

INTEREST OF THE 3D ULTRASOUND EVALUATION OF SUBURETHRAL TAPE AFTER TVT-O PROCEDURE

Hypothesis / aims of study

Urinary incontinence is one of the most common indication of pelvic floor imaging. A 3D perineal ultrasound examination thanks to the multiplanar mode allows a perfect visualization of slings which are highly echogenic. The aim of the study is to define the place of 3D-US in the post-operative evaluation of suburethral slings, especially in order to predict further complications.

Study design, materials and methods

Prospective study of 32 consecutive cases of TVT-O procedures for stress urinary incontinence (SUI) from November 2010 to December 2011 have been evaluated thanks to 3D ultrasound. Thirty-two consecutive patients with TVT-O procedures for SUI and 3D ultrasound were included in the study. All TVT-O procedures used Gynecare TVT-O tape. TVT-O procedure was performed according to manufacturers' recommendations. All patients were discharged on the day of the intervention. A 3D pelvic floor examination was performed between 6 and 9 weeks after the TVT-O procedure. The tape position was determined in reference to bladder neck (uretro-vesical junction) on a sagittal section plan (Figure 1). The spreading of the sling was assessed in the 3 dimensions (axial, sagittal and transversal) (Figures 1 & 2). Clinical findings were evaluated by using validated scales.

Results

The cure rate of stress urinary incontinence was 94 %. A 3D ultrasound imaging was available for each patient. For 30 patients (93.7 %) the sub urethral tape seems to be well spread. The mean distance between the tape of the uretro-vesical junction was 13.1 mm (2.8-20 mm). In three patients the tape was found to be closer to the vesical neck than expected (less than 8 mm with 2.8, 6 and 7.7 mm respectively). For 5 patients (15.6 %) an over-active bladder was noted after surgery. For 30 patients (93.7 %) the sub urethral tape seems to be well spread. In one patient a median sagittal twist of the tape was noted and was associated with dyspareunia and over-active bladder symptoms. In one patient a lateral twist was found without any symptoms reported. A short distance between the tape (defined as less than 8 mm) and the vesical neck is significantly associated with an over-active bladder after such surgery. ($p=0.002$, Fischer's exact test).

Interpretation of results

3D Ultrasound examination of suburethral slings thanks to the multiplanar mode is very useful in the evaluation of the position of the tape after urinary incontinence surgery. A suburethral sling should ideally place at the second third of the urethra. A displacement of the sling too closer from the neck of the bladder or a twist of the tape are causes of late overactive bladder.

Concluding message

3D Ultrasound seems to be a good exam to evaluate the good positioning of the sling and to predict overactive bladder symptoms.

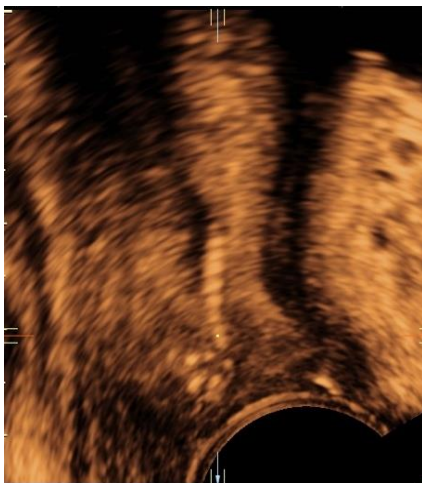


Figure 1 : Sagittal section plan : Suburethral sling well placed

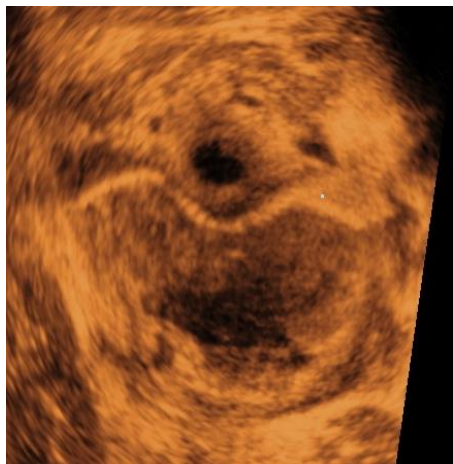


Figure 2 : Axial section plan : Suburethral sling well spread

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** CPP Ile de France X **Helsinki:** Yes **Informed Consent:** Yes