Laparoscopic Dissections for Endometriosis and Pelvic Pain

Matthew Siedhoff, MD MSCR
Associate Professor
Cedars-Sinai
University of California Los Angeles School of Medicine
Minimally Invasive Gynecologic Surgery

Disclosures

- Consultant
  - Applied Medical
  - Olympus
Objectives

- Discuss where surgery and endometriosis fit into broader issue of pelvic pain
- Show video of resection of endometriosis on ureter, uterosacral ligaments, cul-de-sac
- Show pelvic peritonectomy over the ureter and uterosacral ligament
- Review the oncologic potential of endometriosis and need for resection, not ablation

**Clinical Opinion**

Could chronic pelvic pain be a functional somatic syndrome?

John W. Warner III, MD; Monica Moreno, MD; Fred M. Howard, MD

Laparoscopy has been used for decades in diagnosis and treatment of chronic pelvic pain. In a recent report and editorial, the authors argue that treating many pelvic pain patients with laparoscopy is a great step forward in understanding the causes of chronic pelvic pain. In the first part of this series, we have identified a number of techniques that contribute to the relationship of CPP and the pelvic organs, the disease, and the disease process. In this viewpoint, we discuss the role of laparoscopy in the diagnosis of CPP and its associated symptoms.

In this opinion piece, we integrate existing data to suggest that the source of CPP in many women is not solely in the pelvis but rather has a systemic etiology. Several observations from general areas of research have been used to support this hypothesis. The role of systemic factors in the etiology of CPP is not yet fully understood. However, it is clear that the causes of CPP are multifactorial and that there is an urgent need to develop new approaches to diagnosis and treatment.

Key words: chronic pelvic pain, fibromyalgia, functional somatic syndromes, irritable bowel syndrome, laparoscopy

Dysmenorrhea: healthy woman

“Severe” dysmenorrhea: chronic pelvic pain
Surgery in chronic pelvic pain

• Not generally a “Eureka!” moment with chronic, as opposed to acute, pain
• The simple pain conditions won’t be too challenging to identify and treat
• Majority of patients w CPP have a centralized pain disorder
• Turn down the master volume dial
• Tune up the peripheral elements (this is where surgery fits into CPP)

• Symptom vs diagnosis
  – Treatment approach to symptom varies by what you believe is contributing to that symptom
  – Example: Dyspareunia
    • Pelvic floor tension myalgia → physical therapy
    • Vestibulitis → medications, vestibuloplasty
    • Uterine retroversion → position adjustments, uterine suspension
    • Deeply infiltrating endometriosis → surgical excision

• Multifactorial approach to evaluating pain
• Be honest with patients about findings
• Focus on improvement rather than cure
• Delineate what may be helped by surgery and what isn’t likely to be
• Value in “negative” findings in diagnostic surgery
• While surgery (including hysterectomy and removal of ovaries) can be helpful in some women, the treatment of “chronic pelvic pain” is NOT serial removal of organs
Surgery in chronic pelvic pain

- Hysterectomy
  - 500,000 done annually
  - 10% pelvic pain as 1st indication
- 1249 women eval 6 and 24 mos after hysterectomy for QOL, impact of depression and pain on outcomes
  - Women w/o pain or depression had highest function levels
  - Women w/ depression only had improvement in impaired mental health: 85% down to 33%
  - Even among women w/ pain and depression, pelvic pain decreased from 97% to 19%; improved physical and social function
  - Dyspareunia decreased in all groups
  - RCT: improved quality of life in TLH over TAH durable to 4 yrs out from surgery!

Endometriosis

- Definition & Background
  - Ectopic endometrial glands and stroma
  - Adnexae, peritoneum, culdesac, bowel, appendix
  - Associated with a wide variety of pain symptoms – no pathognomonic character
  - Most common staging system rAFS: minimal, mild, moderate severe
  - More common among patients undergoing laparoscopy for pain than women w/o pain
  - Laparoscopic treatment is more effective than diagnostic surgery alone
Endometriosis

• **Superficial disease**
  – Very common in GYN to attribute sx to endometriosis, regardless dz severity
  – Connection to pain symptoms is much more tenuous than previously thought
  – Can be found up to 10% of the time in asymptomatic patients
  – Strong correlation with other functional syndromes (IBS, IC, FMG, TMJ, LBP, CFS, etc)
  – Endometriosis pts more commonly have non-cyclic visceral and musculoskeletal symptoms
  – Symptoms do not localize well to location of implants

• **Deeply infiltrating endometriosis (DIE)**
  – Dense, fibrotic disease which causes adjacent-organ adherence, invasion
  – Makes its own estrogen via aromatase
  – Can usually be felt on exam or seen on imaging
  – Symptoms
    • Dyschezia, hematuria with bowel disease
    • Dysuria, hematuria with bladder endometrioma
    • Dyspareunia and posterior culdesac disease
    • Infertility and adnexal endometriosis
  – Cyclic tender subcutaneous mass with abdominal wall endometrioma
  – Rare: ureteral or bowel obstruction, PTX in thoracic endometriosis
  – Treatment: surgical excision
Endometriosis – excise or ablate

- **Pain**
  - Difficult to study:
    - Connection between superficial endometriosis and pain more tenuous than previously thought
    - Can’t “ablate” deeply infiltrating disease
  - Mostly case series, retrospective studies, nonrandomized prospective studies
  - Large RCT (Australia), n= 178, n= 82 at 5-year followup
    - Mostly mild disease (80%)
    - Both excision and ablation improved pain at 5 years
    - Excision > ablation dyspareunia, no differences otherwise
    - More ablation patients used adjunct hormone treatment
- **Fertility**
  - Endometrioma excision > drainage or ablation
    - Recurrence of endometrioma
    - Recurrence of pain symptoms
    - Subsequent spontaneous pregnancy in previously infertile women
- **Association with ovarian cancer**
  - Clear cell (20% cases w endometriosis vs 6% controls)
  - Low-grade serous (9%)
  - Endometrioid (14%)
  - No assoc high-grade serous, mucinous, borderline

Endometriosis resection – avascular spaces

- **Paravesical**
  - Lateral: obturator internus
  - Medial: bladder
  - Posterior: uterine artery / cardinal ligament
  - Anterior: symphysis

- **Pararectal**
  - Lateral: hypogastric
  - Medial: Rectosigmoid, ureter
  - Posterior: sacrum
  - Anterior: uterine artery / cardinal ligament
Endometriosis resection

- Pararectal space
- Paravesical space
- Vesicovaginal space
- Rectovaginal space
- Retrorectal space
Appendectomy

- No increased morbidity in GYN surgery
- Benefits:
  - Preventing future emergency appendectomy
  - Excluding appendicitis in patients with complicated Ddx (e.g., pelvic pain, differently abled)
- Removing endometriosis
  - Endometrioma: 10% risk of appendix endometriosis
  - UNC, 39% appendectomies: superficial endometriosis 13% – DIE 39%
- Future radiation or chemotherapy anticipated
- Extensive pelvic or abdominal surgery in which adhesions may be an issue postoperatively
Ovarian Remnant Syndrome

• **Definition**
  – Pelvic mass with residual ovarian tissue following oophorectomy

• **Background**
  – Only case series, incidence unknown
  – Most often benign, but malignancy has been reported

• **Etiology**
  – Incomplete excision of ovary, usually in adhesive conditions
    • Endometriosis, PID, inflammatory bowel disease, prior surgery
  – Cystic enlargement in subsequent confined, adherent space

• **Symptoms**
  – Unilateral pain, often cyclic
  – Lack of menopausal symptoms following bilateral oophorectomy

• **Diagnosis**
  – Elevated FSH, E2 (need to discontinue ERT at least 10d)
    • ~2/3 of pts w ORS will have premenopausal hormone levels
  – Imaging: ultrasound, MRI, CT
    • Clomiphene citrate can be used to provoke and identify mass

• **Treatment**
  – Medical suppression - GnRHa, OCs, danazol – often insufficient
  – Radiotherapy - not recommended because no tissue diagnosis
    • Surgical excision
    – Adhesiolysis, ureterolysis, peritoneectomy, isolation of uterine, bowel rsxn

• **Prevention**
  – Always open the pararectal space and skeletonize the IP during oophorectomy
  – Divide the IP at level of aortic bifurcation in adhesive conditions
  – Mobilize the adherent structures
  – Clear margins, don’t generously leave ovarian rind on bowel or sidewall
Central uterine pain

- Manifestations
  - Dysmenorrhea
  - Dyspareunia

- Associations
  - Adenomyosis
  - Retroversion

- Treatment
  - Hormonal: LNG-IUS, OCs, progesins
  - Presacral neurlectomy
  - RCT: 141 subjects
  - Endo + midline component of pain
  - 80% (v 60%) reported effective pain relief at 24mos
  - Urinary, bowel dysfunction, risks
  - LUNA
  - Uterine suspension
  - Hysterectomy

References

Introduction

Endometriosis


References

Endometriosis


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Appendectomy


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Ovarian Remnant Syndrome


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Pelvic Congestion Syndrome


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Postablation Tubal Sterilization Syndrome


Pelvic Inflammatory Disease


Central Uterine Pain


