

## MONARC TRANSOBTURATOR SLING SYSTEM FOR THE TREATMENT OF FEMALE STRESS URINARY INCONTINENCE (SUI) (REPORT OF 120 CASES)

### Hypothesis / aims of study

To evaluate the method and the results of the Monarc transobturator sling system for the treatment of female stress urinary incontinence.

### Study design, materials and methods

In this study, 120 cases of SUI patients were included. All the patients were undergone Monarc transobturator sling system. Specifically designed surgical instruments: The Monarc (AMS) procedure uses a special tape made of a type I nonabsorbable monofilament polypropylene.

**Surgical technique:** The anterior vaginal wall is suspended with two Allis clamps on either side of the midline, 0.5 cm proximally to the urethral meatus. A vertical midline incision of the vaginal wall is started at this level and is continued proximally (towards the vaginal pouches) over a 1.5-cm distance. Both vaginal mucosal and submucosal tissues are incised. Using scissors, dissection of the para-urethral space is made bilaterally, toward the ischiopubic rami. The lateral margin of the ischiopubic ramus is identified and the index finger placed in the latero-vaginal fornix and thumb placed in front of the obturator foramen. The external needle entry point is made in the genito-femoral fold by a shallow cutaneous stab incision slightly above a horizontal line passing through the clitoral hood, just under the adductor longus tendon insertion. The semicircular, corkscrew-shaped needle of the device is introduced through the stab incision, held in the same hand as the side on which the surgeon is working. Once the needle passes through the obturator membrane, its reaches the fingertip inserted in the para-urethral space. It is then passed around the ischiopubic ramus, while the protecting finger remains in contact with the needle until it is visualized at the suburethral incision. Once this procedure has been completed, the vagina is evaluated for any unwanted perforations. The tape is then connected to the needle tip. Next, with a rotating wrist motion, the tape is guided through the tunnel and exits the skin incision. The same procedure is carried out on the contralateral side. The methods of this procedure and the outcomes and complications were closely analyzed.

### Results

The average operating duration was 20 minutes (from 15 minutes to 30 minutes) and average blood loss was 15ml (10ml - 20ml). With average follow-up of 16 month (1 month- 36months), 116 patients were cured and 2 patients were improved and 2 patients were failed. During the operation, 3 patients' vaginae were injured in puncture, including a double uterine-vaginal patient. The slings were pulled out and were placed successfully in second puncture. 2 patients had urine overflow after coughing increased abdominal pressure; 1 patient was invalid; 1 patient appeared acute urinary retention after drawing the urethral catheter, and continued detaining urethral catheter 3 days, but could not micturition after drawing the urethral catheter. The sling was cut off at last and the urinary incontinence relapsed.

### Interpretation of results

Monarc transobturator sling system also use the path of puncture through the obturator foramen, but the difference between Monarc and TVT-O is the former is performed using "outside-to-in" puncture suspension method, that is, the approach is from the perineum incision to vagina. The transobturator route technique enables the prevesical space to be preserved because it avoids intrapelvic and retropubic passage, and consequently seems to limit the risk of not only visceral and vesical wounds, but more importantly, bowel and vascular wounds. Anatomic studies rule out the theoretical risk of lesions to the obturator pedicle. A review of the literature confirms the safety and efficacy of transobturator urethral slings in the treatment of stress urinary incontinence. In our series, we were able to observe low surgical morbidity in 120 cases.

### Concluding message

Monarc transobturator sling system was effective and reliable for the treatment of SUI.

### Disclosures

**Funding:** no funding **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** this study is a cure of stress urinary incontinence **Helsinki:** Yes **Informed Consent:** Yes