

TVT VS. LAPAROSCOPIC BURCH COLPOSUSPENSION FOR THE TREATMENT OF STRESS URINARY INCONTINENCE

Hypothesis / aims of study

This study was performed to determine the differences (if any) between the Tension Free Vaginal Tape (TVT) and Laparoscopic Burch surgeries with respect to anaesthesia preparation time, length of surgery, hospital stay, quality of life, and patient satisfaction. Our hypothesis stated that TVT would take less time in the OR, would require a shorter hospital stay, and would have equivalent patient satisfaction when compared to Laparoscopic Burch for the treatment of stress urinary incontinence (SUI).

Study design, materials and methods

The study design was approved by our ethics committee. Thirty female patients with urodynamic stress urinary incontinence were randomized to receive either TVT or Laparoscopic Burch procedures. These patients were at least 30 years of age, were able to undergo either procedure, had no previous incontinence surgeries, and had no booked concurrent procedure (such as hysterectomy). Exclusion criteria included grade III-IV pelvic organ prolapse, mixed urinary incontinence, detrusor overactivity (proven on urodynamics), or previous bladder repair.

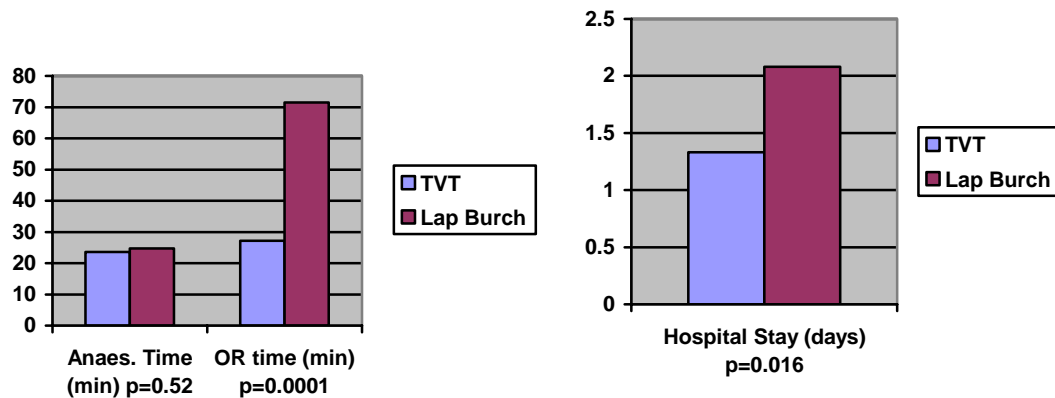
Each patient had a preoperative history and physical exam, urinalysis and culture, urodynamic studies, and cystoscopy. They also completed a quality of life questionnaire (1). Surgeries were performed at two local hospitals by a single surgeon. The TVT procedure was performed under a spinal anaesthetic, while the Laparoscopic Burch procedure was performed under general anaesthetic. Data were collected on demographics, OR and hospital stay times, complications, and patient satisfaction. Patients were examined in the office at six weeks post op. Quality of life data were collected via standardized questionnaires at six weeks, six months, and one year post op.

This study was powered to detect a 20 minute difference in operating (OR) times between the two surgeries and a one day hospital stay difference at an alpha of 0.05 and power of 80%. This would require 16 patients per group. Data were analyzed using Student's T tests and Chi-squared tests where appropriate.

Our primary outcomes were anaesthetic, operative, and hospital stay times. Our secondary outcomes were patient satisfaction, quality of life scores, and complications.

Results

Sixteen women were randomized to the TVT group, while the Laparoscopic Burch group had 14 patients. The patient demographics, anesthetic times, complication rates, satisfaction ratings and quality of life scores were similar. Each group showed a significant improvement in their quality of life scores post operatively. The operative times (TVT 27.2 min vs. LB 71.5 min, $p=0.0001$) and hospital stays (TVT 1.33 days vs. LB 2.1 days, $p=0.016$) were statistically different.



There was one major complication in each group. One patient undergoing a TVT had urinary retention that required stretching of the tape. One patient in the Laparoscopic Burch group had a right sided ureteric obstruction that was relieved by removing both sutures on the right side. All patients were dry one year post surgery.

Interpretation of results

The type of anaesthetic does not impact the overall procedure time. TVT takes less time to perform and these patients go home sooner. Regardless of their procedure, both groups of patients were satisfied with their surgery. The immediate complication rates were similar and there was only one significant complication in each group. Continence at one year was similar and both groups had equal significant improvements in their QOL scores after surgery.

Concluding message

TVT requires less operative time and has a shorter hospital stay compared to Laparoscopic Burch. The complications rates are comparable and patients are equally satisfied with either procedure. The improvements in quality of life scores at one year post surgery are similar.

Reference

(1) Short forms to assess life quality and symptom distress for urinary incontinence in women: the Incontinence Impact Questionnaire and the Urogenital Distress Inventory. Continence Program for Women Research Group. Neurourol Urodyn. 1995;14(2):131-9.