

DOES TAPE TENSION HAVE AN EFFECT ON THE SUCCESS RATE OF TRANSOBTURATOR TAPE SURGERY?

Hypothesis / aims of study

The effect of tape tension on the success rate of mid urethral sling surgery is controversial. In theory, there should be no tape tension on the urethral bed in sling surgery. However, tape tension adjustable devices have recently been introduced. We performed a randomized, prospective study to determine if tape tension has an effect on the success rate of transobturator tape (TOT) surgery.

Study design, materials and methods

Between January 2007 and December 2008, TOT surgeries were performed by a single surgeon under spinal anesthesia. Patients were randomized on the day of surgery in the operating room to undergo a high tension or tension-free procedure. High tension was defined as a state in which there is tension pulling the tape on both lateral sides, so that the height of the tape is slightly or moderately shortened and the surgeon feels resistance when pulling the tape down. In contrast, tension-free was defined as a state in which there is no tension around the tape and no feeling of resistance by the surgeon when pulling the tape down. Clinical data, including age, Q tip test results, and preoperative urodynamic results were collected. The cure rate was determined by administering a questionnaire via the telephone. Cure of incontinence was defined as the absolute absence of subjective complaints of leakage in any situation. We compared the cure rate and the pre- and post-operative clinical variables between the high tension and tension-free groups.

Results

Eighty-two patients underwent TOT surgery. The high tension (N=42) and tension-free groups (N=40) had similar characteristics and preoperative parameters, including age, prevalence of mixed incontinence, prevalence of urethral hypermobility (Q-tip angle >30), peak flow rate, maximal urethral closing pressure, and valsalva leak point pressure. The mean follow-up period was 10 months (range, 3-17 months). The cure rate was higher in the high tension group than the tension-free group, but not statistically significant (67% vs. 56%, p=0.35). The mean postoperative peak flow rate was not different between two groups. There were no episodes of urinary retention in either group.

| | High tension group | Tension-free group | P value |
|--|--------------------|--------------------|---------|
| prevalence of mixed incontinence (%) | 36 | 38 | 0.80 |
| prevalence of urethral hypermobility (%) | 60 | 49 | 0.35 |
| MUCP (cmH ₂ O) | 60±25 | 70±35 | 0.14 |
| VLPP (cmH ₂ O) | 111±23 | 112±21 | 0.78 |
| Preop. Peak flow rate (ml/sec) | 27±11 | 23±10 | 0.09 |
| Postop. Peak flow rate (ml/sec) | 26±11 | 24±9 | 0.45 |
| Cure rate (%) | 67 | 56 | 0.35 |

Interpretation of results

The current prospective study showed that tape tension has an effect on the result of TOT surgery, but the effect was not statistically significant.

Concluding message

More large scale studies are needed to evaluate the effect of tape tension on success rates in incontinence procedures.

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| Specify source of funding or grant | None |
| Is this a clinical trial? | No |
| What were the subjects in the study? | HUMAN |
| Was this study approved by an ethics committee? | No |
| This study did not require ethics committee approval because | This surgery is now performed routinely. the tape tension is decided by surgeon preference. |
| Was the Declaration of Helsinki followed? | Yes |
| Was informed consent obtained from the patients? | Yes |