

## COMPARATIVE STUDY BETWEEN VAGINAL VAULT SUSPENSION WITH SACROSPINOUS LIGAMENT FIXATION AND MESH BASED KIT (PROLIFT) FOR TREATMENT OF VAGINAL VAULT PROLAPSE AT ONE YEAR FOLLOW-UP

### Hypothesis / aims of study

To compare vaginal vault suspension by sacrospinous ligament fixation to vaginal vault repair with mesh based kit (Prolift) in terms of patient's outcomes and complications.

### Study design, materials and methods

Total of 67 patients with symptomatic vaginal vault prolapse were divided into two groups based on the surgical procedure used for repair. 37 women undergone sacrospinous ligament fixation (SSLF) and 30 patients had total vaginal mesh procedure with Prolift kit, between 2007 and 2010. Women in both groups were followed prospectively for one year postoperatively. The main outcome was rate of prolapse recurrence of grade 2 or more over a follow up period of 12 months. Secondary outcomes were rates of mesh erosion and re-operation rates.

### Results

The characteristics of women in both groups are shown in Table 1. No significant difference in the grade of vaginal vault prolapse among women in both groups. Average operative time for Prolift repair was 1.5 vs. 3.07 hours for SSLF, average hospital stay was 2 days vs. 3.6 days, and average intra-operative blood loss was 100ml vs. 251ml for the Prolift and SSLF groups respectively. Objective recurrence rates of prolapse at 6 weeks involving any of the vaginal compartments for patients in the Prolift mesh kit group was 16.7% vs. 21.6% for women in the SSLF. At 6 months, the rates of recurrence were 40% vs. 59.5% respectively. At 12 months assessment, the rates were high for both groups (46.6% in Prolift group vs. 62.2% for SSLF). All rates were significantly higher in the SSLF group at all visits. Subjective recurrence with symptomatic prolapse was only 3.3% in the Prolift patients vs. 5.4% of SSLF patients at 12 months visit and did not reach to a significant difference. Mesh erosion rate in the Prolift group was 33% at one year period with an overall reoperation rate of 40% (for different indications). The overall reoperation rate in the SSLF group was only 10.8%.

### Interpretation of results

Despite that women undergoing Prolift mesh repair have lower anatomical recurrence rates, but not subjective improvement, of their vaginal vault prolapse compared to patients undergoing SSLF at 12 months it was associated with higher reoperation rate.

### Concluding message

Women who had Prolift mesh repair for vaginal vault prolapse should expect high reoperation rate in general, compared to those underwent traditional vaginal repair procedure.

Table 1: Characteristics of women with vaginal vault prolapse.

Characteristics	SSLF (n = 37)	Prolift (n = 30)	P Value
Age	66.2 ± 7.9	74 ± 5.8	< 0.001
Parity	3 ± 1	2.5 ± 1.5	NS
Vaginal Birth	2.7 ± 1.5	2.5 ± 1.7	NS
BMI	28.6 ± 1.2	30.6 ± 7.2	NS
Previous Hysterectomy	20 (54.1%)	30 (100%)	< 0.05
Previous Prolapse Surgery	10 (27%)	16 (53.3%)	< 0.05

### References

1. Eckhard Petrl & Kiran Ashok. Sacrospinous vaginal fixation-current status. Acta Obstetrica et Gynecologica Scandinavica 2011; 429 – 436.

2. Alfredo L. Milani & Mariella I. J. Withagen & Mark E. Vierhout. Trocar-guided total tension-free vaginal mesh repair of post-hysterectomy vaginal vault prolapsed. *Int Urogynecol J* 2009; 20:1203 – 1211.
3. Caquant F, Collinet P, Debodinance P, Berrocal J, Garbin O, Rosenthal C et al. Safety of trans vaginal mesh procedure: retrospective study of 684 patients. *J Obstet Gynaecol Res* 2008; 34:449 – 456.

Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Research Ethics Board at the University of Western Ontario (#15243E), Ontario, Canada **Helsinki:** Yes **Informed Consent:** Yes