

## A REVIEW OF CLINICAL OUTCOMES AFTER VAGINAL MESH REPAIR OF RECURRENT GENITAL PROLAPSE

### Hypothesis / aims of study

There is increasing body evidence to support the superiority of vaginal mesh repair over traditional colporrhaphy in prevention of recurrent vaginal wall prolapse.[1, 2] However, there are several reports of significant morbidities after vaginal mesh repair, raising genuine concerns about overall safety of the procedure.[1,2,3]

Use of vaginal mesh repair became regular surgical treatments for pelvic organ prolapse from 2007 in this District General Hospital. This study aimed to review its clinical outcomes after 4 years of regular vaginal mesh repair with the following objectives;

- The short and medium term efficacy of vaginal mesh Repair of recurrent Prolapse
- Perioperative complications rate
- Late operative complication rate
- Risk factors to Vaginal mesh erosion

### Study design, materials and methods

A retrospective observational study in a District General Hospital in the UK.

Two types of mesh materials (Avulta and Prolift) were in regular use during the study period (January 2007 to June 2010). Each case of genital prolapse repaired with mesh in the unit was grade 2 or more. During the entire 4 years period under review, every case of vaginal mesh repair was performed by a single surgeon.

Cases were identified through hospital gynaecology database. Individual case notes were reviewed. Main outcome measures were recurrent vaginal wall prolapse (Grade 2 or more) and vaginal mesh erosion.

### Results

There were 66 cases but 62(93.9%) case notes retrieved. Mesh repair for primary vaginal wall prolapse in 21(33.9%) cases, while 41(66.1%) cases for recurrent vaginal wall prolapse following failure of anterior and/or posterior colporrhaphy. This latter group form the subjects of this review. Median age 64(34-86) years, BMI 25(20-38)kg/m<sup>2</sup> Parity 3(1-5) and median follow-up of 6(3-30)months. All but 3 had had Hysterectomy. Twenty-one patients (51.2%) had had two or more previous traditional surgical repairs of their genital prolapse.

After 12 months follow-up, there was only one case of failure (2.4%). Perioperative complications rate of 24.3% (Infection/pyrexia 4, Haemorrhage/Haematoma 3, and Retention 4). Late complications rate 26.8% (Mesh erosion/extrusion 8, Dyspareunia 3). Return to theatre for excision of small area of mesh extrusion in 5 cases. All cases of mesh erosion were successfully treated at first attempt.

Risk factors associated with mesh erosion were Perioperative complications with pyrexia/infection and/or haematoma (p=0.009), and posterior Mesh repair(p=0.02)

There was no difference in Perioperative (p=0.61) or late complication(p=0.47) rates between Avulta and Prolift mesh

### Interpretation of results

- The study add to the growing body of evidence confirming the short and medium term efficacy of vaginal mesh repair in genital prolapse
- Haematoma and infection in the perioperative period may compromise long term safety of vaginal mesh repair.
- Use of mesh in previously scarred posterior vaginal wall appears to be associated with significantly higher rate of mesh erosion. Large prospective studies comparing vaginal mesh repair of anterior genital prolapse with posterior genital prolapse is required to validate this finding. This may have huge implication with respect to patient selection and preoperative advice
- Majority of mesh erosion can be treated with conservative simple surgical excision with good clinical outcome.
- The collagen coat on "Avulta" mesh does not seem to offer any advantage over non coated polypropylene mesh of "Prolift"

### Concluding message

- Vaginal mesh repair of recurrent prolapse is safe and effective in the short and medium term.
- Patients need to be warned of risk of mesh erosion and dyspareunia particularly in posterior mesh repair. However, treatment of mesh erosion is simple with good prognosis in majority of cases.
- In order to reduce long term morbidity from vaginal mesh repair, attention should be given to haemostasis during vaginal mesh repair and consideration given to possible extending the duration of surgical antibiotics prophylaxis in cases with significant perioperative complications to prevent genital infection in the perioperative period.

### References

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3. Abdalla M Fayyad; Carolyn North; Fiona M Reid; Anthony RB Smith. Prospective study of anterior transobturator mesh kit(Prolift) for the management of reccurent anterior vaginal wall prolapse. Int. Urogynecol J (2011) 22:157-163

<b><i>Specify source of funding or grant</i></b>	<b>No funding required</b>
<b><i>Is this a clinical trial?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Ethical Committee of Western sussex Hospitals Trust NHS</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>