

## MESH EXTRUSION INTO THE LOWER URINARY TRACT: CORRELATION TO INTRA-OPERATIVE CYSTOSCOPY

### Hypothesis / aims of study

Tertiary care centers have witnessed an increase in referrals for mesh extrusion into the lower urinary tract. We evaluated key aspects of the source procedures to identify factors contributing to graft extrusion.

### Study design, materials and methods

Medical records of female patients referred for mesh extrusion into the lower urinary tract from January 2000 to August 2010 were reviewed. Patients were excluded if their source procedure operative report was not available. We recorded age, hospital type, implanting surgeon, anaesthetic, source procedure, graft material, concomitant surgeries, intra-operative cystoscopy, complications, and extrusion location.

### Results

36 patients were referred for mesh extrusion over the ten year period. Source procedure records were available for 18 patients (50%). All procedures were conducted at community hospitals. 11 operations (61%) were performed by gynaecologists and 7 (39%) by urologists. 17 patients (94%) had a polypropylene mid-urethral sling. 7 patients (39%) had a concomitant vaginal procedure (3 hysterectomies, 4 prolapse repairs). Intra-operative cystoscopy was performed by 78% (14) of surgeons (4/11 gynecologists (36%) did not perform). 5 patients (28%) had recognized intra-operative complications which were repaired by their operating gynaecologists. 60% of these injuries were detected on intra-operative cystoscopy. 6 patients (33%) had an immediate post-operative complication. Extrusions occurred at the urethra (39%) and bladder walls (39%) more frequently than at the bladder neck (11%) and trigone (11%).

### Interpretation of results

Patients with mesh extrusion into the urinary tract often have a protracted course of management prior to referral. Details of source procedures are difficult to obtain, and are frequently poorly documented, thus only 50% of patients were included. Almost 30% of patients had a documented intra- or peri-operative complication at the time of their source procedure. Most patients underwent intra-operative cystoscopy, allowing early recognition of bladder injuries in 60% of cases. However, in 79% of patients undergoing cystoscopy, no mesh was visualized, despite most extrusions occurring at conspicuous areas.

### Concluding message

This work may imply that mesh extrusions can develop over time, rather than result directly from misplacement of graft into the urinary tract. This data additionally reveals the exceptional risk of proceeding with mesh placement following known intra-operative urinary tract injury.

<b><i>Specify source of funding or grant</i></b>	<b>None</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>Institutional Review Board, Vanderbilt University Medical Center</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>