446

Rajan S[1], Shah A[1], Kohli M[1]
1. Brigham and Women's Hospital

UTERINE PRESERVATION FOR THE SURGICAL TREATMENT OF ADVANCED UTEROVAGINAL PROLAPSE

Hypothesis / aims of study
To compare outcomes among women who had uterine preservation with mesh augmentation to women who had a vaginal hysterectomy and vault suspension with either uterosacral ligaments or with mesh.

Study design, materials and methods

This is a single center retrospective study involving all women who underwent surgical correction for uterovaginal prolapse at or beyond the hymen over a 2 year period. Study patients were required to have an intact uterus preoperatively and had to have at least one objective exam (POPQ), 3 months after surgery. Surgical interventions were determined by the patient and were classified into 3 groups: Group A included women who had a vaginal hysterectomy (TVH) and a bilateral uterosacral ligament vaginal vault suspension without mesh augmentation; Group B included women who had a vaginal hysterectomy and a vaginal vault suspension (VVS) with mesh augmentation; and Group C included women who had uterine preservation with either an anterior or posterior compartment mesh augmented repair.
Prolene mesh augmentation was performed using a standard 4-point attachment technique, creating apical and basal support. Postoperatively patients were evaluated at 2 and 6 weeks and then at 3, 6 and 12 months and yearly thereafter. Subjective and objective data (POP-Q) data were collected from office and hospital records. The primary outcome variable was objective cure of prolapse, defined as the leading edge of prolapse at or above the hymenal ring in the compartment that was repaired. Secondary variables analyzed included intraoperative parameters, mesh erosion, dyspareunia, urinary incontinence, and reoperation rate.

Results

72 patients were eligible for the study and groups A, B, and C had 20, 21 and 31 patients respectively. The 3 groups were similar in age and parity. All patients in group A had a TVH, uterosacral ligament vaginal vault suspension, and concurrent colporrhaphy. In group B, all patients had TVH and VVS with mesh, 14 (67%) had anterior wall mesh (AR w/mesh), and 7 (33%) had posterior wall mesh (PR w/mesh). In group C all patients had uterine preservation, 20 (65%) had AR w/mesh, 10 (32%) had PR w/mesh and 1(3%) had total vaginal mesh.

Overall, the mean (range) follow up was 10 months (3-29). Please refer to tables 1 and 2 for the pre and post operative POPQ values and the postoperative outcome data. Objective surgical cure rates were 95%, 86% and 88% respectively for groups A, B and C. All failures occurred in the anterior segment and all were stage 2 or less. There was no apical or uterine prolapse recurrence beyond the hymen in any group. In 90% of patients in the uterine preservation group the cervix was > 6cm above the hymen. Mesh erosion was only seen in women undergoing mesh placement at the time of the hysterectomy and the erosion rate was 33% (p=0.0005).

Interpretation of results

To our knowledge this is the first study to compare outcomes between vaginal hysterectomy and uterine preservation using a mesh augmentation technique. These results indicate that vaginal hysterectomy with traditional vault suspension has a cure rate that is comparable to mesh augmentation. The limitations of this study are a small sample size, retrospective nature, and short duration of follow up.

Concluding message

In women with advanced uterovaginal prolapse, mesh augmentation with uterine suspension has a cure rate that is similar to vaginal hysterectomy and vault suspension with or without mesh augmentation. A mesh augmented repair with uterine suspension may be an equivalent treatment option in women desirous of uterine preservation without any increased risk of mesh erosion. Mesh erosions are more frequent among women undergoing mesh placement at the time of vaginal hysterectomy. Data from larger, prospective studies is warranted at this time.

Table 1: Pre and Post op POP-Q values

	TVH WITH VVS mean (range)	**TVH WITH VVS w/mesh** mean (range)	**UTERINE SUSPENSION WITH MESH** mean (range)
PREOP POQ-Q			
Ba	+ 0.5 (-3 to +4)	+ 1.9 (-1 to +3)	+ 0.8 (-2 to +5)
Bp	- 1.3 (-3 to 0)	- 0.6 (-2 to +4)	- 1 (-3 to +2)
C	**- 2.1 (-9 to +5)**	**+ 0.5 (-4 to +6)**	**- 5.2 (-8 to +5)**
POST OP POQ-Q			

Ba Bp C	- 1.6 (-3 to +1) - 2.7 (-3 to -2) **- 8 (-10 to -6)**	- 1.3 (-2.5 to +1) - 2.6 (-3 to -1) **- 7.7 (-9 to –5)**	- 1.5 (-2.5 to +0.5) - 2.7 (-3 to –0.5) **- 7 (-9 to -1)**

Table 2: Post operative outcome data

	TVH WITH VVS	TVH WITH VVS w/mesh	UTERINE SUSPENSION WITH MESH
FOLLOW UP months mean (range)	9.9 (3- 29)	9.7 (3.7 – 27)	10.5 (4 – 24)
SUBJECTIVE SYMPTOMS OF PROLAPSE	4 (20%)	3 (14.2%)	6 (19.3%)
OBJECTIVE EVIDENCE OF PROLAPSE BY POPQ*	1 (5%)	3 (14.2%)	4 (12%)
EROSION	na	7 (33%)	0
PAIN	1 (5%)	2 (9.5%)	3 (9.6%)
STRESS INCONTINENCE	0	0	3 (9.6%)
REOPERATIONS	2 (10%)	5 ∂ (24%)	3 (9.6%)

* All recurrences were in the anterior segment.

∂ This included 3 mesh arm releases for pain, 1 mesh excision and 1 seroma

FUNDING: NONE
DISCLOSURES: NONE
HUMAN SUBJECTS: This study was approved by the Institution review board Brigham Women's Hospital and followed the Declaration of Helsinki Informed consent was not obtained from the patients.