

MIDURETHRAL TAPE PROCEDURES: ARE THEY ALL THE SAME?

Aims of Study

Midurethral slings have quickly gained popularity for the treatment of stress urinary incontinence in women. Many surgeons have assumed that all midurethral tape procedures are equally effective, although there is little evidence to support this belief. This study compares the short-term outcomes of the tension-free vaginal tape (TVT) with the SPARC tape procedure for the treatment of stress urinary incontinence.

Methods

This study was a retrospective analysis of all eighty-five women undergoing a midurethral sling procedure for stress urinary incontinence between January 2000 and December 2002 at a tertiary referral center. Primary outcomes were subjective and objective stress incontinence cure rates 14 weeks after surgery. Subjects were given survey instruments to assess their subjective stress and urge incontinence symptoms at each visit. Subjects underwent multichannel urodynamics preoperatively and 14 weeks postoperatively. This included standing urethrocystometry with a stress test at 250 ml, static and dynamic urethral closure profiles at maximum cystometric capacity, and voiding pressure studies with patch electromyography. The two groups were compared for differences in demographic, preoperative, intraoperative, and postoperative variables using univariate and multivariate analysis.

Results

Forty-seven subjects had a TVT procedure and thirty-eight subjects had a SPARC procedure. The mean age for the TVT group was 54.8 years and was 56.7 years for the SPARC group. There were no statistical differences in other demographic factors including median parity, hormone use, and prior incontinence surgery. Differences in preoperative urodynamic factors were similar except a higher likelihood of Valsalva voiding (54% vs. 21%, $p=0.002$) and a higher PVR (76.5 vs. 26.2 ml, $p=0.045$) in the SPARC group. At 14 weeks after surgery, the TVT procedure had a urodynamic stress incontinence cure rate of 95.7% while the cure rate for the SPARC procedure was 76.2% ($p=0.062$). These differences were not attributed to any identifiable preoperative or intraoperative factors. Intraoperative bladder injury was more common during the SPARC procedure.

Conclusions

While marketed as such, all midurethral slings may not have the same success rates. In our experience, there is a surprising trend toward lower success rates for the SPARC procedure compared to the TVT procedure. Randomized controlled trials should be considered to directly compare the efficacy of different midurethral sling procedures, especially given their popularity and the common assumption that a difference does not exist.