THE SPECTRUM OF ENDOCERVICAL GLANDULAR LESIONS: FROM MIMICS TO MALIGNANCIES

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SQUAMOCOLUMNAR JUNCTION

ADENOCARCINOMA IN SITU, ENDOCERVICAL TYPE
ADENOCARCINOMA IN SITU, ENDOCERVICAL TYPE

ECX AIS CAN BE ORGANOID WITH SMALL INNOCUOUS GLANDS
MITOTIC FIGURES AND APOPTOSIS IN ENDOCERVICAL AIS: GOTTA HAVE 'EM

Apoptotic bodies: a consistent morphologic feature of endocervical adenocarcinoma in situ. Biscotti CV, Hart WR.

ARTIFACTS

"SQUEEZE DISEASE" 22 YOF AGUS PAP

AIS EXTENSIVE
THERMAL ARTIFACT ON CONES: “HOW ‘BOUT THOSE MARGINS?”

LEEP CONE MARGIN

THE LEPP
LEEP PROCEDURE

LEEP CONE MARGIN

PRECURSORS?

CONSULT: ENDOCERVICAL GLANDULAR LESION?
**ENDOCERVICAL GLANDULAR ATYPIA OR HYPERPLASIA?**

- Ki67 proliferation marker
- CEA
- Mitotic activity & apoptotic-like lymphocytes

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**HOW DO YOU PIGEONHOLE THIS TYPE OF ENDOCERVICAL GLAND OR IS THE PIGEON HOMELESS?**

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**ENDOCERVICAL AIS WITH 'DIFFERENTIATED' CYTOPLASM**

- 'Usual' AIS
IS THIS THE HIGH GRADE GLANDULAR INTRAEPITHELIAL LESION FORMERLY KNOWN AS ENDOCERVICAL GLANDULAR DYSPLASIA?

ADENOSQUAMOUS CARCINOMA IN SITU

TRANSITIONAL CELL METAPLASIA
• CAN MIMIC BOTH SQUAMOUS AND GLANDULAR LESIONS
• MAY BE MISTAKEN FOR MIXED SQUAMOUS AND GLANDULAR ILS (ADENOSQUAMOUS IN SITU)
PAPILLARY SQUAMOTRANSITIONAL CELL CARCINOMA

ADENOSQUAMOUS CARCINOMA IN SITU (STRATIFIED MUCIN PRODUCING INTRAEPITHELIAL LESION=SMILE)

GASTROINTESTINAL METAPLASIA AND NEOPLASIA OF THE CERVIX
ADENOCARCINOMA IN SITU, ENDOMETRIOID TYPE: PRECURSOR TO ENDOMETRIOID CERVICAL CARCINOMA?

ENDOMETRIOID AIS

ENDOMETRIOID CA

ENDOMETRICAL TUMOR

MIMICS OF AIS

CASE: IT STARTED WITH AN AGUS SMEAR...

67 YOF THINPREP

ENDOCERVICAL CTG CELL BLOCK
TUBO-ENDOMETRIOID METAPLASIA: A DIAGNOSTIC PITFALL IN ECCs

MAY GIVE RISE TO AGUS WORRISOME APPEARANCE ON CYTOLOGY, ECCs, AND BIOPSIES

CERVICAL ENDOMETRIOSIS: A MIMIC OF ENDOCERVICAL AIS


CERVICAL ENDOMETRIOSIS
CERVICAL ENDOMETRIOSIS
CONSULTATION: 38 YOF WITH AGUS FAVOR NEOPLASTIC PAP. BIOPSIES SIGNED OUT AS CHRONIC CERVICITIS.

TRANSITIONAL CELL LESIONS
OF THE UTERINE CERVIX

- TRANSITIONAL (UROTHELIAL) CELL METAPLASIA
- PAPILLARY SQUAMOTRANSITIONAL CELL CARCINOMA
- NUCLEAR GROOVES IN SIL/CINs
- INVERTED PAPILLOMA

THE BURGEONING LITERATURE:
HOW DO YOU FIND YOUR LESION?

- PUBMED SEARCH:
  - SEARCHED FOR “OVARIAN TUMORS”
  - 1995: 2127 ARTICLES
  - 2005: 6689 ARTICLES
  - YOUR LESION IS OFTEN HIDDEN IN THE TEXT
  - “PUBDUD”

“CLEAR CELL” CHANGE IN NORMAL TUBAL EPITHELIUM

“MIV”
EXPANSILE VS DESTRUCTIVE

CERVICAL AIS WITH EARLIEST FORM OF INVASION

“DESTRUCTIVE” TYPE OF EARLY INVASIVE ENDOCERVICAL ADENOCARCINOMA
“EXPANSILE” TYPE OF MIV ENDOCERVICAL ADENOCARCINOMA

- DIFFICULT TO DISTINGUISH FROM FLORID ADENOCARCINOMA IN SITU (UNDERSTATEMENT OF THE YEAR)
- MAY GROW AND INVADE IN A LOBULAR CONFIGURATION, EVEN DEEP IN THE CERVICAL WALL

AIS & ‘MICROINVASIVE’ CA

HOW MUCH CRIBRIFORM CHANGE IS ENOUGH TO CALL MICROINVASION?
IS THIS JUST AIS OR IS IT EARLY INVASION?

HOW DO YOU MEASURE A “MIV” ENDOCERVICAL ADENOCARCINOMA?

EARLY INVASIVE ENDOCERVICAL ADENOCARCINOMA

1. **MISDIAGNOSIS**
2. **EARLY INVASION**
3. **LATE INVASION**
4. **LYMPHATIC INVASION**

Significance of neoplastic atypicalities in endocervical epithelium.
J. Buccema and J.D. Woodruff, Gynecol Oncol, 1984.

*In contradistinction to CIS, the definition of AIS is rather arbitrary. Atypical proliferative lesions may be invasive because there are no concrete boundaries analogous to the epidermoid basement membrane that need to be traversed.*
DIFFERENTIAL DIAGNOSIS OF "ADENOMA MALIGNUM"

- FLORID ENDOCERVICAL TUNNEL CLUSTERS
- DEEP ENDOCERVICAL GLANDS AND NABOTHIAN CYSTS
- LOBULAR ENDOCERVICAL GLANDULAR HYPERPLASIA
- DIFFUSE LAMINAR EGH
- REACTIVE ENDOCERVICAL GLANDULAR ATYPIA
- ADENOMYOMA, ENDOCERVICAL TYPE
- ENDOCERVICOSIS

NORMAL CERVIX WITH NABOTHIAN CYSTS

Courtesy of Courtney Woodfield MD, Brown University
‘TUNNEL CLUSTERS’ AND ‘DEEP NABOTHIAN CYSTS’

DIAGNOSTIC IMAGING

SCS 12331

‘TUNNEL CLUSTERS’ AND ‘DEEP NABOTHIAN CYSTS’:
MIMICS OF ADENOMA MALIGNUM

TUNNEL CLUSTERS

DEEP NABOTHIAN CYSTS

ENDOCERVICAL HYPERPLASIA

DEEP MARGINS

“Tunnel Clusters” of the endocervix:
Radiologic Dx: R/O “Adenoma malignum”
LOBULAR ENDOCERVICAL HYPERPLASIA: A SET-UP FOR THE MISDIAGNOSIS OF ADENOMA MALIGNUM

- LEH OFTEN HAS GROSS APPEARANCE SUGGESTIVE OF TUMOR
- RARELY INVOLVES HALF CERVICAL WALL

LOBULAR ENDOCERVICAL GLANDULAR HYPERPLASIA: WORRISOME GROSS FINDINGS

Gross features of lobular endocervical glandular hyperplasia in comparison with minimal-deviation adenocarcinoma of the uterine cervix. Histopathology. 2008 Jul 5

LOBULAR ENDOCERVICAL GLANDULAR HYPERPLASIA WITH APOLOGIES
LOBULAR ENDOCERVICAL GLANDULAR HYPERLASIA

MUCINOUS ADENOCARCINOMA, GASTRIC TYPE
AKA
‘ADENOMA MALIGNUM’ OR MINIMAL DEVIATION ADENOCARCINOMA

ADENOMA MALIGNUM: “MINIMAL DEVIATION ADENOCARCINOMA”
When considering the diagnosis of adenoma malignum, look for unusual architectural configurations of the glands that are not typically seen in the normal endocervix.
ADENOMA MALIGNUM: IF YOU THINK IT MAY BE ADENOMA MALIGNUM, IT PROBABLY ISN’T

“ADENOMA MALIGNUM” IS A VERY RARE TUMOR: BE WARY OF MAKING THE DIAGNOSIS UNLESS YOU SEE VERY ATYPICAL GLANDS SOMEWHERE IN THE TUMOR

GASTRIC ADCA, CX (“ADENOMA MALIGNUM”)

DIFFERENTIAL DIAGNOSIS OF MICROGLANDULAR MISCHIEF

• MICROGLANDULAR (ENDOCERVICAL) HYPERPLASIA
• “ATYPICAL” MICROGLANDULAR HYPERPLASIA
• MICROGLANDULAR CLEAR CELL CARCINOMA
• MICROGLANDULAR MUCINOUS CARCINOMA OF ENDOMETRIUM
• MICROGLANDULAR “SURFACE EPITHELIAL CHANGES” OF ENDOMETRIOID CARCINOMA
TUMORS SIMULATING TUMORS THAT SIMULATE TUMORS
Atypical forms of microglandular hyperplasia of the cervix simulating carcinoma. A report of five cases and review of the literature

Uterine carcinomas simulating microglandular hyperplasia. A report of six cases

MICROGLANDULAR ENDOCERVICAL HYPERPLASIA
MGH ENDOCXR

ATYPICAL MICROGLANDULAR HYPERPLASIA:
A MIMIC OF CLEAR CELL CARCINOMA
CLEAR CELL CARCINOMA CERVIX
12 cm DEEPLY INV
ATYPICAL MGH
3 cm POLYP
ATYPICAL MICROGLANDULAR HYPERPLASIA

“Atypical forms of microglandular hyperplasia of the cervix simulating carcinoma. A report of five cases and review of the literature”

WOLFFIAN FAUNA IN THE CERVIX

“NORMAL” MESONEPHRIC REMNANTS
FLORID MESONEPHRIC HYPERPLASIA
MESONEPHRIC CARCINOMA
CONCENTRIC EXPANSION OF CERVICAL WALL

MIMICS CARCINOMA CLINICALLY AND GROSSLY

MESONEPHRIC HYPERPLASIA

MESONEPHRIC MISCHIEF

MESONEPHRIC HYPERPLASIA IS RARE, ESPECIALLY FLORID
MESONEPHRIC HYPERPLASIA
MESONEPHRIC HYPERPLASIAS ARE ORGANOID AND OFTEN LOBULAR, SITUATED AROUND A DUCT
MESONEPHRIC CARCINOMA IS EVEN MORE RARE

MESONEPHRIC CARCINOMA

RETE OVARI

OVARIAN HILUM
MESONEPHRIC CA CX

ECTOPIC PROSTATE IN THE UTERINE CERVIX

ADENOID BASAL “EPITHELIOMA”

- Usually an incidental finding in postmenopausal women
- No stromal reaction around glands
- No recurrences or deaths reported
- Probably not a carcinoma; I prefer dx of adenoid basal tumor accompanied by a pertinent comment

ADENOID BASAL EPITHELIOMA (L) AND ADENOSQUAMOUS CARCINOMA (R)

ADENOID BASAL TUMOR WITH SQUAMOUS METAPLASIA

71 YOF
ABE
ACC
BASALOID ADSS CA

SIMULATING SCC
RARE HISTOLOGIC TYPES OF CERVICAL CARCINOMA

- VILLOGLANDULAR ADENOCARCINOMA
- SEROUS PAPILLARY CARCINOMA
- SMALL CELL UNDIFFERENTIATED CARCINOMA

VILLOGLANDULAR ADENOCARCINOMA OF THE UTERINE CERVIX

Villoglandular adenocarcinoma of the cervix: two new cases with morphological and molecular study. Int J Gynecol Pathol. 2007

Both cases strongly positive for p16 by PCR and immunostudies

Well differentiated adenocarcinomas with HPV etiology

VILLOGLANDULAR CARCINOMA: NOT TO BE CONFUSED WITH SEROUS CARCINOMA

Elongate tapering villi with a GI architecture

No more than grade 2 nuclear atypia
SEROUS CARCINOMA OF THE UTERINE CERVIX

- Frequently but not invariably p53 positive
- Same histological pattern as endometrial serous carcinoma
- Usually high grade and requires adjunctive therapy

CERVICAL SEROUS CARCINOMA
36 YOF

ENDOMETRIAL SEROUS CARCINOMA WITH SEPARATE SEROUS IN SITU ENDOCERVICAL GLAND CHANGE: A "FIELD EFFECT" OF SEROUS NEOPLASIA

SEPARATE ENDOMETRIAL SEROUS INPILLARY CARCINOMA

NORMAL ECX GLAND WITH SEROUS CIS

GLASSY CELL CARCINOMA
SMALL CELL (NEUROENDOCRINE) CARCINOMA

31 YOF
HPV 18+

IMMUNOPositive
CHROMOGRAinan
& SYNAPTOPhYSIN

SMALL CELL NEUROENDOCRINE CARCINOMA, CERVIX

MAKING A DIAGNOSIS OF MALIGNANCY IN PREGNANCY

CAUTION
CAVEAT: IN PREGNANCY-RELATED LESIONS, THERE IS OFTEN A MISMATCH BETWEEN THE CLINICAL IMPRESSION AND THE PATHOLOGIC IMPRESSION

GIANT ENDOCERVICAL POLYP OF PREGNANCY

- Beware of making a diagnosis of malignancy in pregnancy
- Cells have a reactive/reparative appearance
- No mitotic activity
- Nuclei have smudged chromatin

CERVICAL ARIAS-STElla MIMICKING CLEAR CELL CARCINOMA

FINIS