Pushing the Envelope – Tips and Tricks for Laparoscopy

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October 26, 2016

Disclosures

- I have no financial disclosures

Learning Objectives

- Share keys for preop and intraop planning
- Apply strategies for difficult peritoneal access
- Review key anatomy to avoid injury
- Share pearls for complicated pathology
- Review tips for tissue extraction

Outline

- Preoperative Planning
  - Large uteri
  - Laparoscopic myomectomy
- Patient positioning
- Trocar entry
- Visualization
- Restoring Anatomy
- Hemostasis
- Tissue extraction
- Adhesiolysis
- Detection of intraoperative complications
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Preoperative Planning – High Risk Patients

- Prior laparotomy or known adhesive disease
- Advanced endometriosis
- Large pelvic/abdominal pathology
- Infections (PID/TOA, diverticulitis)
- Obesity
- Very thin patients
- Pregnancy

Patient positioning

- Arms tucked at side
- Dorsal lithotomy
- Gel/foam pad

Trocar Entry

- Lateral to avoid inferior epigastics
- 20-25 mmHg
- LUQ entry
- Direct visualization of ancillary trocars
Risk of Adhesive Disease

Omental and/or Bowel

Prior surgical scar
- Pfannensteil–27%
- Low vertical–55%
- High vertical–67%

Preoperative Assessment of Adhesions

- H&P including rectal
- Prior operative notes
- Ultrasound
  - Visceral slide test

Palmer’s Point

- Relative CI
  - Prior gastric bypass or splenectomy
  - LUQ mass
  - Hepatosplenomegaly

Palmer’s Point Technique

- Closed Veress technique
- 5 mm incision 3 cm below left costal margin in the mid clavicular line
- OG tube

Visualization

- Uterine manipulator
- 0, 30, 45 degree scopes
- Ovarian, bowel, or uterine pexy
  - Keith needle, curved needle, T-lift
- Restoring anatomy

Know your anatomy!

- Retroperitoneal dissection
- Identification of the ureters

Large Uteri

- Pre-operative Lupron
- Uterine manipulator and colpotomy cup
- Suprapubic port
- Hand assist
- Peritoneal window in the broad ligament
- Stay close to the ovary
- Desiccate both sides before transection of UA

Large Uteri Hysterectomy
Laparoscopic myomectomy -
Avoiding hemorrhage

- Vasopressin (0.05-0.3 U/ml)
- 20 U in 200 ml
- Laparoscopic pericervical tourniquets
- Misoprostol
- Bupivacaine plus epinephrine
- Gelatin-thrombin matrix
- Tranexamic acid
- Cell saver
- Laparoscopic bulldog clamps
- IP ligament
- UO ligament

Hemostasis

- Hemostatic agents
- Coagulation
- Vascular Clips
- Thermal energy
- Suture
- Pressure – clamping, gauze, etc.

Specimen Removal

As a surgeon, I have seen an overt emphasis on marketing and enhancement of the volume of practice and, thus, revenue flow, but the cost of this comes at a heavy toll. It becomes clear that the inability to empathetically, carefully, and reflectively look at the devastating complications we cause, when empathy is gone, the self-criticism that comes along with it is also history. Given that reality, it is easy to see how purely utilitarian arguments can take hold of an establishment's ethical reasoning.
Laparoscopic Uterine Power Morcellation in Hysterectomy and Myomectomy:

FDA Safety Communication

- April 17, 2014
  - Risk of Sarcoma 1/352, Risk of LMS 1/498
  - No way to predict sarcoma pre-operatively
  - “FDA discourages the use of laparoscopic power morcellation during hysterectomy or myomectomy for uterine fibroids.”

POLL

A) Power morcellation
B) Mechanical morcellation
C) Morcellation in a bag only
D) No morcellation
E) Enjoy tissue extraction

Specimen Removal - Extraction Sites

- 2.5 cm abdominal
  - Umbilicus
  - Suprapubic
  - Lower lateral port
- Alexis wound retractor
- Paper roll/"C" technique

Manuel morcellation in a bag
Power morcellation in a bag

Types of bags
- Deployable bags if possible - up to 15 cm
- FDA approved tissue extraction bag by Applied Medical
- Cook Lap Sac bag
- Isolation bag

Steps:
- Specimen in upper abdomen
- Introduce bag
- Accordion
- Ties at two ends → introduce bag → cut strings to "deploy"
- Open bag
- Fluid in the bag
- Reverse trendelenburg

Vaginal morcellation in a bag

Specimen Removal – tips for bagging

Adhesiolysis

- Uterine manipulator and/or rectal probe
- Apply traction
- Create planes and windows
- Do not tear
- Cold scissors close to viscera
- Backfill bladder

- Dissect
- Parallel to the ureter
- Medial to uterosacral ligament
- Fat stays with the bowel or bladder
Assess for injury
- Backfill the bladder
- Rectal integrity test
- Cystoscopy
  - fluorescein
  - indigo carmine
  - methylene blue
  - preop pyridium

Conclusions
- Use the right incision for the right surgery
- Know your anatomy
- Right placement of trocars is essential
- Blood is the enemy
- Identify complications early

Resources
- AAGL SurgeryU
  - https://www.aagl.org/service/surgeryu/
- International Academy of Pelvic Surgery
  - https://www.academyofpelvicsurgery.com/
- Websurg
  - http://www.ircad.fr/e-learning/websurg/

Thank you!