

TRANSVAGINAL MESH INCREASES THE RISK OF BLEEDING AND ORGAN SURGICAL SITE INFECTION IN VAGINAL PELVIC RECONSTRUCTION

Hypothesis / aims of study

Vaginal reconstructive surgery can be performed with or without mesh based on surgeon preference. To elucidate small differences in perioperative morbidity following vaginal reconstructive procedures, we elected to look at a national dataset to determine whether using mesh during vaginal pelvic reconstruction surgery impacts rates of various perioperative complications and readmission.

Study design, materials and methods

Using the National Surgical Quality Improvement Program (NSQIP) database we concatenated surgical data from multiple vaginal procedures, including anterior and posterior colporrhaphy, paravaginal defect repair, enterocele repair, and colpexy using CPT coding. We stratified this data by the modifier associated with mesh usage at the time of the procedure. In measuring multiple covariates, we compared various 30-day perioperative outcomes, postoperative complications, and readmission rates.

Results

We identified 5644 procedures without mesh and 1280 procedures using mesh in the NSQIP dataset from 2010 through 2012. Procedures using mesh had a higher rate of perioperative bleeding requiring transfusion than procedures not using mesh (2.11% vs 0.60%, $p < 0.001$). In the 27 cases using mesh that required blood transfusion, seven transfusions occurred the same day of surgery and 10 occurred on the first post-operative day. Procedures using mesh also had a higher rate of organ surgical site infection (0.55% vs 0.18%, $p < 0.05$). There were no significant differences in rates of readmission, superficial or deep surgical site infections, pneumonia, urinary tract infection, sepsis, pulmonary embolism, or renal failure. The data set does not capture surgeon or site specific complications or type of kits/trocars used with the mesh.

Interpretation of results

The current study identifies bleeding and surgical site infection as early complications in vaginal pelvic reconstructive surgeries that occur more frequently when mesh is used. However, the NSQIP database only captures complications occurring in the first 30 days following procedure. Therefore, the most well-known complication of procedures utilizing mesh, erosion, could not be adequately assessed.

Concluding message

In a review of NSQIP data, vaginal pelvic reconstruction procedures using mesh have a higher rate of perioperative bleeding requiring transfusion and organ surgical site infection than procedures not using mesh. Patients undergoing these procedures should be counselled preoperatively concerning these risks.

Disclosures

Funding: NONE. **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** This is a quality improvement study utilizing a national database. The database itself does not include any identifiers for the participants included. **Helsinki:** Yes **Informed Consent:** No