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ANALGESIC REQUIREMENTS, LENGTH OF STAY AND IMMEDIATE COMPLICATIONS IN VAGINAL MESH REPAIRS VERSUS TRADITIONAL ANTERIOR AND POSTERIOR COLPORRHAPHY: A RETROSPECTIVE PILOT STUDY.

Hypothesis / aims of study

It has been suggested that a women's lifetime prevalence of vaginal prolapse is approximately 40% [1] with a risk of operation in 11% [2]. A significant proportion (30%) [2,3] will suffer a reoccurrence which creates a clinical dilemma. Vaginal mesh repairs have been advocated as a viable alternative to traditional colporrhaphy in cases of recurrent vaginal prolapse with a higher degree of success. However it has also been suggested that these procedures are associated with a high complication rate especially vaginal erosion. This pilot study was therefore carried out to assess if such procedures carry an increase in analgesic requirements, length of stay or immediate post operative morbidity and therefore to assess the feasibility of a larger study in this area. In addition we wished to ascertain whether the procedure was cost effective given the current financial restraints on the NHS in the UK.

Study design, materials and methods

42 women who underwent an anterior Avaulta mesh repair [n=17] or posterior Avaulta [n=17] or both procedures [n=8] were identified. Avaulta classic (Bard Urology) is a monofilament, polypropylene mesh with a porous, acellular, ultra-thin sheet of crosslinked porcine collagen attached to the mesh. All procedures were performed by the same surgeon using a standard technique. Analgesic requirements, duration of admission, and immediate complications during their inpatient admission were analysed and compared to a similar sized cohort [n = 38] receiving traditional anterior [n=16] or posterior colporrhaphy [n=12] or both [n=10] performed by the same surgeon over the same time period. Patients were asked to score their pain on a daily basis: a score of 0 indicating no pain, 1 mild pain, 2 moderate pain and 3 severe pain.

Results

There were no intraoperative complications. No cases of erosion, extrusion or haemorrhage were identified in the Avaulta mesh repair group. One wound infection occurred in the Avaulta group compared with three infections (two wound, one urine) in the traditional colporrhaphy group. The duration of admission, although slightly longer for the Avaulta group, showed no significant clinical difference (Table1):

Table1: Duration of Admission

Type of procedure	Length of stay (days)
Anterior Avaulta	3.26
Posterior Avaulta	3.21
Anterior and Posterior Avaulta	3.38
Anterior Colporrhaphy	3.18
Posterior Colporrhaphy	3.26
Anterior and Posterior Colporrhaphy	3.2

Analgesic requirements between the two groups also showed no clinical difference except a reduced opiate requirement in the Avaulta group (Table 2). Pain scores showed that by day 3, the Avaulta cases had less pain than the traditional colporrhaphy arm of the study and as such may have been acceptable to earlier discharge (Table 3)

Table 2: Average daily Analgesic doses

	Day 1	Day 2	Day 3	Day 4
Paracetamol All	2g	3g	2g	2g
Avaulta	2g	3g	2g	2g
Traditional Colporrhaphy	2g	3g	2g	2g
NSAIDS All	1097mg	1672mg	1033mg	983mg
Avaulta	1107mg	1706mg	992mg	1033mg
Traditional Colporrhaphy	1087mg	1631mg	1084mg	933mg
Oromorph All	34mg	34mg	38mg	37mg
Avaulta	36mg	28mg	23mg	6mg
Traditional Colporrhaphy	32mg	40mg	51mg	42mg

Table 3: Pain scores

	Avaulta				Colporrhaphy			
Pain	Day 1	Day 2	Day 3	Day 4	Day 1	Day 2	Day 3	Day 4

Score	N=39	N=37	N=24	N=5	N=35	N=26	N=12	N=3
0	23%	30%	54%	60%	43%	42%	50%	33.3%
1	59%	62%	38%	40%	54%	46%	42%	33.3%
2	15%	5%	8%			12%	8%	33.3%
3	3%	3%			3%			

Interpretation of results

This pilot study suggests that analgesic requirements, length of stay and complication rates immediately following mesh repair in the hands of a skilled surgeon are comparable to traditional colporrhaphy.

Concluding message

These were the first cohort of patients undergoing Avaulta and therefore there may have been a greater tendency to admit for longer. With increasing experience and refining the surgical technique we have found that both the length of stay and analgesic requirements to have decreased further still. The reduction in length of stay results in a significant cost reduction which can offset the cost of the mesh itself. The procedure is therefore cost neutral especially as mesh repairs reduce the need for repeat surgery. As a new procedure the patient numbers in this study are small, but with increasing numbers of mesh repairs we feel that a larger study should be performed and may better illustrate to greater effect the benefits that this study suggests.

References

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Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**Retrospective study post surgery**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**