Women who underwent surgery for pelvic organ prolapse (POP) and stress urinary incontinence (SUI) have a 17% of reoperation rate in the subsequent 10 years, and the anterior vagina is the area most prone to recurrent prolapse among the pelvic compartments. A meta-analysis study showed that mesh for anterior vaginal wall repair significantly reduced prolapse recurrence rates compared with no mesh. Non-absorbable synthetic mesh had a significantly lower prolapse recurrence rate than absorbable synthetic mesh and biological graft. Through a systemic review on the use of polypropylene mesh for cystocele repair, Maher and Baessler reported that the anatomical success rates varied from 75% to 100%. In our series, the 94% of 100 cases with severe cystocele, who underwent transvaginal cystocele repair using a tension-free polypropylene mesh, anatomic success rate was consistent with previous reports and confirmed the feasibility of transvaginal mesh (TVM) for correcting cystocele. Recently Perigee/Apogee and Prolift systems are examples of non-absorbable mesh kits adopted in POP repair in all compartments with good surgical efficacy, but several mesh-related complications could have significant impact on the quality of life of sufferers, and add to the cost of health service.

Assessing outcome from prolapse surgery is complex, and most studies have used objective/anatomical success as the primary outcome, e.g. POP quantification rather than symptoms. Actually patient perceptions as well as the clinician’s anatomical and functional observations should be included along with quality of life and socioeconomic measures. A few studies demonstrated that applying TVM for anterior vaginal wall prolapse increased the risk of de novo SUI. In addition to postoperative urinary incontinence, there are other complications reported in women undergoing TVM repair including mesh erosion, de novo dyspareunia, and recurrent prolapse.

Mesh-related complications

1. De novo SUI. Postoperative SUI is an important complication following prolapse repair because of its impact on the patient’s quality of life. A randomized controlled trial demonstrated that anterior colporrhaphy reinforced with polypropylene mesh was more often associated with de novo SUI than traditional colporrhaphy (23% versus 10%). Our study showed that 14.5% (11/76) of the patients with cystocele who received TVM alone had de novo SUI 3 months after surgery, but 73% (n=8) had their SUI restored to continence later without anti-incontinence surgery.

2. Mesh erosion. Reported rates of mesh erosion following anterior repair were as high as 25% [21]. A meta-analysis study demonstrated that non-absorbable synthetic mesh had a higher erosion rate (10.2%) than absorbable synthetic mesh (0.7%) and biological graft (6%). Collinet et al has reported on mesh exposure management and the risk factors in women undergoing prolapse repair with the TVM
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They found that concomitant hysterectomy and inverted T colpotomy significantly increased the risk of mesh exposure. Several previous studies reported a significant correlation between mesh erosion and concurrent vaginal hysterectomy; our results demonstrating in 5% mesh erosions, however, did not show the same relationship. Cosson et al put together all series published on Prolift, 1882 interventions, the maximal reported rates are 12% for mesh exposition, 17% for prosthetic contraction and 9% for de novo dyspareunia.

3. De novo dyspareunia. The incidence of de novo dyspareunia has been reported between 9% and 20% after cystocele repair with mesh reinforcement. Our data demonstrated that 13% women engaged in active sexual activity after surgery had de novo dyspareunia. In comparison with a synthetic mesh, a biologic graft had a better sexual quality result as observed in a randomized controlled study. However, biologic graft may result in decreased durability of the pelvic tissue support in the surgical treatment of recurrent cystocele. Until now the effects of Perigee/Apogee and Prolift systems on women’s sexual function are still rare studied.

Between February 2010 and October 2010, all consecutive patients scheduled for correcting severe POP by TVM, Perigee/ Apogee or Prolift systems, at our institute was invited to join a prospective study entitled “sexual function in women with pelvic floor disorders following transvaginal synthetic mesh repair”. Our data showed TVM procedure is effective in patients with severe POP, with 6-month recurrent rate around 10%, and coincided with previous reports. Our results also demonstrated total Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) score became worse post-operatively as previous studies reported. The individual scores of PISQ-12 improved in the item 8: always avoidance of intercourse because of vaginal bulging, and became worse in items of dyspareunia, negative emotional reactions, and behavior emotive domain. Scores of partner-related items and the frequency of sexual desire remained unchanged.

**Conclusion:** According to literature review and our experience on POP repair, TVM is effective and safe in patients with severe POP, but may have an impact on voiding and sexual activity.