

Gynecologic Malignancies

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Outline/Objectives

- Gestational Trophoblastic Neoplasia
 - Partial and Complete Molar Pregnancy
 - Diagnosis and Treatment
- Cervical Carcinoma
 - Cytology screening
 - Diagnosis
 - Treatment

Outline/Objectives

- Ovarian Cancer
 - Diagnosis
 - Treatment
- Endometrial Cancer
 - Workup of postmenopausal bleeding
 - Diagnosis
 - Treatment

Gestational Trophoblastic Disease

- Incidence is highest in Asian women: 1 in 200 pregnancies, lower in United States: 1 in 2000 pregnancies
- Recurrence rate is 2%
- Associated with dietary deficiencies such as folic acid
- Tissue derived from proliferation of abnormal placental tissue

Gestational Trophoblastic Disease

- Classification
 - Molar Pregnancy
 - Complete Mole
 - Partial Mole
 - Persistent Gestational Trophoblastic Disease
 - Histologically Benign
 - Persistent histologically benign
 - Persistent histologically malignant

Molar Pregnancy

- Complete mole-
 - only trophoblastic tissue, no fetus, mostly derived from syncytiotrophoblast
 - results from fertilization of blighted ovum by a haploid sperm which duplicates
 - Genetic makeup is 46, XX
 - Most common type, 90% of all molar pregnancy
 - 15-20% will become malignant

Molar Pregnancy

- Partial mole
 - Focal trophoblastic proliferation in the placenta, derived from cytotrophoblast
 - Results from one set of maternal chromosomes and two sets of paternal chromosomes
 - two sperm fertilize one ovum
 - karyotype is 69, XXY
 - 3% will become malignant

<i>Characteristic</i>	<i>Complete Mole</i>	<i>Partial Mole</i>
<i>Villi</i>	All edematous	Some Normal
<i>Capillaries</i>	Few, no fetal blood	Some, fetal blood present
<i>Embryo</i>	None	Abnormal fetus
<i>HCG titer</i>	High	Moderately elevated
<i>Karyotype</i>	46, XX	Triploid (69, XXY)
<i>Malignant Potential</i>	15-20%	1-3%

Molar Pregnancy

- Clinical Presentation
- History/symptoms
 - Vaginal bleeding
 - Passing tissue: grape-like clusters
 - Nausea/vomiting
 - Visual changes, shortness of breath (if pre-eclampsia has developed)

Molar Pregnancy

- Physical Findings
 - Uterus larger or smaller than expected by gestational age estimated by last menstrual period
 - Cervical os may be dilated if passing tissue
 - may find edematous trophoblastic tissue on exam
 - Lack of fetal heart tones may be noted, particularly with complete mole
 - Hypertension, tachycardia, protein in the urine when pre-eclampsia develops

Molar Pregnancy

- Physical Findings
 - Hyperthyroidism may develop as a result of high HCG levels
 - tachycardia, increased deep tendon reflexes, hypertension may be noted in these patients
 - Pre-eclampsia
 - hypertension, protein in urine, seizures (eclampsia)

Molar Pregnancy

- Diagnosis usually established by ultrasound
- Can also suspect diagnosis if uterus is large for menstrual dates and no fetal heart tones are heard

Molar Pregnancy

- Treatment
 - Dilatation and Curettage (D & C)
 - Use suction curette if it is available
 - less trauma to uterus and less risk of uterine perforation with suction D & C
 - Use intravenous oxytocin drip to control hemorrhage while doing the curettage

Molar Pregnancy

- Follow up after treatment
 - Contraception for 1 year after treatment
 - Follow HCG titers/pregnancy tests monthly to make sure the molar pregnancy does not recur
- Recurrence
 - Use methotrexate to treat recurrence
 - very effective
 - important to detect recurrence early to improve chances of survival

Cervical Carcinoma

- Incidence of cervical cancer can be reduced by screening
 - screening done by collecting cervical cytology (Pap test)
- Cervical cancer starts as pre-invasive lesion: cervical intraepithelial neoplasia
- Pre-invasive cervical neoplasms not visible on physical examination
 - usually only detected by cytology screening

Cervical Carcinoma

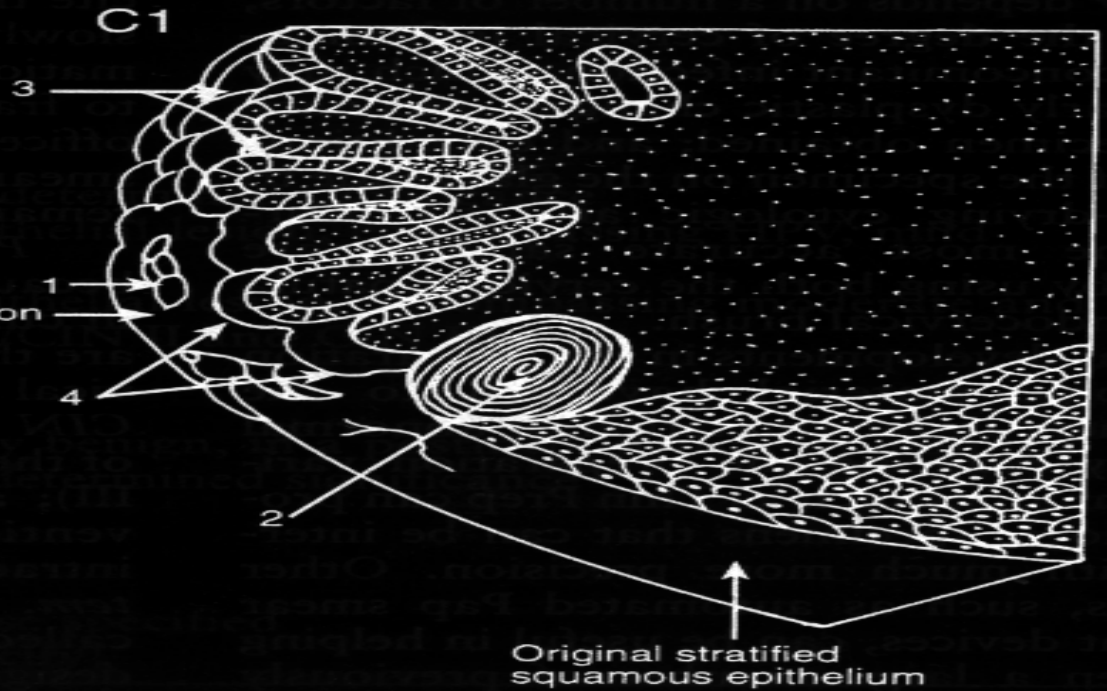
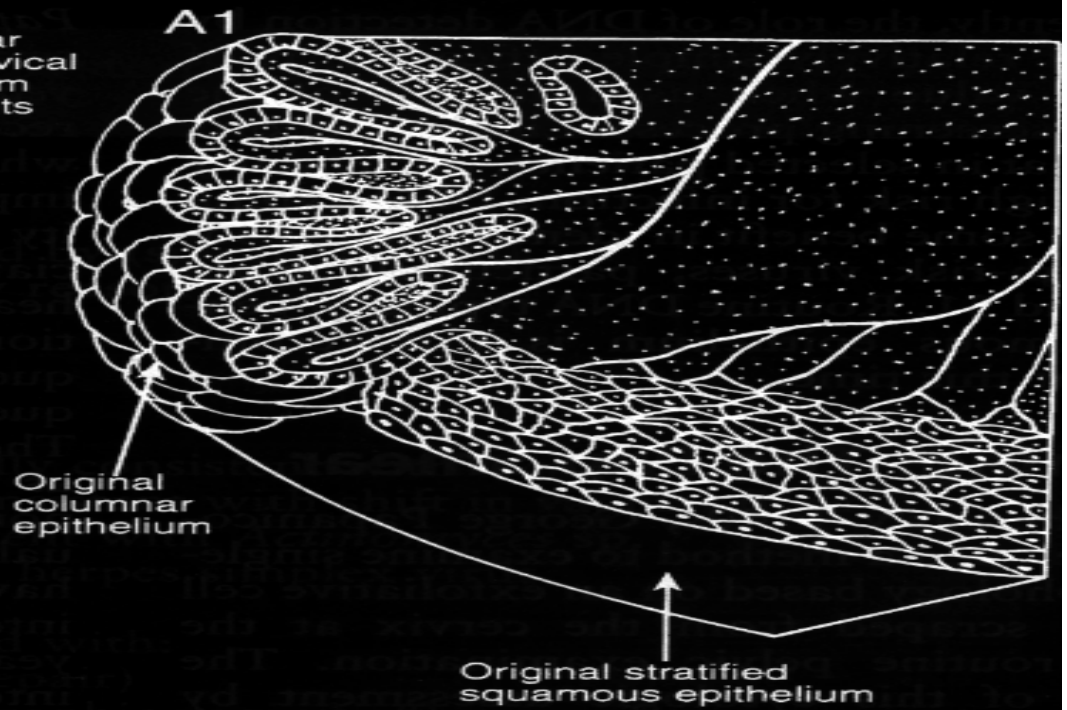
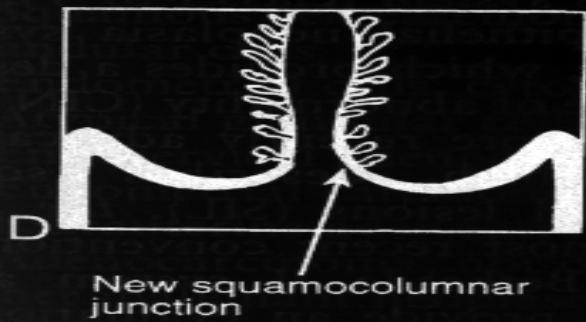
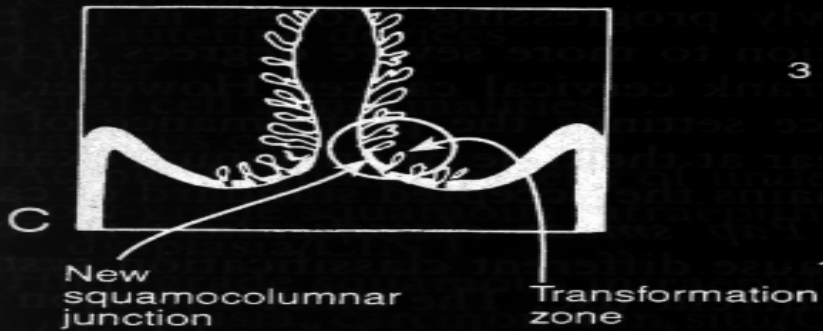
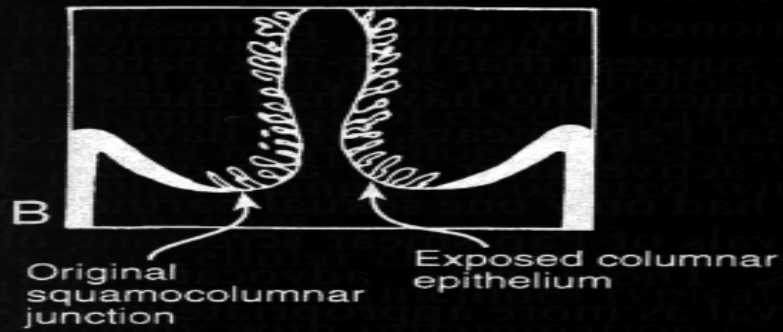
- Risk Factors
 - First intercourse at an early age
 - Multiple sexual partners
 - Early childbearing
 - Male sexual partner who has multiple sexual partners
 - Venereal infections

Cervical Carcinoma

- Risk Factors
 - Suppressed immune system
 - HIV/AIDS
 - Cigarette smoking
 - Human papillomavirus infection

Cervical Carcinoma

- Squamous cell cancers are the most common type
 - develop at the transformation zone
 - human papillomavirus is linked to over 90 % of all squamous cancers of the cervix



Cervical Carcinoma

- 85% of cervical cancer is of the squamous type, 15% from glandular tissue
- Symptoms:
 - bleeding after intercourse
 - abnormal menstrual bleeding
 - pain, blood in urine or from rectum in advanced cancers

Cervical Carcinoma

- Signs/Physical exam findings
 - large mass on cervix which bleeds easily
 - lack of urine production from blocked urinary tract/ureters
- Cervical cancer spreads directly to bladder, rectum and pelvic lymph nodes

Cervical Carcinoma

- Staging/classification of cervical cancer
 - Stage 1: Cancer confined to cervix
 - Stage 2: Cancer extends beyond cervix but not to the pelvic wall, not beyond the upper two-thirds of the vagina
 - Stage 3: Cancer has extended to pelvic wall, cancer involves the lower one-third of vagina, ureter is blocked by cancer
 - Stage 4: Cancer has spread outside of pelvis or to the lining of the bladder or rectum

Cervical Carcinoma

- Therapy
 - Radical surgery-remove cervix and surrounding tissue, remove pelvic lymph nodes
 - Radiation-treat pelvis with radiation
 - Radiation as effective as surgery in curing cervical cancer
 - Radiation can be given to patient by temporary implants inserted into uterus

Endometrial Cancer

- Endometrial cancer is the most common genital tract malignancy in the United States
- More common in women after menopause
- Risk factors
 - obesity
 - hypertension
 - diabetes
 - use of estrogen

Endometrial Cancer

- Endometrial hyperplasia often develops before endometrial cancer
- Patients with hyperplasia are at higher risk for developing cancer of the endometrium
- Patients with hyperplasia should be treated with progestins or hysterectomy if atypical cells are associated with the hyperplastic cells

Endometrial Cancer

- Symptoms
 - Bleeding after menopause is most common symptom
 - Women who develop endometrial cancer before menopause will have abnormal menstrual bleeding

Postmenopausal Bleeding

- Most postmenopausal bleeding is from benign conditions
 - most common benign causes are endometrial polyps, sub-mucosal fibroids and atrophy of the endometrium
- Cancer and hyperplasia are present in 20 % of women with postmenopausal bleeding
- A biopsy should be performed to evaluate the endometrium in women with postmenopausal bleeding

Endometrial Cancer

- Physical Examination
 - Uterus may be enlarged in advanced cases
- Diagnosis is made by taking a biopsy of the endometrium by curettage
- Treatment
 - Hysterectomy
 - Biopsy of the pelvic and para-aortic lymph nodes should be done in deeply invasive cancers
 - Radiation

Ovarian Cancer

- Most cancers of the ovary arise from the surface epithelium
- In women under age 20, the most common cancers of the ovary arise from the germ cells
- Cancer of the ovary spreads throughout the peritoneum
- Most cancers are found when they have spread throughout the peritoneum

Ovarian Cancer

- Symptoms
 - Pelvic pain
 - Abdominal bloating
 - Constipation
 - Nausea, weight loss, poor appetite

Ovarian Cancer

- Physical Exam Findings
 - Large rounded abdomen
 - Fluid wave can be detected with ascites
 - Pelvic mass
 - Lymph nodes in the groin or above the clavicle may be enlarged

Ovarian Cancer

- Diagnosis
 - Only can make diagnosis by laparotomy
 - Diagnosis can be suggested by x-ray based studies such as Computed tomography (CT) scans or ultrasound
 - CA-125 is a serum protein that is elevated in many patients with ovarian cancer
 - mostly useful in following the progress of the cancer after treatment

Ovarian Cancer

- Treatment
 - Surgery: remove all of the visible cancer, remove uterus, fallopian tubes and ovaries, biopsy pelvic and para-aortic lymph nodes
 - Chemotherapy- usually for 3-6 months after surgery