

THE SELF ANCHORING TRANSOBTURATOR MALE SLING TO TREAT STRESS URINARY INCONTINENCE IN MEN – T.O.M.S.; CONSIDERATIONS OF A NEW SLING, A SURGICAL APPROACH AND ANATOMIC FINDINGS IN A CADAVERIC STUDY

Hypothesis / aims of study:

The male perineal sling available these days uses bone anchors to be placed. We introduce a new designed synthetic sling graft underlying the bulbar urethra with a perineal transobturator approach for implantation in men and we hypothesize that our new developed sling can be implanted through the transobturator pathway in a safe and easy way without using screws for anchoring.

Study design, materials and methods:

The Implantation was performed by one surgeon on three male cadavers in the Institute of Anatomy, University of Vienna, Austria. The sling consisted of polypropylene fibres in 60 centimetres in length. The sling was built with a 5 x 4 centimetre rectangle of silicon coated polypropylen in the middle to be placed upon the bulbar urethra by combining standard sling materials available for the treatment of stress urinary incontinence. We used a vertical perineal incision to expose the bulbar urethra and the musculus bulbospongiosus below the inferior pubic ramus. We advanced laterally of the corpora cavernosa and medially of the inferior pubic ramus through the pelvis fascia with a small incision near the symphysis on each side. Through this small incision we placed a helical trocar to surround the inferior pubic ramus and to perforate the obturator membrane. With this trocar we placed the new transobturatoric tape with an inside out technique around the inferior pubic ramus on each side. The tension of the sling was established by pulling on the ends. Tension was measured with the retrograde leak point pressure. The ends of the tape were clamped with the middle part of the synthetic graft. Finally we fixated the ends of the tape with sutures on the middle part of the sling placed upon the bulbar urethra. An anatomic preparation was performed to look at the bladder wall, the bladder neck, the endo pelvic fascia and the obturator nerve with vessels.

Results

The transobturator pathway was possible and easy to perform in male human cadavers using a perineal approach. This system could be placed without bone anchors and necessary compression of the urethra could be provided by this new self anchoring sling. In the anatomic preparation we found no bladder perforation, no damage to the obturator nerve or vessels.

Interpretation of results

We showed in this experimental setting that the new sling can be implanted in a safe and easy way through the transobturator pathway avoiding bone anchors in male human cadavers. In our findings the transobturator pathway is safe in male human cadavers. In our opinion this system can be a new technique in our armamentarium for the treatment of stress urinary incontinence in men.

Concluding message

Our findings should be the first step of clinical studies to evaluate the efficacy and safety of the self anchoring transobturator male sling in men.