

TRANSVAGINAL EVISCERATION FOLLOWING HYSTERECTOMY IN PREMENOPAUSAL WOMEN: A CASE PRESENTATION AND REVIEW OF THE LITERATURE.

Hypothesis / aims of study

We encountered a case of evisceration following abdominal hysterectomy in a premenopausal patient, and have reviewed the literature looking for similar cases from which to deduce risk factors and management options for this entity.

Study design, materials and methods

We conducted a search of the world literature using the key words "vaginal rupture, vaginal evisceration, ruptured enterocele, transvaginal evisceration". We then searched the cited literature from each identified publication. We excluded reports describing postmenopausal patients, trauma, or assault. We also excluded reports of coital injuries with no history of pelvic surgery, and those describing entrapment of fimbriae in the vaginal cuff.

Results

Fewer than 100 cases of vaginal evisceration have been documented in the world literature since the first such report appeared in 1857. The majority involve postmenopausal, postoperative patients. Others result from various forms of trauma. Rarely, evisceration has followed consensual coitus.

Several recent reviews have considered vaginal rupture and postulated risk factors and management options for this rare entity.

Croak, et al (2004) reported a series of 12 patients treated for vaginal rupture, 6 of whom suffered evisceration. Three of the 12 were premenopausal, and two of these suffered trauma in the absence of prior surgery.

Ramirez and Klemer (2002) – identified 59 cases of post-hysterectomy evisceration. 63% of these occurred following a vaginal procedure, compared with 32% after abdominal hysterectomy. The actual numbers of premenopausal and postmenopausal patients were not stated in their report.

Kowalski (1996) reviewed 60 cases of vaginal rupture with evisceration. 19 of these were premenopause. Coincidentally, 19 of the 60 patients also suffered some form of trauma, however, it is not possible to determine from their report how many of the injuries occurred among the premenopausal patients.

We have identified 19 cases in the literature describing premenopausal, postoperative patients with vaginal ruptures. In 18 of these patients, small bowel prolapsed through a ruptured vaginal cuff. In one patient the cuff was ruptured without evisceration. The case described herein brings the total to 20, comprised of 12 abdominal, 5 vaginal, and 3 laparoscopic total hysterectomies.

Interpretation of results

Among premenopausal patients, vaginal evisceration is roughly twice as likely to have been preceded by an abdominal as by a vaginal procedure (12/20 = 60% vs. 5/20 = 25%). These numbers are virtually the reverse of those in the population reviewed by Ramirez and Klemer (2002), the majority of whom were postmenopausal. A precipitating event was recorded for 18 of the 20 patients. 13 suffered rupture during coitus, 4 while straining to defecate or void, and one while douching. Eight patients eviscerated within 12 weeks of their surgical procedure. Two of these were straining in the first few days postoperatively, and 6 had resumed coitus. All twenty patients experienced rupture within 9 months of their hysterectomy.

Risk factors for rupture of a vaginal scar may include (1) poor surgical technique, (2) postoperative cuff infection or hematoma, (3) coitus before complete healing, (4) chronic steroid administration, (5) Valsalva's maneuver or straining, and (6) poor nutrition, diabetes, smoking, and other conditions that impair wound healing. Failure to perform a culdeplasty (7) for enterocele prophylaxis may also be a factor. We note that in both patients who experienced evisceration within 8 days of surgery the vaginal cuff had been left open. A

number of surgeons do leave the cuff open as a matter of routine, however, an open cuff without proper anatomic support may in fact be another risk factor (8) for early evisceration. Finally, it is clear that the great majority of ruptures among premenopausal women occur in the setting of pressure on the wound from below (*i.e.* – coitus). We suggest that poor accommodation of a newly shortened vagina (9) may contribute to coital rupture of the cuff.

Concluding message

Nine risk factors for vaginal rupture in premenopausal patients were listed above. Among these, coital activity appears to be the most common and also the most easily modified risk. Patients should be counseled that careful resumption of coitus should await clearance from their surgeon, and that a 10-12 week period of abstinence following surgery should be anticipated.

Gynecologic surgeons may employ methods of cuff closure chosen to improve cuff strength and vascularity – *e.g.* – two layer closures or suture techniques that can better invert and approximate the cuff mucosa and fascial layers.

Followup of patients with exams of the vaginal cuff for the first postoperative year might identify incipient scar disruption prior to catastrophic evisceration.

References

1. Croak, A. J., et al. 2004. *Obstet Gynecol* **103**:572.
2. Kowalski, L. D., et al. 1996. *J Am Coll Surg* **183**:225.
3. Ramirez, P. T., D. P. Klemer. 2002. *Obstet Gynecol Survey* **57**:462.