748

Barrington J[1], Doherty T[1]
1. *Torbay Hospital*

BOWEL FUNCTION, SEXUAL AND PROLAPSE SYMPTOMS FOLLOWING POSTERIOR AVAULTA MESH REPAIR FOR RECURRENT VAGINAL WALL PROLAPSE.

Hypothesis / aims of study

Posterior vaginal wall prolapse is an extremely common problem. It usually presents with a dragging and/or 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 is approximately 11% [1] and between 30-40% will require repeat surgery for recurrence of prolapse [2]. 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 [3]. This study was carried out to evaluate the place of Posterior Avaulta (Bard Urology), which is a low density macroporous polypropylene mesh coated with porcine dermis, in the surgical management of women with recurrent posterior vaginal wall prolapse.

Study design, materials and methods

56 women have been recruited into the study to date. All women had previously undergone posterior colporrhaphy for symptomatic vaginal prolapse, which had recurred. The prolapse was staged preoperatively using a Pelvic Organ Prolapse Quantitative (POP-Q) assessment. In addition a Prolapse Quality of Life Questionnaire (P-QoL) was completed together with a Birmingham Bowel and Urinary Symptoms Questionnaire (BBUSQ-22). Those who were sexually active completed in addition the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12). The posterior avaulta classic 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 and the women were usually discharged the following day with a week course of antibiotics. The women 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. There were no intra-operative complications and no vaginal mesh erosions were recorded during this study. One woman was lost to follow up: 45 women completed the preoperative and 39 the postoperative P-QoL. 29 women completed the PISQ-12 preoperatively and 22 completed the same questionnaire postoperatively. 48 women successfully completed the pre and postoperative BBUSQ-22 questionnaire. The results are shown in the tables below:

POP-Q stage	Stage 3	Stage 2	Stage 1	Stage 0
Pre	10	44	2	0
Post	0	1	7	47

	Mean		Median		T-Test p value	Mann-Whitney p value
	Pre	Post	Pre	Post		
General health	26.70	25.60	25.00	25.00	0.7960	0.8601
Prolapse impact	78.60	22.90	67.00	0.00	0.0001	0.0001
Role limitations	56.80	22.6	67.00	0.00	0.0001	0.0001
Physical limitations	48.60	20.20	50.00	17.00	0.0001	0.0001
Social limitations	32.90	11.10	22.00	0.00	0.0001	0.0001
Personal relationships	66.60	23.80	83.00	8.50	0.0001	0.0002
Emotions	53.30	24.40	50.00	22.00	0.0001	0.0001
Sleep / Energy	53.50	40.60	50.00	33.00	0.029	0.0447
Severity measures	45.50	16.80	46.00	8.00	0.0001	0.0001
PISQ-12	31.50	36.95	31.00	38.00	0.0030	0.0053
POP-Q	2.143	0.164	2.00	0.00	0.0001	0.0001

Constipation	52.20	49.80	53.50	53.50	0.4660	0.5917
Evacuation	30.40	16.70	25.00	15.13	0.0001	0.0001
Incontinence	29.40	18.30	24.75	8.25	0.0060	0.0011
Urinary	31.30	27.50	33.14	28.43	0.1230	0.1394

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 are all due to some degree of anterior vaginal wall or vault prolapse: there was no residual posterior vaginal wall prolapse. There is no significant reduction in general health but all other domains of the P-QoL were statistically improved. There was also a statistical elevation in PISQ-12 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.

Concluding message

This study had shown that the classic posterior avaulta procedure is highly effective in resolving symptoms of prolapse and improves sexual function related to prolapse. In addition bowel evacuation and faecal incontinence related to the posterior vaginal wall prolapse are improved. The study is therefore being continued in terms of number of women recruited and length of follow up.

References

1. Olsen AL, Smith VJ, Bergstrom JO, Colling JC, Clark AL. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. Obstet Gynecol 1997: 89(4); 501-6
2. Benson JT, Lucente V, McClellan E. Vaginal versus abdominal reconstructive surgery for the treatment of pelvic support defects: a prospective randomized study with long-term outcome evaluation. Am J Obstet Gynecol 1996: 175(6): 1418-21
3. Milani R, Salvatore S, Soligo M, Pifarotti P, Meschia M, Cortese M. Functional and anatomical outcome of anterior and posterior vaginal prolapse repair with prolene mesh. BJOG: An International Journal of Obstetrics & Gynaecology. 2005: 112(1); 107-11

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**