

PELVIC FLOOR ULTRASOUND EVALUATION OF TVTO - COULD WE PUT THE TAPE WHERE IT WAS PLANNED TO BE LOCALIZED?

Hypothesis / aims of study

Results found in literature on the subject suggest that there are significant differences among incontinent women's urethral length and mobility. Anti-incontinence tape localization may play an important role in cure results. There are suggestions that optimizing cure results can be achieved by individualising tape placement. In our departments we plan the exact placement of the anti-incontinence tape.

The aim of the study was to explore the differences between TVTO planned and achieved.

Study design, materials and methods

In our article 63 incontinent women were included. In our departments we place tapes according to urethral length measurement done in ultrasound. In 29 patients incision started at 1/3 of sonographically measured urethral length (1/3 formula) - like TVT. Since the results were not satisfactory, it was changed to formula 1/2 in 34 cases. Pelvic floor ultrasound was performed under standardized conditions (1) using vaginal probe 5-9 MHz. Urethral length and longitudinal urethral tape localization (LUTL) was measured, among others(1). Ultrasound was a part of complete standard urogynecologic exam according to routine department protocol before and after operation. Depending on the preoperative urethral length ultrasound measurement vaginal incision started primarily according to 1/3 formula, later 1/2 formula. It means that urethral length was divided by 3 or 2. This was the distance from external urethral orifice where the incision should begin. Depending on mathematical model, theoretical LUTL was counted. Six months after the operation, LUTL was ultrasonographically measured on control visit. Difference between planned and achieved TVTO localization was counted according to formula: planned LUTL minus achieved LUTL. "+" means shifting to bladder base, "-" - to urethral external orifice.

Results

Results are summarised in table 1. 76% results were between + 3mm and - 3mm, 84% between + 3,5mm and - 3,5mm. One result was - 8mm, the remaining were between - 6,8 mm and + 4,3 mm.

Table 1. Statistical analysis of differences between planned and achieved TVTO localization

Median	Lower quartile	Upper quartile	10th percentile	90th percentile	Minimum	Maximum
- 0,4 mm	-2,5 mm	1,6 mm	- 4,7 mm	+ 2,4 mm	- 8 mm	+ 4,3 mm

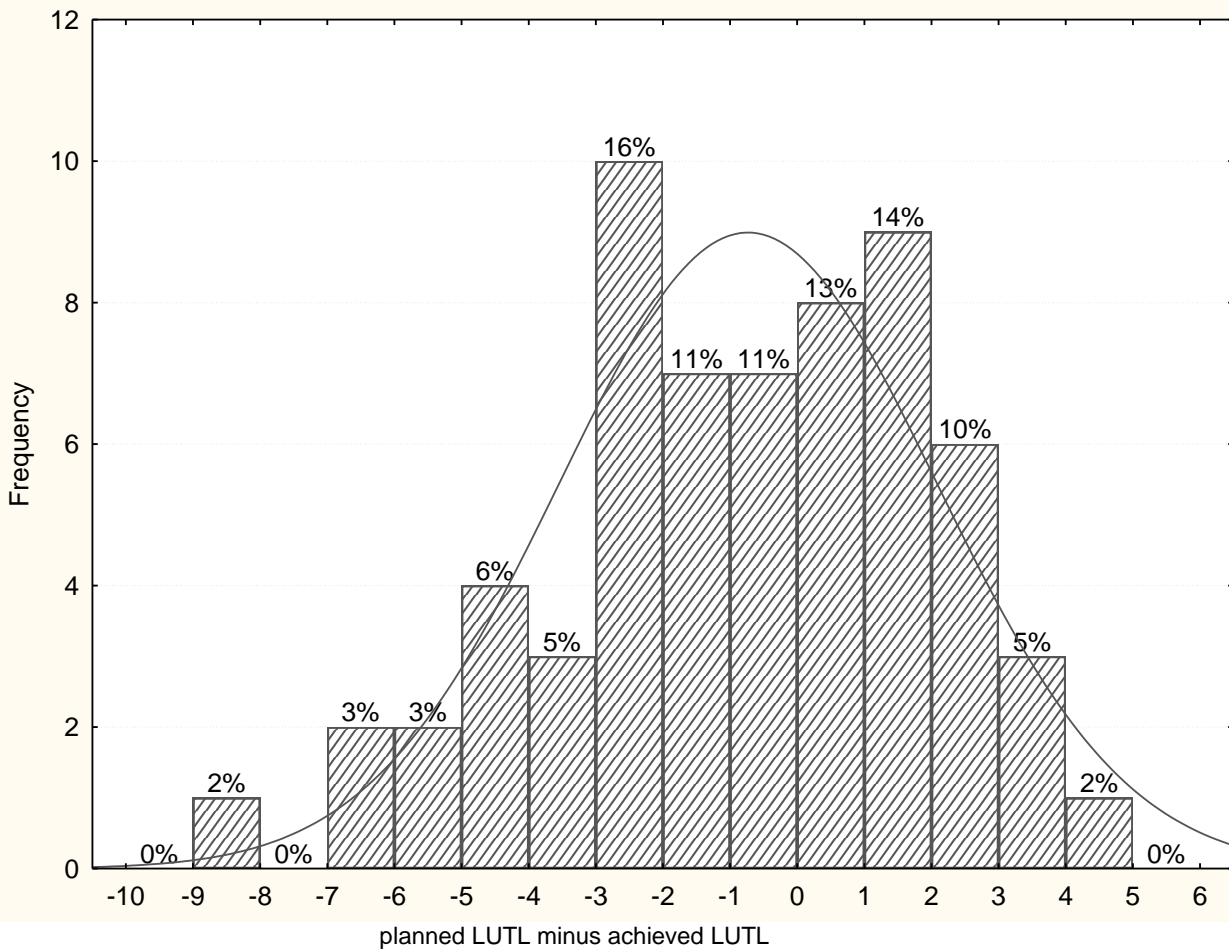


Fig. 1. Distribution of differences between planned and achieved LUTL

Interpretation of results

In most of the cases deviations did not exceed +3,5 and -3,5 mm - it suggests that tape stayed where it was put - probably it was not moving after procedure.

Concluding message

In most cases it was possible to place TVTO where planned. On longitudinal section differences between planned and achieved tape localization usually did not exceed 3,5 mm. We hypothesized that tape rather did not change localization postoperatively. We have the impression that there is possibility to use pelvic floor ultrasound to control quality of anti-incontinence procedures with tape use and to optimize the outcome after these operations.

References

1. Kociszewski J, Rautenberg O, Perucchini D, Eberhard J, Geissbühler V, Hilgers R, Viereck V. Tape functionality: sonographic tape characteristics and outcome after TVT incontinence surgery. *Neurourol Urodyn.* 2008;27(6):485-90.

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	Since all study patients underwent routine investigations and introital US was used for quality assurance purposes, the study was exempted from formal Ethics Committee approval by the Institutional Review Board of the University of Göttingen, Germany. Nevertheless, all patients were informed about the study and consented to participate.
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes