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 ALTS

“A”SCUS — “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

Case One: Post-menopausal ASC-H

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

Assessment: generalized atrophy

Case One: Post-menopausal ASC-H

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

Case One: Post-menopausal ASC-H

- 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 sq. metaplasia ➔ prominent acetowhite Δ’s mosaic
- increased vascularity ➔ confusing angioarchitecture
- decidualization ➔ altered contour of the TZ
- vascular + decidual Δ’s ➔ 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

**Colposcopy in Pregnancy**
- large Graves speculum
- vaginal sidewall retractors
- lots of Acetic Acid (3-5%)
- consult

**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

**Directed Brush Technique**

- 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)

HSIL moderate (to severe)

Colpo: HSIL-moderate

HSIL (severe/CIS)

HSIL (moderate-severe)
Colposcopy in Pregnancy

- How often?
  - It depends...

- Follow-up
  - Cytology only vs.
  - Colposcopy at post-partum

Thank you!


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