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Vulvar Biopsy

60-year-old post-menopausal patient presents to her gynecologist relating that she has noticed a white patch (leukoplakia) that “recently” appeared in her genital area. It itches constantly. A biopsy is performed.
What is the differential diagnosis based upon her history?

- lichen sclerosis
- psoriasis
- squamous hyperplasia
- VIN
- squamous carcinoma
Clinical Photo: Lichen Sclerosus

Kraurosis vulvae
Lichen Sclerosus
Lichen Sclerosus
Lichen Sclerosus

- Pruritic white lesion
  - a.k.a. kraurosis vulvae, LS & A, senile vulvitis
  - primarily menopausal women
  - can occur at any age
- Etiology unknown
  - HLA predisposition
  - autoimmune?
Lichen Sclerosus: Histology

- Histologic triad:
  - epidermal thinning
  - collagenized upper dermis
  - “lichenoid” lymphocytic infiltrate
Cervix, Cone Biopsy

36-year-old with a PAP smear report of HSIL. She relates a history of “dysplasia” which was treated by cryotherapy (freezing the cervix). Attempts at colposcopy are deemed “inadequate” as the clinician is unable to see the transformation zone (T-Z) in its entirety. A cone biopsy was performed.
What HPV sub-types might be responsible for these lesions?

- HPV subtypes 16 or 18
  - HPV 16 - HSIL or CIN and SCCA
  - HPV 18 - ACIS
Colposcopic Photographs

Normal for Comparison

Source Undetermined (Both Images)
koilocytosis

G.D. Abrams, University of Michigan Medical School

LGSIL
HSIL (CIN 3)
Normal Endocervical Glands

ACIS

G.D. Abrams, University of Michigan Medical School (Both Images)
HSIL & ACIS - Key Histology

- **HSIL** (high-grade squamous intraepithelial lesion)
  - squamous (HPV 16)
    - partial to full thickness loss of maturation
  - mitotic figures

- **LSIL** (low grade squamous intraepithelial lesion)
  - koilocytosis, viral cytopathic effect of HPV

- **ACIS** (adenocarcinoma in-situ) – HPV 18
  - loss of mucin, high N/C ratios
  - apoptosis (individual cell death)
  - architectural complexity (cribriforming)
Uterus, Endometrial Biopsy

48-year-old on Megace (medroxyprogesterone acetate) for endometrial hyperplasia. A follow-up endometrial biopsy was performed to assess her treatment status.
What other medications might also explain the findings seen in this slide?
- exogenous progestins
- BCPs

How does this histology differ from gestational endometrium?
- if pregnant: glandular proliferation, glandular secretion, and stromal decidualization
Uterus, Endometrial Curetage

50-year-old with an ultrasound demonstrating thickening of the endometrial stripe.

- proliferative or “disordered” proliferative endometrium
- simple & complex hyperplasia
- atypical hyperplasia
- carcinoma
Hyperplasia
Source Undetermined
Atypical Complex Hyperplasia
Endometrial Carcinoma
Endometrial Adenocarcinoma
Polycystic Ovarian Disease

Chronic anovulation

↓

Hyperestrogenism

↓

Proliferative effects on endometrium

↓

Increased risk of hyperplasia and carcinoma
Uterus, Hysterectomy

28-year-old with a history of infertility and an enlarged uterus. The patient underwent myomectomy in an effort to preserve fertility.
Myomectomy for Fibroids
Leiomyoma
Leiomyoma

Symptoms
- asymptomatic
- pelvic “pressure”
- urinary incontinence
- irregular uterine bleeding
- infertility
- pelvic pain
- dyspareunia

Enlarge with pregnancy

Smaller with menopause and GNRH agonists-antagonists
Benign Leiomyoma (Fibroid) Uteri: Histologic Keys

- Solid spindle cell proliferation
  - “cigar” shaped nuclei, no atypia
  - rare mitotic activity
  - storiform areas, interlacing fascicles
- Hormonally sensitive
  - estrogen and progesterone
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