Diagnostically Challenging Cases in Gynecologic Pathology

Eric C. Huang, M.D., Ph.D.
Department of Pathology and Laboratory Medicine
University of California, Davis Medical Center
Case 1 Presentation

• 38 y/o G3P1021 Caucasian who presented for 1 month postpartum visit. She was noted to have a 5 cm cervical fibroid during delivery

• Cervical exam: large 3x3 cm fibroid prolapsing through the cervix

• Intraoperative excision was performed and sent to pathology
Differential Diagnosis

• Squamous cell carcinoma
Squamous Cell Carcinoma

- An invasive epithelial tumor composed of squamous cells of varying degrees of differentiation
- HPV is present in virtually all cases
- Currently 25% of stage IB tumors occur in women <40 years and 5% in women ≤ 30 years
- Decline by ~75% in the last 50 years in the US due to cervical screening programs
Differential Diagnosis

- Squamous cell carcinoma
- Clear cell carcinoma
Clear Cell Carcinoma

- An adenocarcinoma composed predominantly of clear or hobnail cells whose architectural patterns are solid, tubulocystic and/or papillary
- Comprising ~4% of all cervical ACAs
- Associated with *in utero* diethylstilbestrol exposure (mean age = 19)
- Sporadic CCC (mean age = 47)
Differential Diagnosis

- Squamous cell carcinoma
- Clear cell carcinoma
- Lymphoepithelioma-like carcinoma
Lymphoepithelioma-Like Carcinoma

• A distinct subset of squamous cell carcinoma
• Rare tumor and represents <1% of all primary cervical neoplasms
• EBV is found in ~75% of cases
• ~20% are associated with HPV 16 and 18
Glassy Cell Carcinoma

- A distinctive type of large cell carcinoma that may be pure or admixed with an otherwise typical endocervical adenocarcinoma or adenosquamous carcinoma
- 83% of patients were <35 y/o
- HPV18 has been identified in some tumors
Microscopic Features

• Nests of large cells with
  – Abundant eosinophilic or amphophilic ground-glass cytoplasm
  – Distinct cell borders
  – Large nuclei
  – Macronucleoli
  – High mitotic rate

• Dense stromal inflammatory infiltrate composed predominantly of eosinophils and plasma cells
Case 2 Presentation

- 30 y/o G0P0 morbidly obese Caucasian female with no significant PMH presented with recurrent vaginal bleeding and foul smelling discharge
- Cervical exam: necrotic mass protruding through the dilated cervical os
- Multiple biopsies were performed and sent to pathology
Differential Diagnosis

- Adenosarcoma
Adenosarcoma

- A mixed epithelial and mesenchymal tumor, in which the epithelial component is benign or atypical and the stromal component is low-grade malignant
- ~8% of all uterine sarcomas
- Occurs in all ages (15-90 y/o) with a median of 58
- Presenting with abnormal vaginal bleeding but there may also be discharge or a mass protruding into the vagina
Mitoses
Differential Diagnosis

• Adenosarcoma
• Carcinosarcoma
Carcinosarcoma

- A biphasic tumor composed of high-grade carcinomatous and sarcomatous elements
- Most common subtype of mixed müllerian tumors
- Usually occur in elderly postmenopausal women (mean age = 65 y/o)
- Occasional cases may occur in younger women
Differential Diagnosis

- Adenosarcoma
- Carcinosarcoma
- Mesonephric carcinoma
Mesonephric Carcinoma

- An adenocarcinoma arising from mesonephric remnants
- Most often located in the lateral to posterior wall of the cervix
- Range in age from 33-74 years (mean=52 years)
- Vast majority arise in a background of mesonephric remnant hyperplasia
Mesonephric Hyperplasia

- Lack of irregular, disorderly invasion
- Lack of back-to-back glandular crowding
- Lack of mitotic activity
- Lack of nuclear atypia
- Lack of lymphatic/vascular/perineural invasion
Mesonephric Carcinoma

Ductal

Spindle
Mesonephric Carcinoma

Calretinin

CD 10
Extra-renal Wilms Tumor

• A malignant tumor showing blastema and primitive glomerular and tubular differentiation resembling Wilms tumor of the kidney
• Typically presented with abnormal vaginal bleeding and/or a mass
• 16 cases reported in the literature (7 adults, 9 children)
  – Predominantly a disease of childhood
Microscopic Features

• Epithelial component - small tubules or cysts lined by primitive columnar or cuboidal cells
  – Fetal-type glomeruloid structures

• Mesenchymal component - loose myxoid and fibroblastic spindle cell stroma

• Blastemal component - small cells with hyperchromatic, rounded nuclei surrounded by a small amount of basophilic cytoplasm
Questions?

• eric.huang@ucdmc.ucdavis.edu