of a feminine urethra (A) of approximately 40 mm -35 to 45mm-), and a distance from the mesh to the urethral complex of 2,5 mm, to study the hypothesis that, if the mesh was too close to the complex or located on the proximal third of the urethra, we would find more complications in our results.

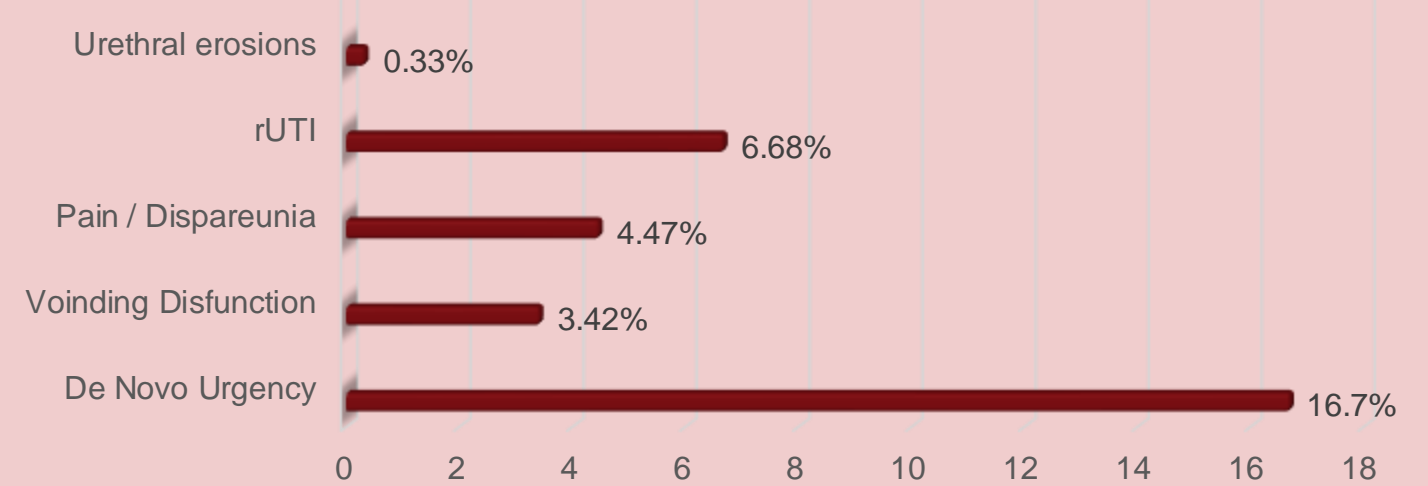


## Results and interpretation

Patients (n=614)	
BMI	27,82 (overweight)
Type of incontinence	40% Mixed Urinary Incontinence (MUI) 60% Pure Stress Urinary Incontinence (SUI).
Previous SUI surgery	1 patient (retropubic tape)



## Complications (5 years follow up)



## Urethral erosions (2 patients -0,33%-):

- Detected 4 years and 8 years after the surgery.
- In 4 patients (0,65%) the sling was found to be in intimate contact with the urethral wall in the ultrasound, but urethral erosion was not confirmed by cystoscopy:
  - None had pain or recurrent UTI.
  - 1 patient had de novo urgency.
  - 1 patient had de novo voiding dysfunction.

Regarding US measurements, we studied them individually about each specific possible complication:

Complication	Cases (%)	US measurements	Distance to urethral complex $\leq 2,5$ mm	Distance to bladder neck $\leq 15$ mm	Medium distance to the complex	Medium distance to bladder neck
Voiding dysfunction	21 (3,42%)	6 (28,5%)	4/6 (66,6%)	4/5 (80%) (1 missed)	2,45 mm	14,5 mm
De Novo Urgency	100 (16,7%)	51 (51%)	9/50 (18%) (1 missed)	24/39 (61,5%) (12 missed)	3,59 mm	16,27 mm
Pain /Dyspareunia	30 (4,47%)	13 (43,33%)	3/13 (23,7%)	7/13 (53,84%)	3,48 mm	16,6 mm
rUTI	41 (6,68%)	18 (43,9%)	6/18 (33,3%)	10/18 (55,5%)	3,09 mm	14,4 mm
Persistent SUI	17 (2,77%)	4 (23,5%)	None $<3,4$ mm	-	5,2 mm	-
Recurrent SUI	29 (4,72%)	14 (48,47%)	2/14 (14,28%)	7/13 (53,84%) (1 missed)	3,92 mm	18,04 mm

## Conclusions

Our results are not as complete as we would like, because we started measuring ultrasound distances just a few years ago. Therefore, we have a lot of slings not studied conveniently, so we could not include them in our study. Of all the results we show here, we would like to emphasize the following:

-Regarding **de novo urgency**, we have found it seems to be **more important the distance to the bladder neck** than the distance to the urethral complex. This can serve us to improve our results, trying to stay as far as reasonably possible of the bladder neck, and to specially check at each patient where exactly the middle third of her urethra is.

-Regarding **voiding dysfunction**, it seems both of the measurements are as important, although we can't extract so much information of our study because there were just a few cases reported.

-According to our results, **persistent SUI** was related to **larger distances to the urethral complex**, but we need to complete this data with more cases.

-We did not find any relation between **pelvic pain nor dyspareunia** and ultrasound measurements.

There are lots of studies about importance of the placement of the slings<sup>(2)</sup> and, with our results, we think we have found an interesting field where we can improve the complication rate of our patients, as other studies are emerging about the use of US at the surgery to exactly assess where we are placing it<sup>(3)</sup>.

Further studies will be performed at our hospital based on this one we are presenting.

## References

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