30

Martan A. [1], Masata J. [1], Svabik K. [1], Halaska M. [1], Voigt R. [2]
1. Dept.Obstet.Gynec, Charles University, Prague, Czech , 2. Dept. Obstet. Gyn, Apolda, Germany

THE ULTRASOUND IMAGING OF THE TAPE AFTER TVT PROCEDURE

Aims of Study
The position and the mobility of the bladder neck and urethra are important factors in the aetiology of genuine stress incontinence (GSI). One of the relevant surgical procedures employed in the management of GSI involve the technique of TVT operation (tension free vaginal tape). The aim of the present study was to compare the ultrasound imaging of the tape in women with GSI after TVT operation. The findings of our study should have implications for TVT procedure.

Methods
All TVT operations were primary procedures. A perineal and introital ultrasound examinations in the sagital and coronal plane in the patients in supine position, (by Acuson 128 XP 10) were performed. These examinations were performed one week or more after operation. The position and course of the tape at rest and during Valsalva manoeuvre in patients after TVT operation were assessed. The examination was performed when a patient had desire to void after drinking an undefined volume of liquid.

Results
The ultrasound of the tape imaging was different between the group of women with and without various problems after TVT operation. The most frequent problems included prolonged urinary retention, urinary urge symptoms, and leakage of urine. Figures 1a and b show ultrasound imagings of the lower urinary tract and the tape in women after successful operation at rest and during Valsalva manoeuvre. Figures 2a and b show ultrasound imagings of the lower urinary tract in women after TVT operation with urinary retention and signs of urgency. Figure 2b shows kinking of the proximal urethra during the Valsalva manoeuvre. Figures 3a,b show the correct location of the tape, but with insuficient tension on the left side. The tape is folded which might cause an intermitent leakage of urine. Figures 4a,b show the correct location of the „tight“ tape. This tape compress the urethra against the symphysis pubis [a „pinching“ effect].

Ultrasound imaging of the lower urinary tract and the tape

Fig.1a
At rest – women without problems

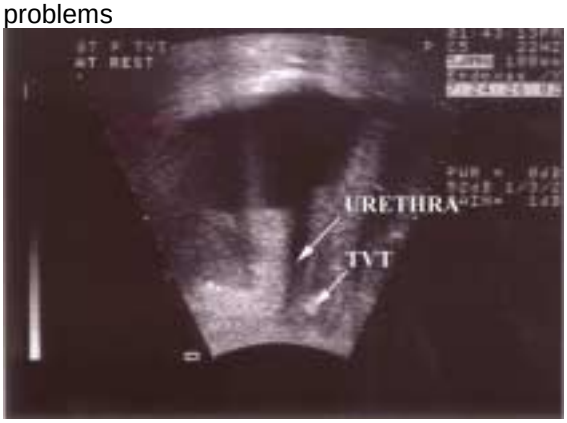

Fig.1b
Valsalva manoeuvre - women without problems

Fig.2a
At rest - women with urinary retention and signs of urgency

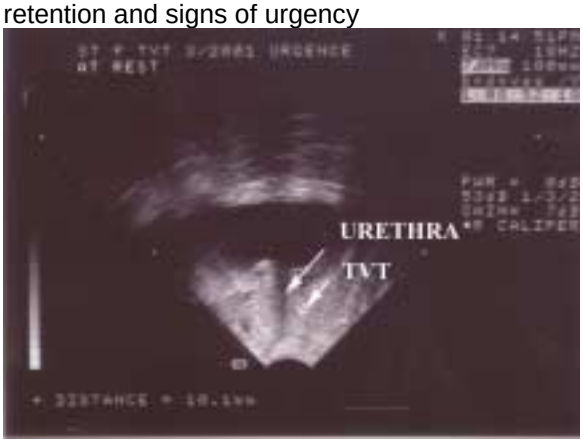

Fig.2b
Valsalva man. - women with urinary retention and signs of urgency

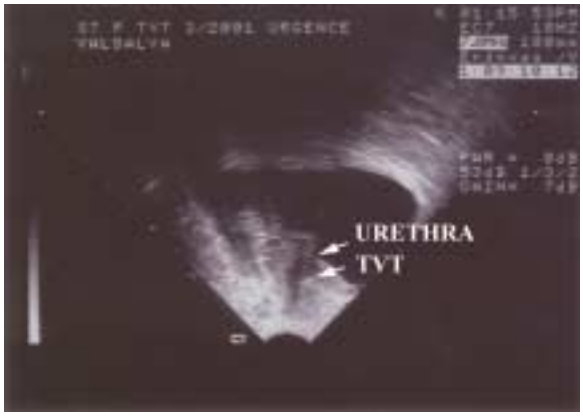

Fig.3a
At rest - women with intermitent GSI

Fig.3b
Valsalva manoeuvre - women with intermitent GSI

Fig.4a
At rest – the correct location of the „tight“ tape

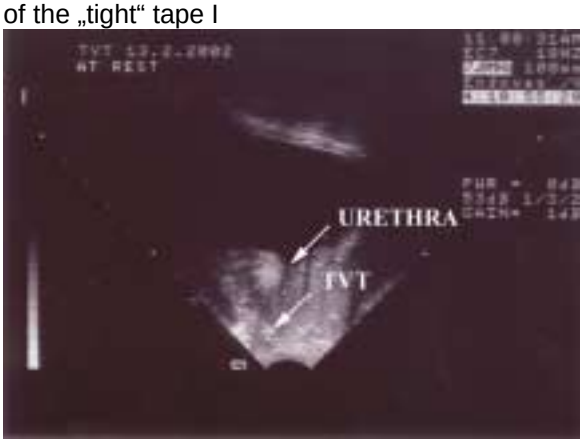

Fig.4b
Valsalva manoeuvre - the correct location of the „tight“ tape I

Conclusions

The determination of the position and course of the tape during ultrasound examination can help us to find reasons for possible complications of TVT procedure. Incorrect position of the tape and over-elevation of the proximal part of the urethra can cause prolonged urinary retention and signs of urgency. On the other hand, insufficient tension of the tape in its right location can result in intermitent GSI. Implementing US evaluation can give good feedback to surgeons and might help prevent symptoms of urgency, prolonged urinary retention and GSI. When these symptoms occur after TVT procedure, carrying out US examination is a logical step in its management.