

## Learning Objectives

### Nevada Academy of Family Physicians 2008 Winter CME Conference

Endometrial Biopsy  
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- Understand indications for EMBx
- Technique of EMBx
- Interpretation of pathologic results and treatment options
- Limitations of EMBx

### Indications for EMBx:

- Abnormal Uterine Bleeding
- Postmenopausal Bleeding
- Abnormal Pap Smears with atypical glandular cells
- Screening for hyperplasia or cancer
- Infertility evaluation
- Evaluating response to therapy for previously diagnosed abnormalities

### Abnormal Uterine Bleeding

- Menorrhagia: excessive but regular menstrual flow
- Metrorrhagia: irregular vaginal bleeding between between expected menstrual periods
- Menometrorrhagia: excessive, irregular bleeding.

### Postmenopausal Bleeding

- Unexpected bleeding after 12 months of amenorrhea with clinical or lab indications of menopause.
- Persistent irregular bleeding on hormone replacement therapy (typically occurring more than 6 months after initiation of HRTx)

### Abnormal Pap Smear Evaluation

- Atypical Glandular cells of undetermined significance (AGCUS)
- Presence of endometrial cells on pap in a postmenopausal women
- Malignant glandular cells on pap smear

### Screening for hyperplasia or cancer

- Patients with previously diagnosed and treated hyperplasia (regardless of current treatment status)
- Patients on unopposed estrogen replacement therapy (ERTx)
- Hyperestrogenic or chronically anovulatory patients (obesity, PCOS, oligomenorrheic or amenorrheic)
- Postmenopausal patients on Tamoxifen therapy

### Infertility Evaluation

- Luteal phase deficiency
- Plasma cell endometritis

## Evaluating response to therapy

- Confirming adequate progestational effect in patients on non-standard hormone replacement regimens
- Confirmation of resolution of hyperplasia on therapy
- Confirmation of correction of luteal phase deficiency with therapy

## Technique of Endometrial biopsy: Supplies

- Consent form
- Non-sterile exam gloves, speculum and lubricating jelly, spray anesthetic (20% benzocaine)
- Sterile tray set-up with betadine, swabs, single tooth tenaculum, sterile gloves, endometrial biopsy catheter
- Pathology request form with appropriate clinical information provided
- Formalin specimen container

## Pre-biopsy preparation

- Pre-treatment with ibuprofen or other NSAID
- Bimanual exam: determine position and approximate size of uterus
- Speculum exam: evaluate ability to visualize cervix, gauge difficulty traversing cervix (os finder needed, anesthetic required)

## Procedure

- Note and record the cavity depth
- Apply suction and perform the biopsy by an in/out and rotational movement to maximize the area of the cavity sampled
- Place the sample in Formalin
- Remove tenaculum and confirm hemostasis (use pressure or silver nitrate as needed)

## Contraindications to EMBx

- Suspected or known pregnancy
- Acute pelvic inflammatory disease or known/suspected infection with Chlamydia, Gonorrhea or Mycoplasma
- Suspected or known intrauterine anatomic abnormality (uterine anomalies, fibroids or polyps)
- Coagulopathies
- Prior adverse events with EMBx

## Informed Consent

- Explanation of procedure and expected discomfort (cramping, mild post-procedural bleeding)
- Diagnostic accuracy: ~90-92% for endometrial cancer
- Complications: failure to obtain biopsy, infection, perforation, non-diagnostic study

## Procedure

- Place sterile speculum
- Prepare upper vagina, cervix and distal endocervix with betadine and/or 20% Benzocaine.
- Place single tooth tenaculum and apply gentle traction.
- Pass endometrial biopsy catheter (Pipelle, Z-sampler, Vabra, Tis-u-trap)
- If easy passage isn't possible, attempt minimal dilation with Os finder or small reusable cervical dilator

## Pitfalls and solutions

- Stenotic cervix: Os finder, small dilator sets, paracervical block
- Suspected perforation: abandon procedure and reschedule; evaluate for bowel injury or intra-abdominal hemorrhage if perforation occurred while mechanical suction was applied (Vabra, Tis-u-Trap)
- Insufficient tissue for diagnosis: consider transvaginal scan to assess EMT; referral for Hysteroscopy, D&C
- Bradycardia: rare, atropine. Reschedule and do with lidocaine jelly/20% benzocaine and then paracervical block

## Post-biopsy instructions

- Avoid douching, intercourse or tampons for 1-2 days
- Call for fever, severe pain, heavy bleeding, abdominal distention with nausea or vomiting

## Results and Treatments

- Atrophic Endometrium
- Suggests estrogen deficiency
- Tx: initiate or increase estrogen component of therapy
- Premenopausal: OC
- Postmenopausal: start HRTx, or change current HRTx to increase estrogenic activity or decrease progestational activity

## Results and Treatments

- Proliferative/follicular phase endometrium
- Correlate this finding with patient's menstrual history as it may be a normal finding
- Suggests anovulation/lack of sufficient progestational activity
- Treat with progestational tx: OC, progesterone or progestin tx, progestin IUD

## Results and Treatments

- Secretory endometrium
- Suggests ovulatory status or exposure to exogenous progesterone/progestins
- Consider additional screening for structural abnormalities (polyps, fibroids, adenomyosis)
- Treatment options are limited: consider Mirena IUD, endometrial ablation

## Results and Treatments

- Dyssynchronous endometrium
- Typically present in anovulatory patients
- Progesterone or progestin therapy, Mirena IUD, OC
- Occasionally mechanical removal via D&C required prior to acceptable response to medical management

## Results and Treatments

- Simple Hyperplasia
- Chronic unopposed estrogen stimulation
- Progesterone, progestin, OC, Mirena IUD
- Consider rescreening with follow-up EMBx after a period of medical management

## Results and Treatments

- Complex (Adenomatous) Hyperplasia
- Potential precursor to Endometrial cancer
- Potent progestin therapy, OC, Progesterone
- Definitely rescreen with EMBx both to confirm regression and exclude missed atypical changes on first biopsy

## Results and Treatment

- Atypical Hyperplasia
- Definite precursor to cancer
- Refer for Hysteroscopy, D&C and probable hysterectomy

## Results and Treatments

- Atypical Adenomatous/complex Hyperplasia
- Endometrial carcinoma is already present in approximately 20% of these patients
- Refer to Gynecologic Oncologist for further evaluation and treatment (endometrial cancers are surgically stage including pelvic/peri-aortic lymphadenectomies)

## Results and Treatments

- Acute or Chronic Endometritis
- Cervical cultures, empiric antibiotic therapy
- Consider structural lesions which often cause this result: submucous leiomyoma, necrotic endometrial polyps, retained POC, foreign body reactions (embedded/retained IUD)