Safe and Effective Surgery for Endometriosis
Including Detection and Intervention for Ovarian Cancer

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Introduction and Overview

- This talk aims to provide an overview of safer surgical techniques for the treatment of endometriosis as well as review the literature on ways to maximize the effectiveness of surgery for recurrence prevention and fertility. Included is a discussion of detection and intervention for ovarian cancer in the patient with endometriosis.
Outline

• Background on Surgery for Endometriosis
• Safer Surgical Technique
• Optimizing Effectiveness of Treatment
• Endometriosis and Infertility
• Cancer Risk and Endometriosis
Surgical Treatment of Endometriosis

• **Indications for surgery**
  - Diagnostic
  - Severe endometriosis
  - Failed medical management
  - Infertility

• **Options**
  - Definitive versus Conservative Surgery
Surgical Treatment of Endometriosis

• **Definitive Surgery:**
  - Removal of uterus, ovaries, and tubes

• **Conservative Surgery**
  - Ablation versus excision of implants and adhesions
  - Resection of endometriomas
Conservative Surgery

- Excision, fulguration, or laser vaporization of endometriotic implants
- Removal of adhesions
- Resection of endometriomas including the cyst wall
- Restoration of normal pelvic anatomy
Conservative Surgery

- Ancillary procedures:
  - Presacral neurctomy
  - Uterosacral neurctomy
Maximizing Safety in Surgery

- Identifying Landmarks
- Ureterolysis
- Hydrodissection and CO2 Laser
  - More precise and less penetrating
Maximizing Safety in Surgery

• Cystoscopy, Proctoscopy
  – Check integrity if ablation/fulguration are done around bladder or bowel

• Recognizing when consultation is needed
Optimizing Effectiveness

• Recurrence risk
  – Risk of recurrence is estimated to be as high as 40 percent at 10 year of follow up

• Pain control
  – Pain relief is achieved in most patients who undergo ablation/resection of endometriosis

Wheeler et al 1983
Optimizing Effectiveness

• Randomized trials

• Trial 1
  – LSC laser ablation of endometriotic implants plus uterine nerve ablation was more likely to result in improvement or resolution of symptoms at 6 months than expectant management (63 versus 23 %)

• Women with stage I disease were less likely to improve after their surgical procedure

Sutton et al Oct 1994
Optimizing Effectiveness

- **Trial 2**
  - LSC excision of implants led to symptomatic improvement in 80% of patients at 6 months compared to 32% of controls undergoing diagnostic laparoscopy.

- Most of these women had stage II-IV disease which may account for higher success rate.

Abbot et al Oct 2004
Optimizing Effectiveness

• Combining LSC laser ablation, adhesiolysis and uterine nerve ablation is likely to be beneficial treatment for pelvic pain associated with minimal, mild and moderate endometriosis

– Interpret with caution- only one trial in this Cochrane review

Jacobson Cochrane 2005
Optimizing Effectiveness

• Presacral Neurectomy
  – Insufficient evidence to recommend use of nerve interruption in the management of dysmenorrhea alone

• Our clinical experience: shows efficacy

Proctor et al Cochrane 2005
Optimizing Effectiveness

• Barrier agents for preventing adhesions after surgery for subfertility
  – Interceed reduces incidence of adhesion formation but insufficient data to support its use to improve pregnancy
  – Seprafilm no evidence in prevention of adhesion formation

Farquar et al Cochrane 2005
Optimizing Effectiveness

- Pre and post operative medical therapy for endometriosis surgery
  - Cochrane Review showed insufficient evidence that hormonal suppression in association with surgery provides improvement of symptoms, pregnancy rates and overall tolerability but a significant improvement in disease recurrence

Yap et al, Cochrane 2005
Treatment of Infertility

• Endometriosis can reduce fecundability

• Endometriosis does not usually completely prevent conception
Treatment of Infertility

• Achieving pregnancy following a surgical procedure depends on:
  – stage of disease
  – presence of other infertility factors

• Women with moderate to severe endometriosis who desire pregnancy benefit from surgical therapy
Treatment of Infertility

- Pregnancy rates after surgery:
  - Moderate endometriosis 50%
  - Severe endometriosis 39%

- Pregnancy rates with expectant management:
  - Mild 50%
  - Moderate <25%
  - Severe disease 5%

Evers 1989
Olive 1989
Cancer Risk and Endometriosis

• Epidemiologic evidence
  – Large cohort studies suggest endometriosis is an independent risk factor for epithelial ovarian cancer (EOC)
  – Risk of malignant transformation in ovarian endometriosis is approx 2.5%

Van Gorp et al Apr 2004
Cancer Risk and Endometriosis

- Endometrioid and clear cell ovarian cancer can arise from endometriomas
Cancer Risk and Endometriosis

• **Endometriosis associated ovarian cancer** presents:
  – Earlier stage
  – Lower grade lesions
  – Better overall survival 81% vs 54%

• **Ovarian endometrioid and clear cell cancer** more commonly diagnosed in Stage 1 because of their frequent association with symptomatic endometriosis

Erzen et al Oct 2001

Nezhat, F 2005 abstract
Cancer Risk and Endometriosis

• Molecular studies detected common alterations in endometriosis and ovarian cancer

• Risk of ovarian cancer is highest in women with endometriosis and primary infertility

Van Gorp et al Apr 2004
Nezhat, F 2005 abstract

Brinton et al Aug 2004
Cancer Risk and Endometriosis Screening

- No Standardized Protocol
- Screening
  - Routine annual exam
  - Clinical symptoms
  - Ultrasound if needed
  - Tumor markers if indicated
Cancer Risk and Endometriosis Detection

- Consider washings
- Consider frozen section
- Prepare patient for full staging if index of suspicion is high
Thank you

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