Clinical and ultrasonographic study of treatment for severe prolapse with transvaginal mesh and high uteroligment suspension

Hypothesis / aims of study
The use of nonanchored mesh kit (Prosima) for repair of pelvic-organ prolapse has some certain advantages, but it can only be used for mild and moderate prolapse. Though the mesh (Prosima) area is much smaller than Prilift, it can still be contracted and exposed to the vaginal wall, causing mesh related complications. The objective of this study is to evaluate the objective and subjective outcomes of vaginal mesh procedure (VMP) (PROSIMA) combined with high uteroligment suspension (HUS) for treatment of severe prolapse and quantify changes of mesh implanted during anterior vaginal wall repair for cystocele with ultrasound.

Study design, materials and methods
It is a continuous series including all the patients needing a surgical procedure to treat a genital prolapse. The study was undertaken at a tertiary referral urogynaecology unit in Beijing, China. Evaluations included prolapse staging using the POP-Q system by vaginal examination and validated questionnaires for symptoms (PFDI) and quality of life (PFIQ). Anterior mesh measured using ultrasound. After 1 month a perineal two-dimensional ultrasound examination (US) was performed to measure mesh length in mid-sagittal plane. A second US was performed 2-3 months after surgery to repeat this measurement. The patients comprised 70 consecutive women with advanced uterovaginal prolapse. The transvaginal hysterectomy and perineorraphy were conducted in all cases. Antincontinence procedure (TVT, TVT-O) was conducted in 20 cases with stress urinary incontinence. A polypropylene mesh (Prosima) was used to augment the anterior and posterior vaginal wall. The two arms of the mesh were introduced with special inducer into the area of ischial spines. The remnants of the uterosacral ligaments were identified and palpated posterior, medial and 2 cm cephalic to the ischial spines by traction with a 24 cm long Allis clamp and sutured for vaginal vault suspension. Operative and postoperative complications were also assessed.

Results
During July 2010 to February 2011, 70 patients had undergone operation for severe prolapse with the Prosima pelvic repair system combined with HUS. The criterion of recurrence is defined as the leading edge of the prolapse is not beyond the hymen. All the patients were followed at a mean time of 13 months with no one recurrence. Anterior Prosima mesh was 3.5 cm at the first time ultrasound examination, in comparison from the late ultrasound scans with 2.8 cm. The original size the shortening of the Prosima was 41.6 % vs. 53.3 %. There was no difference in the shrinkage of the mesh in both group of different times.

Concluding message
The use of nonanchored mesh kit (Prosima) combined with HUS can be used for restoring the anatomy of advanced pelvic organ prolapse and achieving favorable pelvic function as well. After 2-3 months, the anterior mesh have shortened by about 50%. But because of the action of the high uteroligment suspension there is neither prolapse nor anterior wall recurrence in one year follow-up. The combination of nonanchored mesh kit (Prosima) with HUS can be a good choice for treatment of advanced pelvic organ prolapse. It is not only safe and minimal traumatic, but also cost effective.

Disclosures
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