Update in Cytology Reporting: Cases Highlighting Bethesda 2001

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TBS 2001: Reporting “ASC”

- ASC: cytological changes suggestive of an intraepithelial lesion that are qualitatively or quantitatively insufficient to render a definitive interpretation
- ASC-US (undetermined significance)
- ASC-H (cannot exclude HSIL)

HPV testing: Impact of ALT

"ASCUS — "L"SIL "T"riage "S"tudy

...for all women with ASCUS, HPV testing identified virtually all (99.6%) with underlying abnormalities needing attention
Case Scenario One: ASC-H

- 55yo post-menopausal female x5yrs
  - No HT
  - Routine annual HME
- PAP Smear
  - ASC, cannot exclude HSIL
    - Reflex HPV-DNA, negative

Next step?
- Colposcopic Examination
- Thin, erythematous
- No acetowhite changes
- T-Z?
  - Nowhere to be seen
Assessment: generalized atrophy

Why the “H”?
- Decreased E2
- Less maturation of squamous epithelium
- Shift in maturation index
- Parabasal cells may mimic HSIL

What else should be done?
- ECC? (optional)
- Have the cytology reviewed
- Second opinion
- Intravaginal estrogen, repeat cytology
- Repeat cytology +/- HPV testing
ECC in Cervical Stenosis/Atrophy

Submit sample in formalin.

Case One: Post-menopausal ASC-H

- Follow-up
  - Cytology remains ASC, HPV negative
    - Over and over and over...
  - Then what?!
    - Colposcopy
      - How often?
    - Cytology screening
      - How often?

Case Scenario Two

- 30 year old gravida 3 para 2002
- 24 weeks gestation
- PAP: ASC-US
- Reflex HPV
  - Positive for high/intermediate risk subtypes
- No history of sexually transmitted disease
Case Two: ASC-US in Pregnancy

Things to consider
- Exam can be limited
- Unique Findings
- To biopsy or not to biopsy... that is the question!

Cervical Changes in Pregnancy
- Estrogen-induced connective tissue proliferation
- Increased cervical edema
- Increased vascularity
  - Uterine blood flow at term = 500-650 ml/min
- Endocervical gland hypertrophy and hyperplasia
  - Marked eversion of the transformation zone (TZ)
- Stromal decidualization
Pregnancy Effects on Colposcopy

- immature squamous metaplasia
- increased vascularity
- decidualization
- vascular + decidual vessels

→ prominent acetowhite mosaic
→ confusing angioarchitecture
→ altered contour of the TZ
→ mimics invasive carcinoma

Decidual Changes

- Diffuse, Cervical
- Diffuse, Vaginal

Why Worry About These Patients?

- Provider Issues:
  - risk of accelerated growth
  - theoretical "immune compromise"
  - not substantiated in the literature
  - medicolegal
  - primum non nocere

Abnormal Cervical Cytology in Pregnancy: Historical

- 1950's: Conization for repeated "dyskaryosis"
- 1960's: Random Four Quadrant Biopsy
- 1970's: Colposcopically Directed Cervical Biopsy
- 1980's: HPV and The Bethesda System
**Cervical Neoplasia in Pregnancy: In Perspective**

*Obstet Gynecol 59:735, 1982*
- In-situ carcinoma: 1 per 770 pregnancies
- Invasive carcinoma: 1 per 2200 pregnancies

*Semin Oncol 16:417, 1989*
- Dysplasia (all types): 1 per 40 pregnancies
- In-situ carcinoma: 1 per 210 pregnancies

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**Colposcopy in Pregnancy**

- Large Graves speculum
- Vaginal sidewall retractors
- Lots of Acetic Acid (3-5%)
- Consult

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**Algorithm for Colposcopy in Pregnancy**

- NOT Suspicious for Invasive Carcinoma
- Abnormal Antepartum Colposcopy (lesions noted)
- Suspicious for Invasive Carcinoma
- Colpo Assessment Only
- Colpo-Directed Brush Cytology
- Colpo-Directed Biopsy of "Worst" Lesion
- Colpo-Directed Biopsy

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**Directed Brush Technique**

- Bend Brush 30-45°
- Cytobrush®
Colposcopy in Pregnancy

- Biopsy only if Cancer Suspected
- Be prepared for bleeding
- ...my opinion

Clinical Correlation

Colpo: HSIL severe

LSIL
Features suggest HSIL-moderate

Colpo: HSIL moderate (to severe)

HSIL moderate


to severe

HSIL (moderate-severe)

Clincial Correlation

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HSIL (severe/CIS)

HSIL

HSIL

LSIL

Update in Cytology Reporting
Colposcopy in Pregnancy

- How often?
  - It depends...
- Follow-up
  - Cytology only vs.
  - Colposcopy at post-partum

Diagnosis of Cancer

Current Perspective

Goal of Cervical Biopsy in Pregnancy

Potential Bleeding Risk of Cervical Biopsy in Pregnancy

Thank you!


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