

SURGICAL TECHNIQUE: REMEEX SYSTEM IN MALE

Synopsis of Video

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RE.ME.EX.® are the Spanish initials for **R**eadjustable **M**echanical **E**xternal device. It was initially designed for postoperative regulation of suburethral sling support level (SSSL) in female SUI surgery. The Remeex ® mechanical regulation part is a subcutaneous permanent implant, the "*varitensor*" (V), which permits the adjustment of the SSSL from outside the body by means of an "*external manipulator*" (EM). The EM is a disposable part of the set, which is attached to the varitensor and permits to activate the regulation mechanism from outside the body. A special screwdriver called the "disconnecter" (D) is used to disconnect the EM from the varitensor once the desired continence level is achieved.

The varitensor is a small cubic device (1 x 1 x 2.5 cm) with an internal never-ending screw to wind in the sling traction threads simultaneously. The traction threads are introduced into the varitensor through two lateral holes and exit it through a single frontal hole, where the threads are tied to each other. The varitensor also has a mechanical connecting point for the EM on its upper side. These components are made of biocompatible materials like titanium and ultra-high-molecular-weight polyethylene. The Remeex ® system urethral support part of the set is made-up of two unreabsorbable polypropylene threads joined to a short suburethral polypropylene sling mesh (1.5 x 3 cm).

Under spinal anaesthesia the patient is placed in the dorsal lithotomy position and prepared by shaving the abdomen and perineum. Antibiotic prophylaxis with cefonicid is preoperatively administered and continued for 72 hours. The surgical field is draped taking care to exclude the anus by fixing a towel to the perineum with silk stitches. A perineal retractor is used to aid in exposing the posterior urethra and a 18F Foley catheter is placed per urethra. Then we perform a 4 centimeter transversal suprapubic incision is made just above the upper side of the pubic bone, and the subcutaneous tissue is dissected until anterior rectus muscle fascia is patent. A vertical incision is made at the perineum and the urethra surrounded by bulbocavernous muscle is carefully dissected in order to find the angle between the bulbocavernous and isquiocavernous muscles. At this point, the urogenital diaphragmatic fascia is sharply penetrated and the hole is enlarged with scissors to permit the introduction of the index finger. Digital ascending dissection of the retropubic space is then performed trying to reach the highest possible position in order to diminish to a minimum the space between the finger tip and the anterior rectus fascia. A 60 degree modified Stamey needle is then pushed down from the retropubic until it reach the finger tip. At this moment, the needle is passed down to the perineal area through the Retzius space guided by our finger to avoid urethral or bladder perforation. The same maneuver is performed at the contralateral side. A cystourethroscopy is then performed to ensure bladder integrity. If there is no perforation, the traction thread tips are passed through the needle hole and the needles pushed from the perineal field to the suprapubic area, where the tips of the traction threads are pulled up until the polypropylene sling mesh is in full contact with the bulbocavernous muscle without asserting pressure. The sling is then fixed and fully extended by placing four reabsorbable stitches. The perineum is then closed layer by layer with reabsorbable sutures without leaving drains.

Suprapubically, threads are passed through the rectus fascia, which is closed with reabsorbable sutures. The traction thread tips are introduced into the varitensor, and wound into it by rotating the manipulator clockwise until the varitensor rests freely over the abdominal rectus fascia (two finger tips must pass easily between the fascia and the varitensor). The operation ends by closing the abdominal wound, leaving the EM connected to the varitensor and protruding through the center of the abdominal incision.

The morning after the operation the bladder is filled through the urethral catheter with 250-300 cc of saline and patient is asked to stand up and perform valsalva maneuvers and all the movements which usually produce urinary leakage. The EM is then rotated 4 complete turns, and continence is checked again. If still incontinent, 4 additional turns are applied to the EM, this maneuver is repeated until leakage disappears. Then the patient is invited to urinate and the postvoid volume is measured by sonogram or with a urethral catheter. If residual urine is

under 100 cc and the patient is able to void well, the disconnecter is placed inside the EM, to remove it and patient is discharged.