Comparing the Vaginal Wall Sling with Autologous Rectus Fascia and Polypropylene Sling on Outcome and Patient Satisfaction

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INTRODUCTION

Since 2011 FDA safety update on transvaginal synthetic mesh for treatment of stress urinary incontinence (SUI) and pelvic organ prolapse (POP), providers are encouraged to counsel patients on risks related to synthetic mesh slings, such as dyspareunia, erosion, and extrusion. As an alternative to synthetic slings patients often choose autologous slings. We aim to compare outcome and patient satisfaction in patients, who received an autologous vaginal wall sling (VWS), rectus fascia sling (RFS), or synthetic suburethral sling (SSS) for treatment of SUI.

MATERIAL AND METHODS

Between May 2011 and July 2016, a retrospective review was performed in patients who underwent suburethral sling placement using vaginal epithelium, autologous rectus fascia, or synthetic mesh with or without POP repair by a single surgeon. Pre- and postoperative voiding symptoms were obtained from medical records and a telephone survey. Postoperative satisfaction was measured with the Likert scale (1-3= dissatisfied, 4-5= satisfied). Subjective SEAPI scores, pad use, PVR were recorded and compared between the 3 groups. SEAPI scores are a sum of scores of patients' perception to loose urine with activities, ability to empty their bladder, sensation of pelvic organ prolapse, amount of pads used, and severity of urge incontinence. One-way ANOVA was used for statistical analysis with $p<0.05$ considered statistically significant.

RESULTS

In total, 177 patients underwent a sling placement. Of these, 62 received a retropubic VWS, 49 an autologous rectus fascia sling, and 66 a synthetic mesh sling. Age, body mass index, and number of vaginal deliveries were evenly distributed in this cohort. Average length of follow up was 14 months (1-43). Among those three different sling types, there was no significant difference in postoperative outcome and patient satisfaction (Table 1). Mean subjective and objective postoperative SEAPI scores for patients underwent VWS were significantly lower compared to patients underwent rectus fascia sling and synthetic mesh ($p<0.05$ for both) (Table 2).

CONCLUSION

The VWS is well tolerated, has similar efficacy, and patient satisfaction compared to the rectus fascia and synthetic slings. Based on our short term follow up, VWS may be an alternative treatment for SUI avoiding the risks associated with the synthetic material and the morbidity associated with the rectus fascia sling. Further studies are needed to fully validate the long term effectiveness of VWS.

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Patients Demographic				
	Vaginal epithelium	Rectus Fascia n	Synthetic mesh	P value
Average Age (range)	61.6 (29-85)	61.9 (41-81)	61.2 (33-87)	0.9
Average BMI (range)	28.3 (19.1-44.5)	31.2 (22.5-44.5)	30.8 (21.4-46.2)	0.6
Number of vaginal deliveries (range)	3.3 (1-8)	2.62 (0-9)	3.0 (0-10)	1.00
Post-operative outcomes				
Objective SUI, number (%)	2 (3.2)	2 (4.1)	1 (1.5)	0.71
Urgency n (%)	7 (11.3)	7 (14.2)	9 (13.6)	0.87
No more pad use required n (%)	46 (76.2)	36 (73.5)	55 (83.3)	0.34
Satisfaction, avg Likert score (mean)	4.1	3.7	4.2	0.17
Composite Subjective SEAPI score	1.76	2.61	2.61	0.11
SUI	0.15	0.35	0.35	0.18
Emptying (mean subscore)	0.37	0.37	0.45	0.76
Anatomy (mean subscore)	0.18	0.10	0.17	0.74
Protection (mean subscore)	0.50	0.88	0.85	0.13
Inhibition (mean subscore)	0.56	0.92	0.79	0.18