

## AN INNOVATIVE TAILORED ANTERIOR VAGINAL MESH SURGERY SIMULTANEOUSLY REPAIRING CYSTOCELE AND STRESS URINARY INCONTINENCE

### Introduction

Transvaginal mesh (TVM) surgery for treating pelvic organ prolapsed (POP) was widely used for recent twenty years and many excellent results were reported in literature. However, the warnings of serious complications after these TVM surgeries were issued from FDA in 2008 and 2011. Thus many tailored mesh surgeries are now innovated for better outcomes. This video shows our innovative tailored anterior TVM including a diamond body (7x6 cm in body size) with four arms in two pairs for repairing cystocele and stress urinary incontinence (SUI) simultaneously.

### Design

The incision of anterior vaginal wall was performed from bladder base to bladder neck and proximal urethra after hydro-dissection. After complete separation of bladder from vaginal wall, bilateral paravesical spaces were opened carefully. Then purse-string suture of posterior bladder wall skipping bladder neck was done. First, two appropriate skin holes outside the left obturator foramen were performed and the same procedures at the right obturator foramen were also done. Second, use the stainless tunneller to pull out the four arms in sequence with outside-in method. Third, adjust the mesh body in appropriate position under the bladder and fix the tail of diamond body with the upper part of anterior cervix by sutures. Then push the cervix or vaginal stump upward by adjusting the inner two arms in each side. Fourth, adjust the head of diamond body with the outer two arms avoiding too much tension over the bladder neck. Then fix the right part of head with right side of periurethral tissue. Fifth, adjust the mesh making sure not too tightness, and finally suture the anterior vaginal wall in two layers without trimming redundant part.

### Results

Between November 2011 and October 2013 there were totally 41 cases with this anterior reconstruction (AR) procedure only and another 50 cases with both AR and posterior reconstruction (PR) were recruited. The PR surgery was used for repairing posterior vaginal wall defects by another our innovative tailored posterior TVM in a grasshopper body (13x6 cm in size) with six arms. All the 91 cases were with cystocele stage  $\geq 2$  in POP-Q system. The mean age of these 91 cases was  $63.4 \pm 10.4$  years with a parity of  $3.2 \pm 1.1$ . The median postoperative follow-up period was  $10.4 \pm 4.7$  months. No postoperative failure cases were noted but 5 (5%) cases with mesh erosion, 1 (1%) cases with voiding dysfunction and 2 (2%) cases with hematoma were found. All of them recovered after the subsequent managements. In addition, 20 out of 41 cases with AR and 38 out of 50 cases with AR+PR had both pre- and post-operative urodynamic studies and 20-minute pad weight results. After surgery, the pad weight decreased from  $22.9 \pm 39.6$  to  $6.8 \pm 20.8$ g,  $P < 0.001$  and post-void residual  $51 \pm 29$  vs.  $35 \pm 14$  ml,  $P < 0.001$ , respectively.

### Conclusion

This innovative AR can simultaneously repair cystocele and female SUI with excellent clinical outcomes and much improved urodynamic effects.

### Disclosures

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