267

Hogg S[1], Barrington J[1]
1. *Torbay Hospital*

IMPROVEMENTS IN BOWEL DYSFUNCTION, SEXUAL AND PROLAPSE SYMPTOMS FOLLOWING POSTERIOR AVAULTA

Hypothesis / aims of study

Posterior vaginal wall prolapse is an extremely common problem. It usually presents with a dragging uncomfortable feeling in the vagina, sexual problems, backache or bowel dysfunction including constipation, faecal incontinence and evacuatory difficulty. The primary surgical procedure offered to women with posterior vaginal prolapse is a posterior repair or colporrhaphy. It has been reported that a woman's lifetime risk of requiring surgical correction in North America is approximately 40% and a similar number will require repeat surgery within 5 years for recurrence of prolapse. Repeat surgery generally carries a lower success rate, is associated with narrowing and/or shortening the vagina leading to sexual problems and pain, and may not deal effectively with associated bowel symptoms. A reinforcing graft of either natural material such as porcine dermis or polypropylene mesh is often used in recurrent prolapse surgery but they are difficult to suture effectively into place and long-tem results are disappointing with high erosion rates. This study was carried out to evaluate the place of Posterior Avaulta (Bard Urology), which is a new system consisting of a polypropylene mesh coated with porcine dermis, in the surgical management of women with recurrent posterior vaginal wall prolapse.

Study design, materials and methods

34 women (age range 28 – 82 years) were recruited into the study. All women had previously undergone posterior colporrhaphy for symptomatic vaginal prolapse which had recurred. Preoperatively a Birmingham Bowel and Urinary Symptoms Questionnaire (BBUSQ-22) was completed together with a Prolapse Quality of Life Questionnaire (P-QoL). Those who were sexually active (n=19) completed in addition the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionaire (PISQ-12). The prolapse was staged using a Pelvic Organ Prolapse Quantitative (POP-Q) assessment. The posterior avaulta procedure was carried out in the lithotomy position under general anaesthetic with antibiotic cover. The posterior vaginal wall was incised and the rectum and/or enterocele reflected until the ischial spines were identified on each side. An incision was then made lateral and inferior to the anus on each side, and specially designed needles were passed through these incisions and guided upwards perforating the levator muscles just below the ischial spines. The superior arms of the avaulta mesh were then inserted into the needles and withdrawn pulling the body of the mesh into place. The mesh was then trimmed to the correct size and sutured flat into place. The needles were then passed through the same buttock incisions but this time was brought immediately upwards to pierce the perineal body through which the inferior mesh arms were brought down and the system anchored into place. The vagina was repaired using a continuous non-locked suture without any mucosa being trimmed. A pack and catheter was inserted overnight only. The women were discharged with a weeks course of antibiotics and were followed up at 6 months where the prolapse was staged objectively using POP-Q and subjectively using BBUSQ-22, P-QoL and PISQ-12 questionnaires. Both nonparametric (Mann-Whitney) and parametric (T-Test) tests were used to determine statistical significance.

Results

The average length of stay was 2 days. No vaginal mesh erosions were recorded during this study. The results are shown in the tables below:

POP-Q stage	Stage 3	Stage 2	Stage 1	Stage 0
Pre	N = 6	N = 25	N = 3	N = 0
Post	N = 0	N =1	N = 5	N = 28

	Mean		Median		T-Test p value	Mann-Whitney p value
	Pre	Post	Pre	Post		
General health	22.66	28.13	25.00	25.00	0.2500	0.3080
Prolapse impact	77.19	24.88	67.00	16.50	0.0001	0.0001
Role limitations	52.58	24.96	50.00	0.00	0.0024	0.0035
Physical limitations	45.36	24.46	50.00	17.00	0.0120	0.0087
Social limitations	28.86	15.44	22.00	0.00	0.0590	0.0476
Personal relationships	65.86	25.60	75.00	0.00	0.0013	0.0024
Emotions	52.68	29.08	56.00	22.00	0.0048	0.0051
Sleep / Energy	47.90	43.71	50.00	33.00	0.5800	0.6714
Severity measures	44.39	19.08	42.00	17.00	0.0001	0.0001
PISQ-22	32.53	38.42	33.00	40.00	0.0120	0.0208
POP-Q	2.16	0.19	2.00	0.00	0.0001	0.0001
Constipation	52.69	47.77	53.50	53.50	0.2600	0.3662
Evacuation	30.54	14.46	25.00	12.38	0.0001	0.0001

Incontinence	31.64	18.07	33.00	8.25	0.0049	0.0009
Urinary	31.73	27.26	33.00	28.36	0.1100	0.1331

Interpretation of results

There is significant reduction in POP-Q staging with the majority reduced to stage 0. Further analysis of the post-operative stages 1 and 2 showed these gradings are all due to some degree of anterior vaginal wall or vault prolapse: there was no residual posterior vaginal wall prolapse. The absence of erosion may be due to the coating of porcine dermis which is claimed to reduce the immediate post-operative inflammatory response. There is no significant reduction in the general health and sleep/energy domains but all other domains of the P-QoL especially prolapse impact and severity measures were statistically improved. There was also a statistical elevation in PISQ-22 scores signifying a higher sexual satisfaction. Bowel evacuation and faecal incontinence rates were improved after a posterior avaulta procedure but constipation was not overall helped by this operation and neither were urinary problems which is perhaps not surprising.

Concluding message

This study had shown that the posterior avaulta procedure is highly effective in resolving symptoms of prolapse. This information has been reported in previous studies but the effects on sexual function combined with improvement of bowel dysfunction are new observations and merit further study. The study is therefore being continued in terms of number of women recruited and length of follow up.

Specify source of funding or grant	**NONE**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Torbay Local Research Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**