

TVT versus TOT: A Single-Center, Prospective Randomized Study

Introduction and Objective: After introduction of TVT and TOT, both techniques became so widely used that they represent the denominator in incontinence trials. Our aim is prospectively comparing TVT to TOT, regarding cure of incontinence and adverse events.

Materials and Methods: Between September 2006 and September 2009, women with SUI were randomized to receive TVT (Gynecare, Ethicon) or TOT (Aris, Mentor –Porges). All were adults with predominant stress incontinence. All had clinical evaluation, lab testing and urodynamics. Patients were randomly assigned to the surgical modality, using closed envelopes. Randomization performed after installation of spinal anesthesia. A standard inverted U vaginal incision was performed. Grade II cystocele or rectocele were only concomitant procedure allowed per protocol. TOT was inside-out and TVT was fixed in retrograde approach in all patients. Patients had PVR after catheter removal. Follow up at 3, 6 and 12 months included 1-hr.pad testing, stress test and symptom scores. Post operative complications were stratified according to modified Clavien classification.

Results: A total of 75 women were enrolled in the study. There were 65 patients who completed a minimum of 1 year follow up. Median age 47 (range: 33-60) years. Median parity was 4 (range: 2-11). Mean BMI was 33.6 ± 5 . 34 and 7 of the study group had cystocele and rectocele respectively. At 1 year, objective cure rate based on 1 hour pad test was 78.9%. Mean pad weight increase in those deemed failure was 4gm. Based on stress test, cure rate was 89.5%. Based on anti incontinence score, cure rate was also 89.5%. Overall complication rate was 21.5% (14/65). One vascular injury required blood transfusion and one vaginal extrusion conservatively treated with TVT. One bladder injury and 3 thigh pain (with TOT). Cure rate based on Pad test, anti incontinence score and stress–test was significantly different among the 2 groups at year. P value was 0.002, 0.001 and 0.02 respectively, using independent t -test.

Conclusion: TVT seems superior to TOT at 1 year, regarding cure of incontinence. TOT seems safer. Only Clavien grade 4 adverse event (inferior epigastric injury) was inflicted by TVT. Bladder injury can happen with TOT but no Clavien 3 or 4 were noticed with TOT.