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MANAGEMENT OF VAGINAL MESH EROSION FOLLOWING THE TENSION FREE VAGINAL TAPE PROCEDURE: FIVE YEARS EXPERIENCE AT A UK TERTIARY REFERRAL CENTRE.

Hypothesis / aims of study

The mid-urethral tension free vaginal tape (TVT) procedure is a popular treatment for stress urinary incontinence. Vaginal mesh erosion following TVT has a reported rate varying from 0.3% to 23%(1-3). To date there is no consensus on the optimum management of vaginal mesh erosion following TVT.

The aim of our study was to determine the overall erosion rate, time of presentation and most common erosion site, and try to identify an effective management strategy.

Study design, materials and methods

The cases were identified from our electronic records of theatre procedures, investigating the total number of TVT procedures performed at the John Radcliffe Hospital Oxford (UK) from January 2005 to January 2010 and the number of vaginal mesh erosions over the same period. The medical records of all women with vaginal mesh erosion following TVT were reviewed. We analysed the time of presentation, presenting symptoms, site of the mesh erosion, management employed and its effectiveness.

Results

1189 TVT procedures, using a type 1 monofilament polypropelene mesh (Gynecare TVT), were performed between January 2005 and January 2010. 24 cases of vaginal mesh erosion occurred during the same period, giving an overall erosion rate of 2%. 22 (92%) of the erosions were detected at 8-12 weeks postoperative follow-up. There were two cases of late presentation, at 12 and 15 months post operatively.

The most common presenting complaint was pain and discomfort to the woman's partner during sexual intercourse (17 cases), followed by vaginal discharge (15), bleeding (11), pain (9), and female dyspareunia (9). 22 (92%) of the cases of erosion were located at the midline where the incision was made during insertion of the TVT; there were also 2 (8%) cases of lateral vaginal wall erosion.

In 4 cases, where only a few fibres of the mesh were exposed, and in 2 further cases of late presentation, excision of the mesh was performed as a primary procedure.

In the remaining 20 cases, the exposed mesh was re-sutured after mobilising and re-freshing the edges of the vagina. Patients were given a broad spectrum antibiotic for seven days after re-suturing of the mesh. The outcomes of re-suturing were:

Outcome of re-suturing	**Number**	**%**
Successful re-suturing	13/20	65
Recurrence of mesh erosion	7/20	35

In the 7 cases of recurrent mesh erosion after re-suturing, excision of the exposed vaginal mesh was performed 10 -12 weeks later. In all cases full thickness sling excision was required. Recurrence of urinary stress incontinence was observed in 4 out of 7 cases. Two patients required repeat excision of the mesh, when further mesh exposure recurred after the first excision.

Interpretation of results

In our study, the rate of vaginal mesh erosion post TVT was 2%, which is comparable with rates reported in the literature. In the majority of cases where it occurred, vaginal mesh erosion was clinically apparent 8 to 12 weeks post surgery. The most common site of erosion was at the midline where the incision was made during insertion of the TVT. Possible reasons for this complication might be inadequate suturing of vaginal incision, superficial tape placement or wound infection. The lateral vaginal wall erosions may be due to unrecognised vaginal wall puncture at the time of TVT insertion.

Re-suturing of the exposed mesh was successful in two thirds of cases. Excision of the exposed mesh after failed re-suturing was associated with the recurrence of urinary stress incontinence in about half of the cases.

Concluding message

Re-suturing of the vaginal mesh erosion can be employed successfully as a first-line surgical management strategy. Excision of the mesh can be reserved for those cases when re-suturing is unsuccessful, as there is risk of recurrence of stress incontinence after excision.

References

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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	**the study was conducted as a clinical audit**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**