688

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PROSPECTIVE EVALUATION OF FIVE YEAR OUTCOMES, RECURRENCE RATES AND SEXUAL FUNCTION FOLLOWING VAGINAL HYSTERECTOMY AND MODIFIED HIGH UTEROSACRAL LIGAMENT VAULT SUSPENSION (HUSLS).

Hypothesis / aims of study
Prospective evaluation of long term anatomical, functional and quality of life outcomes of a modified high uterosacral ligament suspension (HUSLS) at vaginal hysterectomy for pelvic organ prolapse (POP). This technique involves bilateral separate HUSLS sutures without fascial reconstruction and has been associated with excellent objective, subjective and sexual function outcomes at 15 month follow up.

Study design, materials and methods
We prospectively assessed 42 consecutive women who underwent vaginal hysterectomy and HUSLS for POP, 3-6 years postoperatively, using Baden-Walker Halfway (BW) and POP-Q systems. Eleven women were lost to follow up. Bladder, bowel and sexual function were evaluated by a standard symptom questionnaire. Quality of life was evaluated using the p-QoL validated questionnaire. Sexually active women were asked to complete the PISQ-31 sexual function questionnaire.

Results
Pre-operatively, 27/42 women had at least Grade 2 prolapse of the cervix. At a mean follow up period of 59.4 months (range: 40-79 months) 2 women had undergone surgical intervention for the correction of vault prolapse (abdominal sacrocolpopexy and ileococcygeous fixation), 33 women had no vault prolapse and 6 women had grade 1 vault prolapse. One woman declined vaginal examination. Nineteen women were sexually active and completed the PISQ-31. The mean total score for all domains was 91 (range 65-107) out of a maximum of 125 indicating satisfactory sexual function. On quality of life assessments using the p-QoL questionnaire high scores were noted in all domains.

Interpretation of results
We evaluated the long term outcomes of HUSLS done at hysterectomy alone, with other reports on this procedure involving heterogenous groups of patients with both uterine prolapse and post hysterectomy vault prolapse. The longest follow up study to date [1] evaluated outcomes 5 years postoperatively. However this study cohort also consisted of a mixed group of uterosacral ligament suspension at hysterectomy with post hysterectomy vault prolapse repair.
In other studies describing vault suspension techniques, a non absorbable monofilament or multifilament suture material was used. In contrast, we used polydiaxone suture. The durability of our anatomical outcomes appears unaffected.
Our technique is quicker to perform, with comparable outcomes to more complex procedures and is associated with maintenance of good vaginal length in the long term (table 1).
The greatest risk associated with this procedure is ureteric injury. Reported ureteric injury rates vary between 1 and 11% with the different surgical techniques. In our cohort, two women had ureteric obstruction, however, neither of these was considered by the urologists as a direct complication of the procedure. In the first case, the injury was related to edema at the vesicoureteric junction following anterior vaginal repair and resolved with expectant management. The second injury occurred at the pelvic inlet in an elderly diabetic woman and was felt to be related to traction on the infundibulopelvic ligament at the time of surgery. We believe that a good surgical technique, requiring fewer steps, reduces the risk of ureteric damage. A deep, dorsal, posterior placement of sutures increases the margin of safety for the ureter five-fold [2]. It remains prudent, however, to confirm ureteric patency cystoscopically at the end of the procedure with or without intravenous contrast (methylene blue or indigo carmine). There may also be a role for ureteric stenting in women with complex or advanced POP.
In our series, women scored highly on a number of specific domains on the PISQ-31 as well as on the overall scores. The high scores indicate that this technique is associated with satisfactory sexual function, which is sustained over time.
Concluding message
Modified HUSLS at vaginal hysterectomy is associated with excellent objective and subjective outcomes, sexual function and quality of life scores at 5 years' follow up.

Table 1. Anatomical outcomes

Baden – Walker and POP-Q	Preoperative		Postoperative at 5 years		Postoperative at 5 years	
					BW ≤1 or POPQ ≤1	BW≥2 or POPQ ≥2
	Mean	Median	Mean	Median		
BW1	2.29	2	0.35	0	35/37*	2/37*
BW2	2.4	2	0.54	0	37/39*	
BW3	1.93	2	0.15	0	39/39*	0/39*
BW4	1	1	0.16	0	38/39*	1/39*
BW5	1.45	2	0.62	1	33/37*	4/37*
BW6	0.6	0	0.11	0	38/38*	0/38*
POPQ Aa	0.67	0	-1.97	-2	29/39*	10/39*
POPQ Ba	.07	0	-1.9	-2	17/39*	12/39*
POPQ C	-2.06	-3	-6.85	-7	39/39*	0/39
POPQ GH	3.94	4	4.48	5	-	-

POPQ PB	3.3	3	2.98	3	-	-
POPQ TVL	8.3	8	8.28	8	-	-
POPQ Ap	-1.3	-1	-2	-2	26/37*	11/37*
POPQ Bp	-1.15	-1	-1.7	-2	32/37*	5/37*
POPQ D	-3.94	-5				

4/40 women had stage 1 vault prolapse (POPQ – C) and 6/40 women grade 1 vault prolapse (BW)

*Those women who had subsequent POP surgery were excluded from the calculations of the respective compartment.ie the following cases were excluded from the calculation of the postoperative scores:

- From BW1 those women with subsequent transobturator tape insertion.
- From BW 2 those women with subsequent anterior vaginal repair.
- From all calculations women with subsequent vault suspension procedures.
- From BW 5 women with subsequent posterior vaginal repair.

Similar calculations were undertaken for POPQ.

References

1. 1. Silva WA, Pauls RN, Segal JL, Rooney CM, Kleeman SD, Karram MM: Uterosacral ligament vault suspension: five-year outcomes. Obstet Gynecol 2006, 108:255-263.
2. 2. Aronson MP, Aronson PK, Howard AE, Morse AN, Baker SP, Young SB: Low risk of ureteral obstruction with "deep" (dorsal/posterior) uterosacral ligament suture placement for transvaginal apical suspension. Am J Obstet Gynecol 2005, 192:1530-1536.

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**This was a prospective audit and was registered to the local Audit Committee.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**