Presentation and Management of Iatrogenic Foreign Bodies of the Lower Urinary Tract Following Pelvic Surgery

Hypothesis / Aims of Study
The surgical use of mesh technologies for pelvic surgery may increase the risk of mesh complications. These complications present challenges for identification and treatment. We review presentation, management and outcomes for a series of iatrogenic foreign bodies of the female lower urinary tract.

Study Design, Materials and Methods
Retrospective review of records of 45 patients with mesh complications following pelvic surgery between 11/2000 and 11/2008 were evaluated for demographics, presenting symptoms, prior procedures, type of foreign body, technique and outcomes.

Results
Mean patient age was 55.23±13.5 years. 45 patients (22 extrusions, 23 erosions) were treated. 33 (73.3%) were symptomatic within 2 months (0-123) of surgery. 31 (68.9%) had prior pelvic surgery. Extrusion presented commonly with dyspareunia, incontinence, or vaginal discharge/bleeding. All extrusions improved with excision, except one (0.45%) which required second excision and 2 (0.9%) with persistent obturator pain requiring orthopedic exposure and removal of mesh. Most common source procedure for erosion were 12 (52.2%) mid-urethral slings and 6 (26%) prolapse repairs. Foreign bodies included polypropylene in 14, xenograft in 2, goretex in 2, protegen in 3 and one case of retained suture. Erosions commonly presented with incontinence, frequency, urgency or persistent UTI. 9 (39.1%) patients had previous trials of removal (4 endoscopic, 4 transvaginal). Location of the foreign body was urethra in 9 patients (39.1%), bladder neck in 7 patients (30.4%) and bladder walls or dome in 6 patients (26.1%). All erosions were evident cystoscopically. Except for one endoscopic removal, all erosions were managed surgically - cystorraphy or partial cystectomy (11), urethroplasty (9± interposition graft), abdominal fistula repair and conduit in 1 patient each. Only 13% were reported to have clinical success (3) or improvement (3), yet 19 (82.5%) felt their symptoms were cured or partially improved. 1 patient developed de novo urgency. 8 of 23 (34.8%) patients had a secondary procedure, with 50% requiring a third procedure.

Interpretation of Results
Multiple prior repairs and a high re-operation rate support a complex patient population best managed with non-endoscopic repair.

Concluding Message
This is the largest series to date of patients with iatrogenic foreign body erosions of the bladder and urethra. Although a small number had complete subjective symptom regression, a majority were subjectively improved but with some level of persistent symptoms.

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What were the subjects in the study? HUMAN
Was this study approved by an ethics committee? Yes
Specify Name of Ethics Committee: Vanderbilt University IRB
Was the Declaration of Helsinki followed? Yes
Was informed consent obtained from the patients? Yes