Mastering Office GYN Procedures

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Disclosure: Merck Speakers Bureau

Outline

- Vulvar skin conditions; vulvar biopsy
- Postmenopausal bleeding; endometrial biopsy
- Bartholin Duct Infections: I&D abscess
- Intrauterine contraceptive (IUC) insertion

Genital Skin: White Lesions

- Lichen sclerosus
- Lichen simplex chronicus
- LS+LSC
- Tinea versicolor
- Intertrigo

- VIN/ PIN
- Depigmentation disorders
  - Leukoderma
  - Vitiligo
  - Partial albinism

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- VIN/ PIN
- Depigmentation disorders
  - Leukoderma
  - Vitiligo
  - Partial albinism
### Vulvar Dermatoses 1997

<table>
<thead>
<tr>
<th>Type</th>
<th>ISSVD Term</th>
<th>Old Terms</th>
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<tbody>
<tr>
<td>Atrophic</td>
<td>Lichen sclerosus</td>
<td>• Lichen sclerosus et atrophicus</td>
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<tr>
<td></td>
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<td>• Krauosis vulvae</td>
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<tr>
<td>Hyperplastic</td>
<td>Squamous cell</td>
<td>• Hyperplastic dystrophy</td>
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<tr>
<td></td>
<td>hyperplasia</td>
<td>• Neurodermatitis</td>
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<td></td>
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<td>• Lichen simplex chronicus</td>
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<tr>
<td>Systemic</td>
<td>Other dermatoses</td>
<td>• Lichen planus</td>
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<td></td>
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<td>Premalignant</td>
<td>VIN</td>
<td>• Hyperplastic dystrophy/atypia</td>
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<td>• Bowen’s disease</td>
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<td>• Bowenoid papulosis</td>
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<td></td>
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<td>• Vulvar CIS</td>
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</tbody>
</table>

### 2006 ISSVD Classification of Vulvar Dermatoses

- No consensus agreement on a system based upon clinical morphology, path physiology, or etiology
- Include only non-Neoplastic, non-infectious entities
- Agreed upon a microscopic morphology based system

#### Rationale of ISSVD Committee
- Clinical diagnosis → no classification needed
- Unclear clinical diagnosis → seek biopsy diagnosis
- Unclear biopsy diagnosis → seek clinic pathologic correlation

### 2006 ISSVD Classification of Vulvar Dermatoses

<table>
<thead>
<tr>
<th>Pathologic pattern</th>
<th>Clinical Correlates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spongiotic</td>
<td>Atopic dermatitis, allergic contact dermatitis, irritant contact dermatitis</td>
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<tr>
<td>Acanthotic</td>
<td>Psoriasis, LSC (primary or superimposed), (VIN)</td>
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<tr>
<td>Lichenoid</td>
<td>Lichen sclerosus, lichen planus</td>
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<tr>
<td>Dermal homogenization</td>
<td>Lichen sclerosus</td>
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<tr>
<td>Vesiculobullous</td>
<td>Pemphigoid, linear IgA disease</td>
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<tr>
<td>Acantholytic</td>
<td>Hailey-Hailey disease, Darier disease, papular genitocrural acantholysis</td>
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<tr>
<td>Granulomatous</td>
<td>Crohn disease</td>
</tr>
<tr>
<td>Vasculopathic</td>
<td>Aphthous ulcers, Behcet disease, plasma c. vulvitis</td>
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</table>

### Lichen Sclerosus: Natural History

- Most common vulvar dermatosis (dystrophy)
- Cause: autoimmune condition
- Bimodal age distribution: older women and children, but may be present at any age
- Chronic, progressive, lifelong condition
- Most common in Caucasian women
- Can affect non-vulvar areas
- Predisposition to vulvar squamous cell carcinoma
  - 3-5% lifetime risk (vs. < 1% without LS)
  - LS in 30-40% women with vulvar squamous cancers
Lichen Sclerosus: Findings

- **Symptoms**
  - Itching, burning, dyspareunia, dysuria
- **Signs**
  - Thin white “parchment paper” epithelium
  - Fissures, ulcers, bruises, or submucosal hemorrhage
  - Depigmentation (white) or hyperpigmentation in “keyhole” distribution: vulva and anus
  - Introital stenosis and loss of vulvar architecture
  - Reduced skin elasticity
- Biopsy mandatory for diagnosis

“Early” Lichen Sclerosus

- Hyperpigmentation due to scarring
- Loss of labia minora

“Late” Lichen Sclerosus

- Agglutination of clitoral hood
- Loss of labia minora
- Introital narrowing
- Parchment paper epithelium
68 year old woman with urinary obstruction

Labial agglutination over urethral meatus

**Lichen Sclerosus: Treatment**

- **Explain chronicity**
- **Preferred treatment**
  - Clobetasol 0.05% ointment BID x 2-3 wk, to QD
  - Taper to med potency steroid 2-4x/month for life
- Testosterone ointment is time honored, but little evidence to support
- **Adjunctive therapy:** anti-pruritic therapy
  - Atarax or Benedryl PO, especially at night
  - Doxypin, QHS or topically
  - If not effective: amitriptyline, desipramine PO
- Perineoplasty may help dyspareunia, fissuring

**Lichen Simplex Chronicus = Squamous Cell Hyperplasia**

- Irritant initiates “scratch-itch” cycle
  - Candida
  - Chemical irritant, allergen
  - Lichen sclerosus
- Presentation: always itching; burning, pain, and tenderness
- Thickened leathery red (white if moisture) raised lesion
- In absence of atypia, no malignant potential
  - If atypia present, classified as VIN

**Lichen Simplex Chronicus**
Chronic candidal vulvitis → LSC

L. Simplex Chronicus: Treatment

- **Removal of irritants or allergens**
- **Treatment**
  - Triamcinolone acetonide (TAC) 0.1% ointment BID x4-6 weeks, then QD
  - Other moderate strength steroid ointments
  - Intraligamental TAC once every 3-6 months
- **Anti-pruritics**
  - Hydroxyzine (Atarax) 25-75 mg QHS
  - Doxepin 25-75 mg PO QHS
  - Doxepin (Zonalon) 5% cream; start QD, work up

Lichen Sclerosus + LSC

- “Mixed dystrophy” deleted in 1987
- ISSVD System
- 15% all vulvar dystrophies
- LS is irritant; scratching causes LSC
- DDX: LS with plaque, candida, VIN
- Treatment
  - Clobetasol x12 weeks, then steroid maintenance
  - Stop the itch!!

Rules for Topical Steroid Use

- **Topical steroids are not a cure**
  - Use potency that will control condition quickly, then stop, use PRN, or maintain with low potency
- Limit the amount prescribed to 15 grams
- Ointments are stronger, last longer, less irritating
- Show the patient exactly how to use it: thin film
- L. minora are steroid resistant
- L. majora, crural fold, thighs thin easily; get striae
- At any suggestion of 2° candidal infection, use steroid along with topical antifungal drug
Vulvar Intraepithelial Neoplasia (VIN):
Prior to 2004

- Grading of VIN-1 through VIN-3, based upon degree of epithelial involvement
- The mnemonic of the 4 P’s
  - Papule formation: raised lesion (erosion also possible, but much less common)
  - Pruritic: itching is prominent
  - “Patriotic”: red, white, or blue (hyperpigmented)
  - Parakeratosis on microscopy

ISSVD 2004: Squamous VIN

- VIN 1 is not cancer precursor; abandon use of term
  - Instead, use “condyloma” or “flat wart”
- Combine VIN-2, VIN-3 into single “VIN” diagnosis
- Two distinct variants of VIN
  - VIN, usual type
    - Warty type
    - Basaloid type
    - Mixed warty-basaloid
  - VIN, differentiated (simplex) type

ISSVD 2004: VIN, Usual Type

- Includes (old) VIN -2 or -3
- Usually HPV-related (mainly type 16)
- More common in younger women (30s-40s)
- Often asymptomatic
- Lesions usually elevated and have a rough surface, although flat lesions can be seen
- Often multifocal (incl periurethral and perianal areas) and multicentric in 50%
- Strongly associated with cigarette smoking
- Regression is less likely and progression to invasion more likely with the basaloid type

VIN, usual: warty type
VIN, usual: basaloid type

VIN, usual warty-basaloid type

VIN, Differentiated (Simplex) Type

- Includes (old) VIN 3 only
- Not HPV related
- Usually in older women with LS, LSC, or LP
- Less common than usual type
- Patients usually symptomatic, with long history of pruritus and burning
- Findings
  - Red, pink, or white papule; rough or eroded surfaces
  - A persistent, non-healing ulcer
- More likely to progress to SCC of vulva than warty-basaloid type
**Vulvar Intraepithelial Neoplasia**

- Precursor to vulvar cancer, but low “hit rate”
  - Greater risk of invasion if immunocompromised (steroids, HIV), >40 years old, previous lower genital tract neoplasia
- Treatment
  - Wide local excision (few lesions), laser ablation
  - Topical agents: 5FU cream, imiquimod
  - Skinning or simple vulvectomy
- Recurrence is common (48% at 15 years)
  - Smoking cessation may reduce recurrence rate

**Leukoderma**

- Lack of pigmentation in scarred area from trauma or ulceration
- Most commonly seen after herpetic and syphylitic ulcers
- No family history, as with albinism or vitiligo
- No biopsy or treatment necessary

**Vitiligo or Lichen Sclerosus?**
Vitiligo

Genital Skin: Dark Lesions (% are in women only)

- 36% Lentigo, benign genital melanosis
- 22% VIN
- 21% Nevi (mole)
- 10% Reactive hyperpigmentation (scarring)
- 5% Seborrheic keratosis
- 2% Malignant melanoma
- 1% Basal cell or squamous cell carcinoma

VIN usual; warty type

VIN usual; warty/basaloid type
Vulvar Melanoma: ABCDE Rule

A: Asymmetry
B: Border Irregularities
C: Color black or multicolored
D: Diameter larger than 6 mm
E: Evolution
  ▪ Any change in mole should arouse suspicion
  ▪ Biopsy mandatory when melanoma is a possibility
Nodular Melanoma

Genital Ulcers

- Infections
  - Herpes simplex
  - Syphilis (chancre)
  - Chancroid

- Inflammatory
  - Lichen planus
  - Crohn’s disease
  - Behcet’s disease
  - Fixed drug eruption
  - Pemphigus/ Pemphigoid

- Neoplastic
  - Squamous cell carcinoma
  - Basal cell carcinoma

Lichen Planus

- Classic form
  - Purple, well-demarcated, flat topped papules on oral, genital tissues

- Erosive form
  - Erythematous erosive lesions on vestibule or in vagina
  - Vulvar burning or pruritus

- DDX: Behcet’s syndrome, syphilis, herpes, chancroid

- DX: biopsy essential
Lichen planus: Oral lesion

Lichen Planus: Treatment
- No one satisfactory treatment exists
- Emollients, vulvar care; treat superinfection
- Vulva: clobetasol ointment with taper
- Vagina: Anusol HC 25 mg supp; ½-1 supp PV BID x4 weeks, then taper
- Short course of oral steroids if necessary
- Vaginal dilators to prevent scarring
- Other Rx: Tacrolimus 0.1% (Protopic) BID, Acitretin, methotrexate, Dapsone

Crohn’s Disease
- Vulvar ulcers may precede bowel lesions by many years
- Presentations
  - Knife cut ulcers on vulva
  - GI-cutaneous fistulae
    » Entero-vaginal
    » Recto-perineal
  - Oral ulcers often present
- Bx: sarcoid-like granulomas, sometimes eosinophilia
- If suspected, refer patient for colonoscopy to confirm diagnosis

Behçet’s Disease
- Criteria
  - Major: Relapsing oral and genital ulcerations with ocular inflammation (iritis)
  - Minor: arthritis, thrombophlebitis, acneform eruption or erythema nodosum
- Autoimmune condition; may occur with Crohn’s
- Oral: apthous ulcers of lips, tongue, gums, palate
- Vulva: usually deep, tender ulcers
- Diagnosis
  - Bx: chronic inflammation, vasculitis
- Treatment: controversial; refer to dermatologist

Vulvar ulcers may precede bowel lesions by many years
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Behcet’s Disease

Fixed Drug Eruption
- Reappears at same site with each rechallenge
- Individual lesion-iris or target, which blisters, then erodes leaving a shallow, unilocular, wide ulcer
- Oral Mucosa, genitalia (2% of GUD)
- Residual hyperpigmentation
- Causes: NSAIDs, laxatives, SMT/TMP

Fixed Drug Eruption
- Reappears at same site with each rechallenge
- Individual lesion-iris or target, which blisters, then erodes leaving a shallow, unilocular, wide ulcer
- Oral mucosa, genitalia (2% of genital ulcer disease)
- Residual hyperpigmentation
- Common drug triggers
  - TMP/SMX
  - NSAIDs
  - Laxatives
Genital Ulcers: Evaluation

- **Syphilis**
  - VDRL or RPR
- **Chancroid**
  - Test for *H. ducreyi* (culture, PCR, DNA)
- **Herpes simplex**
  - Early lesion: HSV culture, PCR, or DFA
  - Late lesion: DFA or cytology
  - Type-specific HSV serology
- Biopsy if lichen planus, Bechet’s Dz, or Crohn’s suspected
- Presumptively treat for “best guess” or syphilis + chancroid

Indications for Vulvar Biopsy

- Papular or exophytic lesions, except genital warts
- Thickened lesions (biopsy thickest region) to differentiate VIN vs. LSC
- Hyperpigmented lesions (biopsy darkest area), unless obvious nevus or lentigo
- Ulcerative lesions (biopsy at edge), unless obvious herpes, syphilis or chancroid
- Lesions that don’t respond or worsen with treatment
- *In summary*: biopsy whenever diagnosis is uncertain

Tips for Vulvar Biopsies

- Where to biopsy
  - Homogeneous: one biopsy in center of lesion
  - Heterogeneous: biopsy each different lesions
- Skin local anesthesia
  - Most lesions will require ½ cc. lidocaine or less
  - Epinephrine will delay onset, but longer duration
  - Use smallest, sharpest needle: *insulin syringe*
  - Inject anesthetic s-l-o-w-l-y
- Alternative: 4% liposomal lidocaine (30 minutes) or EMLA (60 minutes) pre-op

- Stretch skin *perpendicular* to skin folds
- Twist Keyes punch back-and-forth until it “gives” into fat layer
Tips for Vulvar Biopsies

- Lift circle with forceps or needle; snip base
- Hemostasis with AgNO3 stick or Monsel's
- Separate pathology container for each area biopsied

Endometrial Cancer: Epidemiology

- 4th most common female cancer
- Most common female genital tract cancer
  - 2000: 36,100 new cases in US; 6,500 deaths
- 5 year survival (86-93): 86% white; 55% Af-Am
- Bimodal age distribution
  - Menopausal women (mean = 61 y.o.)
  - Pre- and peri-menopausal chronic anovulators
- Developing countries (+ Japan) have rates 4-5x less than developed countries; increased in high SES

Endometrial Cancer

<table>
<thead>
<tr>
<th>Type I</th>
<th>Type II</th>
</tr>
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<tbody>
<tr>
<td>- Low grade</td>
<td>- Aggressive</td>
</tr>
<tr>
<td>- Estrogen related</td>
<td>- Unrelated to estrogen</td>
</tr>
<tr>
<td>- Perimenopausal</td>
<td>- Older &amp; thinner women</td>
</tr>
<tr>
<td>- Exogenous estrogen</td>
<td>- Potential genetic basis</td>
</tr>
<tr>
<td>- Younger and heavier patients</td>
<td>» Lynch syndrome</td>
</tr>
<tr>
<td></td>
<td>» Familial trend</td>
</tr>
</tbody>
</table>

Endometrial Cancer: Risk Factors

- Age: peak incidence 72 years old
  - 3x higher than 50-54 years old
- Chronic unopposed estrogen exposure
  - Related to E-level and duration of exposure
  - High body mass index (BMI)...obesity b
  - Menopause >52 y.o. (2.4x); low parity (2-3x)
  - E- secreting tumor (granulosa-theca tumor)
  - Exogenous sources: ET, tamoxifen
  - Chronic anovulation (PCOS)
**Endometrial Cancer: Risk Factors**

- Diabetes (RR= 2.8)
- Hypertension (RR= 1.5)
- Personal or family history of breast or colon cancer
- HNPCC (Hereditary Non-Polyposis Colon Cancer) – 5% of all endometrial cancers
- HNPCC women have 22-50% lifetime risk of endometrial cancer
- ACS endometrial cancer screening guidelines (2001)
  - Annual EMB starting at 35 years old
  - Prophylactic hysterectomy and BSO after childbearing

**Screening for Endometrial Cancer**

- **Routine screening** not recommended for
  - Asymptomatic peri- or postmenopausal women
  - Asymptomatic chronic anovulation
  - Women initiating menopausal hormone therapy
- **Testing** for endometrial cancer is indicated for
  - Post-menopausal bleeding or pyometra
  - Endometrial cells on Pap (postmenopause)
  - Menometrorrhagia in chronic oligo-anovulator
  - Intermenstrual bleeding in perimenopause

**Screening Tamoxifen Users for Endometrial Cancer**

- Tamoxifen **may be** a weak promoter of endometrial cancer
  - RR= 0.5-15; most studies have significant biases
  - Greater risk of endometrial cancer if breast cancer present
- Endometrial changes in tamoxifen users
  - PM users often have thickened endometrium (x=6-7 mm)
  - May be stromal; high rate of false positive vaginal UTZ
- Most **do not support** screening asymptomatic women
- All articles recommend testing those with post-menopausal bleeding

**Postmenopausal Bleeding: Differential Diagnosis**

- Exogenous estrogens
  - HT (therapy formerly known as HRT)
- Endogenous estrogens
  - Acute stress
  - Estrogen-secreting ovarian tumor
- Atrophic vaginitis
- Endometrial hypoplasia (atrophy)
- Endometrial hyperplasia/adenocarcinoma
- Uterine corpus sarcoma
Postmenopausal Bleeding: Evaluation

- If not using HT, endometrial evaluation is required by either
  - Endometrial biopsy (EMB), or
  - Endovaginal ultrasound (normal stripe is < 5 mm)
- If using HT, EMB to evaluate
  - CC-EPT: persistent bleeding for more than 3 months after HT initiation
  - CS-EPT: persistent unscheduled bleeding

Ultrasound Diagnosis of Endometrial Hyperplasia

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Endometrial Stripe Thickness</th>
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<tbody>
<tr>
<td>N=250</td>
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<tr>
<td>Atrophy</td>
<td>&lt;5mm 6-10mm 11-15mm &gt;15mm</td>
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<tr>
<td>Hyperplasia</td>
<td>93% 7% 58% 42%</td>
</tr>
<tr>
<td>Polyp</td>
<td>53% 47%</td>
</tr>
<tr>
<td>Cancer</td>
<td>18% 41% 41%</td>
</tr>
</tbody>
</table>

Grigoriou: Maturitus 23:9-14,1996

Who Needs an EMB?

- Purpose: detect endometrial hyperplasia or cancer
- Menopausal woman
  - Any postmenopausal bleeding, if not using HT
  - Unscheduled bleeding on continuous-sequential hormone therapy
  - Bleeding > 3 mo after start of continuous-combined hormone therapy
  - Endometrial stripe > 5 mm (applies to postmenopausal woman only)
  - Pap smear: any endometrial cells or AGC Pap

Who Needs an EMB?

Premenopausal Women
- Prolonged metrorrhagia
- Unexplained post-coital or intermenstrual bleeding
- Endometrial cells on Pap smear in anovulatory premenopausal woman
- AGC Pap
  - Abnormal endometrial cells
  - Older than 35 years old
  - < 35 yo with abnormal bleeding
Technique of EMB

- Bimanual exam to evaluate uterine axis, size
- Cleanse cervix with antiseptic
- S-l-o-w-l-y apply tenaculum (± local anesthetic)
- Use of the sampling device
  - Choose correct type (rigidity) of sampler
  - “Crack” stylet to ensure easy movement
  - Gently advance to fundus; expect resistance at internal os
  - Note depth of sounding with side markings
  - Pull back stylet to establish vacuum

Technique of EMB (continued)

- Use of sampling device
  - Rotate sampler from fundus toward cervix (as spiral or helix) until removed
  - If little tissue on first pass, repeat 2-3 more times
  - Extrude sample(s) into fixative, but avoid contaminating sampler tip until last pass complete
  - On last pass, use in-out motion to check for “gritty” sensation to confirm uterine location
- Remove all instruments; check for cervical bleeding
- Ensure that medical record note references completeness of procedure and depth of sounding

Tips for Internal Os Stenosis

- Pain relief
  - Use para-cervical or intra-cervical block
  - Intrauterine instillation of lidocaine
- Cervical dilation
  - Freeze endometrial sampler to increase rigidity
  - Grasp sampler with sponge forceps 3-4 cm from tip
  - Use cervical “os finder” device
  - Use small size Pratt or Hegar dilators
  - Give vaginal misoprostol to soften cervix 4 hours before procedure
**Interpretation of EMB Result**

**Pre-menopausal women**
- Proliferative: E-induced growth, but no ovulation
- Secretory: ovulatory or recent progestin exposure
- Menstrual: glandular breakdown, non-neoplastic
- Disordered: out-of-phase glands (often anovulation)
- Endometrial polyp
- Simple hyperplasia: gland proliferation, no atypia
- Atypical hyperplasia: nuclear atypia in glands
- Endometrial carcinoma: glandular stromal invasion

**Menopausal women**
- Insufficient: not enough tissue for interpretation
  - If adequate sampling, atrophic endometrium likely
  - If sounding <5 cm, may not have entered cavity
- Atrophic: hypoplastic glands and stroma
- Cystic hyperplasia: hypoplastic glands and stroma
- Simple hyperplasia: gland proliferation, no atypia
- Atypical hyperplasia: nuclear atypia in glands
- Endometrial carcinoma: glandular stromal invasion

**Postmenopausal Bleeding: Management**
- Therapy is tailored to the site of bleeding
  - Atrophic vaginitis: topical estrogen
  - Endometrial atrophy: cyclic or continuous HT
  - Endometrial hyperplasia: continuous progestin for 3-4 months, then re-biopsy
  - Atypical hyperplasia: hysterectomy
  - Endometrial cancer: hysterectomy + XRT

**Bartholin Duct (BD) and Gland (BG)**
- Bartholin duct and gland at 5, 7 o’clock cephalad (deep) to hymeneal ring
- Makes serous secretion to “lubricate” introitus
- If BD is transected or blocked, fluid accumulates
  - Non-infected: BD cyst
  - Infected: BD abscess or BG cellulitis
- All surgical treatments are designed to drain fluid and create a new duct
**Bartholin Gland: Infectious Conditions**

- **Bartholin gland cellulitis**
  - Painful red induration of lateral perineum at 5 or 7 o’clock, but no palpable abscess
  - Most commonly due to skin streptococcus
  - Treatment: oral cephalosporin, moist heat
  - Will either resolve or point as abscess
  - Admit immunocompromised women (especially diabetics) for IV antibiotics and close observation
    » May develop necrotizing fasciitis

- **Bartholin gland abscess**
  - Usually due to Staph, but may contain anaerobes
  - Fluctuent painful abscess; if uncertain, needle aspiration will confirm pus
  - Treatment: I&D, then insert Word catheter for 6 weeks
  - Antibiotics usually not needed, unless
    » Cellulitis (cephalosporin)
    » Anaerobic smell with drainage (metronidazole)

**Bartholin Duct: Infectious Conditions**

- **Bartholin duct abscess**
  - Usually due to Staph, but may contain anaerobes
  - Fluctuent painful abscess; if uncertain, needle aspiration will confirm pus
  - Treatment: I&D, then insert Word catheter for 6 weeks
  - Antibiotics usually not needed, unless
    » Cellulitis (cephalosporin)
    » Anaerobic smell with drainage (metronidazole)

**Bartholin Duct Abscess: I&D**

- Retract abscess laterally to select incision site… inside the hymeneal ring if possible
- Inject 3 cc. lidocaine
- 1 cm incision with #15 blade perpendicular to abscess
- Lyse loculations with clamp; irrigate with saline
- Insert Word catheter; inflate until snug fit
- Tuck nipple into vagina
- Follow-up in 4-6 weeks for removal

**BD Abscess: I&D**

- Retract abscess laterally to select incision site… inside the hymeneal ring if possible
- Inject 3 cc. lidocaine
- 1 cm incision with #15 blade perpendicular to abscess
- Lyse loculations with clamp
- Irrigate cavity with saline
- Insert Word catheter; inflate until snug fit in abscess cavity
- Tuck nipple into vagina
Bartholin Duct: Non Infectious

- **Bartholin duct cyst**
  - Nontender cystic mass
  - Treat only if symptomatic or recurrent
  - Tx: marsupialize or insert Word catheter x 6 weeks
- **Bartholin duct carcinoma**
  - Most common in women over 40
  - Can be adenoca, transitional cell, or squamous cell
  - Firm non-tender mass in region of Bartholin gland
  - Suspect if recurrent BD cyst or abcess with firm base after drainage

“Politically Correct” Terminology

Old name
- IUD: Intrauterine Device

New names
- IUC: Intrauterine Contraception
- IUS: Intrauterine System
  - applied to Levonorgestrel IUD/IUC/IUS

Intrauterine Contraception in the U.S.

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Copper</th>
<th>LNG-IUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>10 years</td>
<td>5 years</td>
</tr>
<tr>
<td>Efficacy (typ)</td>
<td>0.8 failures/hwy</td>
<td>0.1 failures/hwy</td>
</tr>
<tr>
<td>Benefit</td>
<td>No hormones</td>
<td>Less bleeding</td>
</tr>
</tbody>
</table>
| Non contra-ceptive uses | None | Menorrhagia
  - Endometriosis |
| Cost        | Less expensive | More expensive |
**Indications for IUC Use**

*Both IUC products*
- Long term contraception in fertile women

*LNG-IUS specific indications*
- Long term endometrial suppression
  - Fibroids; heavy periods without explanation
  - Endometriosis, adenomyosis, dysmenorrhea
  - Ovaries removed, but uterus in place
- Post-menopausal women with uterus
  - Permits use of estrogen-only HT regimens

*WHO-MEC for IUD Use*
- Menarche to age 20: WHO-2
- Age 20 and older: WHO-1
- Nulliparity: WHO-2
- Parous: WHO-1

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**Candidates for IUCs**

*Copper T IUC*
- Good method for women who don’t want hormonal contraception

*LNG IUS*
- Good method for women who request less menstrual flow or who experience dysmenorrhea

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**Pre-IUC Insertion Screening**

- Evidence supports *no* routine screening tests
  - Ct, GC: if high risk sexual behaviors or <26 yo and annual screening Ct not performed
  - Pregnancy test: only if pregnancy suspected
  - Pap smear: only if due for a routine Pap
  - Hematocrit: only if anemia suspected
- Any indicated screening test can be done on the day of IUC insertion
**Pre-Insertion Guidelines**

- Prophylactic antibiotics
  - No value based on randomized clinical trials
- Premedication
  - NSAID 1 hour before; cervical block if stenotic
- Timing of insertion
  - Copper: anytime, “as long as not pregnant”
  - LNG-IUS: insertion recommended by day 7
  - Back-up method if “off-cycle” insertion
- May insert after delivery or abortion, but slightly higher expulsion rate

**Timing of Insertion of Intrauterine Contraception**

<table>
<thead>
<tr>
<th>Timing</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>With menses</td>
<td>Ensures patient not pregnant</td>
<td>Scheduling; interim pregnancy</td>
</tr>
<tr>
<td>Midcycle anytime</td>
<td>Convenience; low rate of expulsion</td>
<td>Must rule out pregnancy</td>
</tr>
<tr>
<td>Emergency contraception (copper T IUD)</td>
<td>Convenience; pregnancy prevention</td>
<td>Pregnancy</td>
</tr>
</tbody>
</table>

**Post-IUC Insertion Counseling**

- Post-insertion visit is optional
  - Only value is to detect “asymptomatic” expulsion
- Patient should call the office afterward if
  - String cannot be located
  - Menstrual bleeding is more than pre-insertion pattern or duration
  - Symptoms suggesting pregnancy occur
  - Sudden unexplained pelvic pain occurs

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*Alvarez PJ, Ginecol Obstet Mex. 1994.*

**IUCs: Purchase and Record Keeping**

- LNG-IUS devices that are shipped under less-than-optimal controlled conditions may not maintain their stability or provide appropriate LNG release rates
  - IUCs must be FDA-approved devices, labeled for US use, and obtained from FDA approved distributors
- Providers should record the lot number in the medical record and keep a written or electronic log of all IUCs inserted for at least 3 years from insertion
- Patients should be provided with a record of the dates of insertion and expiration

**Steps for Insertion: Technique Varies According to Product**

1. Pelvic exam: assess uterus size & position
2. Apply tenaculum
3. Sound the uterus
4. Load the device
5. Place the device
6. Cut the threads

**Steps for IUC Insertion**

- Perform bimanual pelvic exam to determine anterior or retro-flexion
- Inspect cervix for mucopus
- Cleanse cervix with antiseptic
- "No-touch" technique is preferred; sterile gloves are unnecessary
  - Both LNG-IUS and Copper IUC can be loaded without touching the devices
  - Do not touch portion of sound that will pass through cervix

**Steps for IUC Insertion**

- *Routine vs. selective local anesthetic injection at tenaculum site*
- Apply a single tooth tenaculum
  - Horizontal or vertical application
  - Anterior or posterior lip of cervix
  - Hold hand in palm-up position
  - "Squeeze" ratchet closed to first clasp; avoid abrupt "snap"
- *Routine vs. selective use of cervical block*
Steps for IUC Insertion

- Sound the uterus
  - Purposes
    - Determine the “pathway” to the fundus
    - Preliminary dilation of the internal os
    - Establish depth to fundus to set flange
    - Ensure depth within 6-10 cm limits
  - Bend sound to mimic uterine flexion
  - Brace fingertips on speculum to achieve control of force while advancing the sound
  - EMS* device can be used instead of metal sound

EMS*: endometrial sampling

Open the IUC package after sounding is completed
- Load the IUC into the inserter
- Insert the IUC into the uterus according to manufacturer’s instructions (see package inserts)
- Remove tenaculum
- Trim strings at most horizontal angle possible (to avoid puncture of partner’s penis)
- If concerns regarding location of IUC placement, palpate external os or perform pelvic ultrasound

Uncomplicated IUC Removal

- Indications
  - Patient desires pregnancy
  - Expiration date reached
  - Unacceptable side effects
  - Failure (pregnancy)
- Menopause
  - Strings seen: remove
  - No strings: weigh benefit vs. hazard of removal
  - Tail-less IUC (e.g., stainless steel coil ring) does not require removal unless requested by patient

IUD Insertion: Tricks of the Trade

For women with narrow cervical canal
  - Prime cervix with misoprostol 400 mcg a few hours before insertion
For pain management
  - Oral NSAID 400 mg PO and/or
  - Instill lidocaine in uterine cavity with an endometrial sampler
  - The sampler can be used instead of sound to measure depth of uterus

more...
IUD Insertion: Tricks of the Trade
A Clinical Update on Intrauterine Contraception @arhp.org

- To visualize cervix
  - Use large speculum
  - If vaginal walls obscure cervix, cut off end of condom and slip over metal speculum
  - Get better light

- Reduce expulsion rate by waiting for strings to be released from cleft before withdrawal

What Should I Do if the LNG-IUS Isn’t at the Fundus?

- There can be significant migration of the LNG-IUS within the uterine cavity
- Fundal placement insures that the tail strings will be long enough to remove the device
- A device that settles within the lower uterine segment is still effective
- Removal of the device is necessary only if
  - A portion of it protrudes from the cervix, or
  - There is excessive cramping with a low-lying IUS

Intervention Steps in the “Difficult IUC Insertion”

- Use greater outward traction on the tenaculum to minimize canal-to-endometrial cavity angulation
- Use os finder device, if available
- Place paracervical or intracervical block to relax cervical smooth muscle and reduce pain
- Dilate internal os with Pratt dilators to #13F (4.1 mm)
- If unsuccessful, return at a later date with use of misoprostol cervical priming
Os Finder

Cervical Os Finders (Disposable Box/25) $49.00
Cervical Os Finder Set (Reusable Set of 3) $69.00

Pratt Dilators

Paracervical Block

- Target is uterosacral ligaments
- Inject at reflection of cervico-vaginal epithelium
- 2 (5, 7 o’clock) or 4 sites (4, 5, 7, 8 o’clock) submucosally to depth of 5 mm
- Use spinal needle or 25g, 1 ½” needle + extender
- Moore-Graves (standard size, shorter length) speculum allows for more outward movement of cervix

Tips
- Start with ½-1 cc. at tenaculum site
- Disguise pain of needle insertion with cough
- WAIT 1-2 minutes for set up before procedure

Paracervical Block

7 o’clock

Paracervical Block

5 o’clock

Paracervical Block

6 o’clock
**Intra-cervical Block**

- Targets the paracervical nerve plexus
- 1 ½ inch 25g needle with 12 cc “finger lock” syringe
- Inject ½-1 cc local anesthetic at 12 o’clock, then apply tenaculum
- Angulate needle at the hub to 45° lateral direction
- At 3 or 9, insert needle into cervix to the hub 1 cm lateral to external os, aspirate
- Inject 4 cc of local, then last 1 cc while withdrawing
- Rotate barrel 180°, then inject opposite side

**Intracervical Block**

- 9 o’clock
- 3 o’clock
- 7 o’clock
- 5 o’clock
- 6 o’clock

**Misoprostol for IUC Insertion**

- 80 nulliparas treated 1 hour prior to IUD insertion
  - Misoprostol 400 mcg SL and diclofenac 100 mg
  - Diclofenac 100 mg PO alone (control group)

**Findings**
- Insertion easier with misoprostol than control group
- Pain scores no different in the two groups
- Most side effects equal
  » Shivering, diarrhea more common in misoprostol group

**Saav I et. al., Human Reproduction 2007; 22, (10): 2647**

**Table 2: Difficulty of IUD insertion, as estimated by the inserter**

<table>
<thead>
<tr>
<th>Difficulty of insertion</th>
<th>Misoprostol group, n = 39 (%)</th>
<th>Control group, n = 40 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>29 (74.4)</td>
<td>22 (55.0)</td>
</tr>
<tr>
<td>Intermediate or difficult</td>
<td>10 (25.6)</td>
<td>18 (45.0)</td>
</tr>
</tbody>
</table>

*P = 0.039; Fisher’s Exact test, mid-P-value. Degrees of freedom = 1.*

**Conclusion**
- Misoprostol facilitates IUD insertion and reduces the number of difficult and failed attempts of insertions in women with a narrow cervical canal
**Missing IUC String: Diagnosis**

- Possibilities…
  - Expulsion, pregnancy, embedment, translocation
- Initial management
  - Probe for strings in cervical canal
    - Cytology brush to tease from canal
    - Endocervical speculum or forceps
  - Rule out pregnancy
  - Prescribe back-up contraceptive method until intrauterine location is confirmed

**Missing IUC String: Management**

- No IUC string in canal
- Pregnancy test negative

Desires removal

\[\begin{align*}
\text{Desires retention} &\quad \text{UTZ} \quad \text{OR} \\
\text{KUB} &\quad \text{UTZ} \\
\text{In Situ} &\quad \text{Absent} \\
\text{In Situ} &\quad \text{Present}
\end{align*}\]

- Initial management

  \[\begin{align*}
  \text{Probe for strings in cervical canal} \\
  \text{Cytology brush to tease from canal} \\
  \text{Endocervical speculum or forceps}
  \end{align*}\]

- Rule out pregnancy

**Missing IUC String: Treatment**

- In situ (intrauterine) placement: desires continuation
  - Leave in place for remainder of IUC lifespan
  - Option: annual pelvic ultrasound in lieu of string check
- Translocation (IUC in peritoneal cavity)
  - Since copper IUC may cause more adhesions, must extract via operative laparoscopy
  - LNG-IUS is less reactive, but most experts recommend laparoscopic removal

**Missing IUC String: Treatment**

- In situ placement; desires removal
  - Attempt extraction with small “polyp” or “alligator” forceps, ± simultaneous real time pelvic ultrasound
  - Crochet hook best for circular IUCs; less helpful with T-shaped IUCs
  - If unsuccessful, suspect embedment and extract via operative hysteroscopy