
TIPS & TRICKS 1

A Novel Technique for the Minimally Invasive Management of Large Ovarian Cysts

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Objective: We sought to develop a minimally invasive technique for the management of large ovarian cysts with a low suspicion for malignancy and not amenable to laparoscopy by using the Applied GelPort™.

Description: MATERIALS AND METHODS: The management of large ovarian cysts (> 10 centimeters) by laparoscopy is particularly challenging because of a limited surgical field and concerns for cyst rupture with intra-peritoneal spillage. As a result, traditional laparotomy continues to be considered the standard despite the vast majority of these returning benign on final pathology.

The Applied GelPort™ is an advanced access device that combines the advantages of a self-retaining wound retractor with the benefits and option of laparoscopy, particularly hand-assisted laparoscopy. A standard kit is comprised of an incision template, a 100 millimeter GelSeal™ Cap, a wound retractor base, and an Alexis™ wound retractor. This technique relies on the presence a mobile, unilocular, and anteriorly located ovarian cyst. After placing the patient in modified dorsal lithotomy, a small transverse or vertical 2-3 centimeter suprapubic incision is made with the aide of the incision template and a scalpel. This incision is carried all the way through into the peritoneal cavity and the Alexis™ wound retractor is subsequently placed along with the wound retractor base. A circular area of self-retraction with superior exposure is created. Visual and manual inspection of the cyst and pelvis can occur at this time in addition to obtaining pelvic washings. The area of the ovarian cyst that is visible through the self-retaining retractor is carefully dried with a Ray-Tec™. A Tegaderm™ transparent dressing sheet large enough to cover the entire Alexis™ wound retractor is then secured to the cyst wall surface with Dermabond™, a sterile surgical glue. A Behrman needle attached to wall suction is used to puncture and drain the ovarian cyst in a “leak proof” fashion thereby minimizing the risk of intra-peritoneal spillage. Once decompressed, the pathologic ovary can be exteriorized through the mini-laparotomy incision and either an ovarian cystectomy or salpingo-oophorectomy performed. Should malignancy be encountered after a frozen section is obtained, the GelSeal™ Cap can be attached to the Alexis™ wound retractor. The case is then readily converted to a laparoscopy with the ability to place either a trocar or hand through the specialized cap.

RESULTS: We have used this advanced access technique in a variety of cases. Patients were able to undergo either an ovarian cystectomy or salpingo-oophorectomy through the mini-laparotomy incision as an outpatient when pathology was benign. In cases of malignancy, the Applied GelPort™ allowed for the conversion to and completion of a laparoscopic staging with the option of hand-assistance.

CONCLUSION: The use of the Applied GelPort™ advanced access device allows for the management of large ovarian cysts without compromising the benefits of minimally invasive surgery or the surgical management of a malignancy.

Key Words: laparoscopy, surgical technique, ovarian cysts, mini-laparotomy

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TIPS & TRICKS 2

Teaching Salpingo-Oophorectomy With Vaginal Hysterectomy

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Objective: To improve the teaching and performance of salpingo-oophorectomy at the time of vaginal hysterectomy, using a step-by-step approach based on optimal exposure.

Description: (for the left side)

Step 1

The uterus has been removed. The assistant places traction on the ovarian pedicles and on the stay suture at the posterior peritoneum and vaginal fornix.

Step 2

The surgeon places a pack (10x30cm) at 3 o'clock, pushing it upward towards the pelvic brim along the infundibulopelvic ligament.

Step 3

A long Breisky retractor (3x15cm) is inserted between the pack and the adnexae. The Breisky blade retracts the small bowel medially and upward to expose the adnexae.

Step 4

A second, smaller and shorter Breisky (2.5x11cm) is introduced on top of the first Breisky, and is rotated clockwise.

Step 5

The adnexae are grasped with a ring forceps and pulled downwards and medially. The tip of the anterior Breisky rests on the extended infundibulopelvic ligament.

Step 6

The ovarian vessels - which lie in the medial part of the extended infundibulopelvic ligament - are ligated with a Deschamps needle. The tip of the Deschamps needle is introduced into the avascular triangle formed by the ovarian vessels medially, the pelvic sidewall laterally, and the adnexae below. The ureter is safely located at the pelvic sidewall. The suture is passed, retrieved and tied.

Step 7

The ovarian pedicle is cut below the tie.

Step 8

A curved clamp is placed on the base of the adnexae and this pedicle is ligated.

Good exposure is achieved with the following maneuvers:

- Intraabdominal placement of a 10x30cm pack which is held medially with the long Breisky speculum.

- Insertion of the second Breisky.

- Medial and downward traction on the adnexae which are grasped with ring forceps to pull the ovarian vessels and the supporting peritoneum medially into the cavity of the small pelvis.

CONCLUSION: The method presented here emphasizes good exposure before actually beginning with salpingo-oophorectomy. A step-by-step approach facilitates teaching and

learning of this adjunct to vaginal hysterectomy.

Key Words: vaginal surgery, adnexectomy, teaching, salpingo-oophorectomy

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TIPS & TRICKS 3

Fascia- Synthetic Graft Seam Technique for Sacrocolpopexy

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Objective: The fascia-synthetic graft seam technique is a technical trick to minimize graft erosion and maximize graft durability in the performance of sacrocolpopexy. A recent and extensive published review of the ASC literature cited a 0.5-5% incidence of mesh erosion with various synthetic materials and no erosions with autologous or cadaveric fascia (1). Anterior rectus fascia, although easily harvested at abdominal wall entry, often lacks adequate width or length for optimum technical placement. Attachment of harvested autologous abdominal fascia first to the vaginal cuff and then lengthening the graft by attachment of a synthetic graft using a seam of sutures allows adequate sacral attachment without tension.

Description: The abdomen is opened with the incision of choice down to the anterior rectus fascia. A strip of 10 x 2 cm fascia is harvested and placed in antibiotic solution of choice. The vaginal cuff is prepared in the standard fashion with opening of the pelvic peritoneum and dissecting the bladder from the proximal anterior vaginal wall. Each end of the harvested fascial graft is cut vertically in the midline about 1.5 cm to create a wider Y shaped configuration for attachment to the anterior and posterior vaginal walls. Interrupted permanent sutures of choice attach each end of the, now folded over on itself, fascial graft to the anterior and posterior vaginal walls and vaginal cuff. A 2cm wide piece of synthetic mesh of choice is sutured to the now proximal (cephalad) elbow of folded fascia with 4-5 interrupted permanent sutures. These seam sutures penetrate both folded sheets of fascia and include about 3mm of fascia to minimize possibility of pullout. The proximal (cephalad) portion of the synthetic mesh is trimmed and attached to the sacral promontory with standard technique of choice. Closure of the peritoneum over the graft is then performed.

CONCLUSION: The author has successfully used this technique for about 25 years in over 100 patients. Because charts from his former private practice were lost in transfer, storage, or conversion to electronic medical record by the university, specific detail of follow-up unfortunately cannot be given. Anecdotally there were no known vaginal erosions or infectious complications with most patients followed over 3 years, and some over 15 years. Only a couple of patients required repeat pelvic reconstructive surgery and none of these were apical failures. There were no known incisional hernias.

Attachment of harvested autologous abdominal fascia first to the vaginal cuff and then lengthening the graft by attachment of a synthetic graft using a seam of sutures has the following advantages: 1) a shorter length of fascia can be used, 2) allows more flexibility

in length to attach the graft to the sacrum and 3) it eliminates the risk of erosion if a total (rather than supracervical) hysterectomy is performed or in the case of thin and atrophic post-hysterectomy vaginal cuff.

References:

1.Nygaard et al. Abdominal Sacrocolpopexy: A Comprehensive Review. Obstet Gynecol Oct 2004; 104:805-823

Key Words: sacrocolpopexy, autologous rectus fascia, seam technique

Disclosure - Nothing to disclose.