

RISK FACTORS FOR VAGINAL MESH EXPOSURE AFTER ROBOTIC-ASSISTED LAPAROSCOPIC SACROCOLPOPEXY: A RETROSPECTIVE COHORT STUDY

Hypothesis / aims of study

To identify risk factors for vaginal mesh exposure after robotic-assisted laparoscopic sacrocolpopexy (RSC).

Study design, materials and methods

This is a retrospective cohort study of all patients who had RSC by one urogynecology group (3 providers) between 1/2009 and 12/2010. Data were extracted from medical records and included demographics, surgical techniques, and outcomes. Potential risk factors were selected from previous reports or clinical observation. The primary outcome was vaginal mesh exposure rate. The association between risk factors and mesh exposure rates was analyzed using the chi-square and Fisher's exact tests, and Mann-Whitney U test. Relative risks (RR) and 95% confidence intervals (CI) were calculated. Multivariate analysis was done using logistic regression models.

Results

A total of 93 subjects underwent RSC. Mean follow up was 20 weeks (SD \pm 15). Exposures occurred in 15 (16.1%) subjects with 14 as mesh exposure and 1 as a suture exposure. Most exposures (86.7%) occurred at the vaginal apex. There were no posterior exposures. Twelve (80%) exposures needed surgical therapy after failed medical treatment.

On bivariate analysis, risk factors that showed statistically significant association with exposure rates were: Incidental anterior vaginotomy, 40% versus 13.3% (RR 3.02; 95% CI 1.18 to 7.71), and early learning curve (2009 versus 2010), 30% versus 9.5% (RR 3.15; 95% CI 1.23 to 8.04). Other factors that suggested a higher risk of exposure but did not reach statistical significance were: Ethibond suture compared to prolene, 30% versus 9.8% (RR 3.08; 95% CI 0.98 to 1.68); Cautery use for the rectovaginal space dissection, 20.3% versus 6.9% (RR 2.95; 95% CI 0.71 to 12.2); concomitant suburethral sling, 24.4% versus 9.6% (RR 2.54; 95% CI 0.94 to 6.84). BMI \geq 30 seemed to be protective (RR 0.28; 95% CI 0.04 to 1.99). Concurrent total hysterectomy did not increase exposure rates (RR 1.06; 95% CI 0.41 to 2.72). Age, smoking, menopause status with and without hormone replacement therapy, intraoperative blood loss, and perineopexy did not significantly change the exposure rates. Multivariate analysis failed to demonstrate a significant association with any of the risk factors.

Interpretation of results

Larger sample is needed to better define the risk factors for mesh exposure.

Concluding message

Although no definitive risk factors were identified on multivariate analysis, incidental anterior vaginotomy, early learning curve, cautery use, and suture material may be associated with higher vaginal mesh exposure rates after RSC and warrant further research.

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| Specify source of funding or grant | None |
| Is this a clinical trial? | No |
| What were the subjects in the study? | HUMAN |
| Was this study approved by an ethics committee? | Yes |
| Specify Name of Ethics Committee | Christiana Health Care System IRB |
| Was the Declaration of Helsinki followed? | Yes |
| Was informed consent obtained from the patients? | No |