

## COST ANALYSIS OF A VAGINAL SUBURETHRAL SYNTHETIC SLING REMOVAL (SSR) PROCEDURE IN THE MANAGEMENT OF COMPLICATIONS OF MIDURETHRAL SLINGS

### Hypothesis / aims of study

Midurethral slings (MUS) can be associated with complications necessitating vaginal removal. This cost is currently absent from most long-term analysis of cost of MUS management for stress urinary incontinence, as there is a void of information in that area. Therefore, the goal of this study was to conduct a cost analysis over two consecutive years of expenses related to a vaginal Suburethral Synthetic Sling Removal (SSR) procedure.

### Study design, materials and methods

From a prospectively maintained, IRB approved, database of consecutive non-neurogenic women who underwent one vaginal sub-urethral sling removal (SSR) only (with no concomitant surgeries) and had at least 6 months follow-up, we analyzed the cost of SSR for 2013 and 2014. Costing data was obtained at a tertiary care institution for operating room expenses, medical and surgical supplies, pharmacy, anesthesia supplies, and room and bed. Professional fees for the SSR procedure were obtained from the Medicare Fee for Service Schedule. Due to non-normality in the data, the non-parametric Wilcoxon Rank Sum test was used to test for differences in cost by fiscal year or payer type. Costs for 2013 were adjusted by 3% to match 2014 costs.

### Results

From 2013- 2014, 46 women underwent SSR (Table 1). The mean age of the sample was 56 (33-88), 57% had TVTs, and the mean BMI was 28 (18-48). The mean total length of surgery was 62 minutes  $\pm$  22 minutes and median length of stay of 1 day (range = 0-2 days) (Table 2). Cost for medical and surgical supplies significantly decreased from 2013 to 2014 while operating room and total cost increased from 2013 to 2014. No significant differences were found between payer types. With the 3% inflation adjustment for 2013, the mean total cost based on these factors was \$3,714  $\pm$  \$941, with a median cost of \$3,556.

### Interpretation of results

While cost-effectiveness of sling placement has been examined, [1] to our knowledge this is the first study to report on the cost analysis of a vaginal SSR [2,3] procedure. There has been an increase in the number of MUS placements in the last several years, resulting in more reported complications and subsequent need for vaginal SSRs in a subset of patients. It is imperative for physicians to understand the potential fiscal cost of sling placement should complications arise and factor this cost in the overall management of SUI by MUS.

### Concluding message

In this limited study at a tertiary care center, the SSR mean total cost was \$3714, with an increase in total cost from 2013 to 2014. This information will be useful for inclusion in the overall cost of managing SUI in women with MUS procedures.

Table 1. Sample Demographics

Sample size	N = 46
Type of sling	TVT: 26 TOT: 15 Minisling: 1 Monarc: 1 Other: 3
Mean Age at surgery, years	56 (33-88)
Mean BMI, kg/m <sup>2</sup>	28 (18-48)
Gravida (median)	2
Parity (median)	2
Prior hysterectomy	37
Menopausal	24
HRT pre-op	3

Table 2. Wilcoxon Rank Sum Test for Comparison of Cost by Calendar Year and Payer Type (With 3% inflation adjustment)

	Calendar Year			Payer Type		
	2013 (n = 26)	2014 (n = 20)	<i>p</i>	Medicare (n = 10)	Payer Mix (n = 36)	<i>p</i>
Anesthesia	309.64	288.78	0.2981	306.98	294.98	1.0000
Medical and Surgical Supplies	7.59	7.27	0.0126	7.59	7.49	0.9250
Operating Room	2343.22	2734.09	0.0012	2445.06	2557.64	0.6061
Pharmacy	208.55	192.55	0.8688	242.87	198.20	0.2984
Respiratory	41.59	23.77	0.6395	46.97	22.88	0.1159
Room and bed	609.75	681.11	0.0513	641.65	609.75	0.1292
<b>Total</b>	3419.60	4042.91	0.0021	3693.00	3526.33	0.3495

All values reported as medians.

#### References

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2. Seklehner S, et al. *Neurourology and Urodynamics*, 2013
3. Wu JM, et al. *American journal of obstetrics and gynecology* 197(1): 62-e1, 2007

#### Disclosures

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