

SHORT TERM OUTCOMES OF CYSTOCELE REPAIR USING THE PERIGEE® POLYPROPYLENE MESH KIT.

Hypothesis / aims of study

Vaginal mesh kit procedures have become increasingly popular for the treatment of pelvic organ prolapse (POP). While safe use of mesh in hernia and trans-abdominal prolapse procedures are well documented, mesh exposure risks in trans-vaginal surgery are not well reported. Here we present our series to evaluate the safety efficacy and morbidity profile with use of the Perigee® (AMS, Minnetonka, MN) polypropylene mesh kit for repair of anterior vaginal wall prolapse.

Study design, materials and methods

We performed a retrospective analysis of 97 patients who underwent POP repair at our institution. Sixty five patients had anterior repair utilizing the Perigee® mesh kit. All procedures were performed by two surgeons specializing in female urology. We evaluated preoperative characteristics including age, prior pelvic surgery, stress urinary incontinence (SUI), urgency, urge incontinence (UUI), dyspareunia, stage of anterior, posterior, or apical prolapse. Operative time, intra-operative blood loss, complications, and additional procedures were recorded. Post-operatively, patients were evaluated for recurrence of POP, persistent or de-novo pain or dyspareunia, mesh related complications, and voiding dysfunction until the time of last follow-up.

Results

Ninety seven patients underwent POP repair, and of these 65 had Perigee® mesh repairs. The mean age was 63. Forty three patients had undergone 89 prior pelvic surgeries including 13 anterior repairs, 3 enterocele repairs, 10 posterior repairs, 1 trans vaginal retropubic sling, 3 autologous fascial slings, 3 allograft slings, 8 slings of unknown type, 10 retropubic suspensions (MMK/Burch), 31 abdominal hysterectomies, 5 vaginal hysterectomies, 2 periurethral injections. Pre operatively stress urinary incontinence was present in 28 (43%) patients; urgency was noted in 43 (66%) and urge incontinence in 18 (27%). Seven patients (10%) complained of dyspareunia prior to repair. The mean stage of anterior prolapse was 2.6. Fourteen patients (21%) also had concomitant posterior prolapse with a mean stage of 1.5. Enterocele was found in 3 (4%) patients with a mean stage of 2.

The mean intra-operative time was 138 minutes and mean blood loss was 171cc. There were no intra-operative complications encountered. Twelve (18%) patients underwent concomitant posterior repair with the Apogee® mesh kit. Forty two (64%) patients had simultaneous placement of a mid urethral sling (38 transobturator, 4 retropubic).

Post operatively the average follow up was 6 months with a range of 1-28 months. Five (8%) patients experienced a recurrence of anterior prolapse. All but one of the recurrences were asymptomatic and grade 1. Post operative enterocele was found in 3 (5%) patients with an average stage of 1.3. Posterior prolapse was seen in 4 (6%) patients. One of these was an uncorrected persistence and the other 3 were de novo. One (2%) patient had new onset dyspareunia. There were no urinary tract erosions of mesh. There was one (2%) vaginal mesh extrusion which was managed conservatively. Four (6%) patients experienced post operative pain in the vagina and one (2%) patient had a subsequent mesh removal for pain relief. Six (9%) patients had SUI post operatively. Twenty four (85%) patients had resolution of SUI, four remained unchanged and 3 developed de novo SUI. Urge incontinence was also seen in 6 (9%) patients. Thirty eight patients (88%) had resolution of UUI and 2 patients developed de novo UUI.

Six (9%) patients underwent subsequent urogynecologic procedures including one each of autologous pubovaginal sling, sling incision, enterocele repair, redo anterior repair/hysterectomy, sacral neuromodulation, and posterior prolapse repair.

Interpretation of results

The ideal method of treating complex vaginal wall prolapse has not been defined. The potential long term benefits of using synthetic materials in the vagina such as polypropylene mesh must be balanced against the adverse effects of these materials such as extrusion into the vagina and erosion into the urinary tract. In this study, with short term followup, complications directly attributable to the mesh seem to be uncommon, but are certainly present. Recurrence rates, as expected, are low in the short term but longer term followup is necessary.

Concluding message

The use of the Perigee® polypropylene mesh kit provides good short term results for the repair of anterior vaginal wall prolapse. The incidence of intra operative and post operative complications is sufficiently low that in appropriately selected patients the Perigee® mesh kit can be considered safe and effective in the short term.

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Medical University of South Carolina IRB
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No