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CLINICAL ASPECTS OF GYNECOLOGIC DISEASES I&II

M2 Reproduction Sequence

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Learning Objectives:

For diseases of the vulva, vagina, cervix, uterus, and ovaries:

1. Understand the presentation of disease
2. Understand the evaluation of disease
3. Understand the basic treatment of disease

Overlying Themes:

1. Age of patient
2. ? Pregnant
3. History and symptoms
4. Physical exam and pertinent findings

5. Diagnostic testing
6. Medical versus Surgical management
7. Future fertility concerns

DISEASES OF THE VULVA

Presentation: Irritation/pruritis/burning
Lesions

Evaluation: History
Inspection
Palpation
Culture
Biopsy

Infections:

Candida

Condyloma acuminatum

Herpes simplex

Bartholin's gland abscess

Molluscum contagiosum

Pthirus pubis (crab louse)

Sarcoptes scabiei (itch mite)

Dermatologic conditions:

Chemical irritation/contact dermatitis

Melanoma

Squamous cell hyperplasia

Lichen sclerosis

Psoriasis

Nevi

Seborrheic dermatitis

Fibromas/lipomas

VIN/Vulvar Carcinoma:

Most common in women aged 60-70
Fourth most common gyn malignancy
Pruritis most common symptom
Can also present with a mass, pain, ulceration

Increased relative risk associated with:
>2 cups of coffee/day
occupation (laundry/dry cleaning)
history of vulvitis
HPV implicated as possible causative agent

Spread by local invasion then via lymphatics in ipsilateral fashion
Treatment by excision of lesions
Good prognosis

DISEASES OF THE VAGINA

Presentation: abnormal vaginal discharge

What is normal vaginal discharge?

Physiologic
Normal pH 3.5-4.5 ie, acidic
lactobacilli
Variation with menstrual cycle
Variation with hormonal levels

Evaluation: History
Wet prep
Culture
Biopsy

Infections:

Bacterial vaginosis: symbiotic infection of anaerobic bacteria
Lack of lactobacilli
Grey, non-inflammatory discharge
Amine odor with addition of 10% KOH
Clue cells

Treatment with metronidazole/clindamycin

Candida: Vulvovaginal yeast
Pregnancy, diabetes, obesity, immunosuppression,
antibiotic use
Pruritis, erythema, irritation, dyspareunia
Thickened, adherent discharge
Hyphae and buds on KOH prep
Treatment with anti-fungals

Trichomoniasis: Protozoan *T. vaginalis*, sexually transmitted
Diffuse, malodorous discharge, dyspareunia
“Frothy”, yellow-green discharge
Flagellated protozoa, +WBCs on wet prep
Treatment with metronidazole

Atrophic vaginitis: Due to low estrogen levels
Itching, irritation, burning, dyspareunia, bleeding
Immature squamous cells on wet prep
Estrogen therapy?

Vaginal Carcinoma: rare, mean age 60-65
In patient < 5 yo.: Sarcoma botryoides: red-tan
grape clusters

Clear cell carcinoma and DES exposure
Squamous cell carcinoma as metastatic spread
Most present with vaginal bleeding, foul discharge
Biopsy, rule out metastatic disease
Radiation, possible surgical excision
Prognosis disease dependent

DISEASES OF THE CERVIX

Cervicitis: Presents as vaginal discharge, pain, post-coital bleeding
Chlamydia trachomatis: Intracellular bacterium
Sexually transmitted
Presents with gonorrhea
Infertility, ectopic pregnancy
Neonatal conjunctivitis
Antibiotic therapy
Neisseria gonorrhoea: Sexually transmitted
Disseminated infection
Antibiotic therapy treat for Chlam too

Herpes Simplex Virus: Importance in pregnancy
Anti-viral therapy
Trichomonas

Cervical polyps: Most common benign growth of cervix
Cause irregular spotting, post-coital bleeding
Polypectomy

Cervical dysplasia:

Area at risk for dysplasia/infection is the squamocolumnar junction
Location of SCJ varies with age and hormonal status

Risk factors for cervical dysplasia: Early coitarche
Multiple partners
Tobacco use
HPV 16,18,31,33,35,39
Immunosuppression/HIV
Other STDs

Cervical cytology (Papanicolaou smear)

Exfoliative cytology
First Pap at age 21 or when sexually active
Bethesda system of classification
SCREENING tool
False negative rates as high as 10-30%
Biopsy a visible abnormality for diagnosis

Evaluation: Colposcopy with directed biopsies
Visualize cervix under magnification
Requires visualization of entire transformation zone
Acetic acid application
Assess for vascular changes
Endocervical curettage

Treatment: Ablative
Excisional
Cone biopsy
Loop electrosurgical excision procedure

Subsequent follow-up of cervical cytology:

Dependent on diagnosis and risk factors
80% of CIN I will regress within one year

High grade abnormalities likely to progress
Evaluation for AGUS
Ensure compliance
Observation vs. Treatment of lesions
Smoking cessation

Cervical cancer:

65-85% is squamous cell carcinoma
HPV

Present with AUB, post-coital bleeding, most often painless
Late symptoms include back pain, weight loss, foul discharge
Pap smear screening with high false negative rate therefore BIOPSY
Spread via local invasion and lymphatics
Early stages may be treated surgically
Later stages treated with radiation

ENDOMETRIOSIS

Presence of endometrial glands and stroma outside of the uterus
1-2% of general population
30-50% of infertile women
20% of patients with chronic pelvic pain

Endometrioma: tumor of endometriosis within the ovary

Adenomyosis: endometrial implants within the myometrium

Pathogenesis:

Retrograde menstruation

Vascular/lymphatic dissemination

Coelomic metaplasia

? Hereditary

Iatrogenic

Location of endometriotic lesions: dependent portions of pelvis
ovaries typically bilateral
uterosacral ligaments and rectovaginal septum
endometrioma = "chocolate cyst"
outside of the pelvis: lungs, surgical scars

Presentation: Pelvic pain
Infertility
Dysmenorrhea
Dyspareunia
GI symptoms
15-20% with AUB
severity of disease does NOT correlate with symptoms

Exam Findings: Fixed retroverted uterus
Uterosacral nodularity
Enlarged tender ovaries

Diagnosis: Laparoscopy
Ablation of lesions at time of laparoscopy
No lab studies
Imaging not helpful

Treatment: Chronic, progressive disease
Treatment is temporizing
Consider symptoms, severity, location of disease
Discuss future fertility desires

Goal is amenorrhea
OCPs
Progestins
Danazol
Lupron
Surgical

Adenomyosis: Incidental finding on pathological evaluation of uterus
Enlarged, "soft" uterus, globular, tender with menses
?pathogenesis
Age 35-50, dysmenorrhea/menorrhagia
Treat with NSAIDs, hormonal suppression, hysterectomy

DISEASES OF THE UTERUS

Endometrial polyps: Overgrowth of endometrial glands/stroma
Peak incidence age 40-49
?etiology, associated with endometrial hyperplasia
Unopposed estrogen
Present with irregular/abnormal uterine bleeding
Ultrasound with sonohysterogram

Consider endometrial biopsy
Treatment by hysteroscopy, dilatation & curettage

Leiomyomata: Monoclonal smooth muscle cell tumor-benign
"Fibroids"
Most frequent pelvic tumor
Incidence varies with ethnicity

Location: Intramural
Subserosal
Submucosal
Broad ligament
Cervical

Symptoms: AUB, dysmenorrhea, menorrhagia, pain, pressure, infertility

Diagnosis: Pelvic exam
Ultrasound
CT/MRI
Size described like weeks of pregnancy
CBC

Treatment: Hormonal
Surgical
Myomectomy
Hysterectomy
Uterine artery embolization

Endometrial hyperplasia/carcinoma:

Most common gyn malignancy
Adenocarcinoma
Peri/Post-menopausal women
Increased risk associated with unopposed estrogen
obesity, HTN, diabetes, anovulation, nulligravid, Tamoxifen
Peripheral conversion of androgens to estrone
Progesterone is protective

Endometrial hyperplasia: continuum of simple → complex → carcinoma

Presentation: Post-menopausal bleeding
Abnormal uterine bleeding

Diagnosis: Endometrial biopsy

Dilatation and curettage

Treatment of endometrial CA: Surgical staging

Extent of myometrial invasion

Prognostic factors: tumor grade, depth of invasion, spread

Lymphatic spread to pelvic LN → periaortic LN and direct extension via fallopian tubes

Possible radiation therapy

Possible progesterone therapy

DISEASES OF THE OVARIES AND FALLOPIAN TUBES

Ovaries:

Adnexa = ovaries, fallopian tubes, upper portion of broad ligament

Presentation:

Asymptomatic

Pain

Irregular menses

Mass on exam

Bloating

Constipation

Vague abdominal discomfort

Evaluation:

Expect ovaries to be NON-palpable in adolescents and post-menopausal women

Otherwise, ovaries palpable 50% of the time

Evaluate size, shape, consistency on exam

Imaging modalities—USN, CT, MRI

Other actors:

Urinary tract infections

Renal calculus

Appendicitis

Pregnancy complications

Inflammatory bowel disease

Myomas

Ovarian torsion

Pelvic kidney

Functional Ovarian Cysts: “it is not a tumor”

Anatomic variations due to normal ovarian function

May be as large as 5-8 cm
Most regress spontaneously

Follicular cyst: Anovulation, amenorrhea, granulosa cells
Presents with unilateral pain, irreg. menses
On exam—unilateral mass, tenderness
USN eval—simple cystic structure
Expect spont. regression 6-8 weeks
NSAIDs, OCPs
Rupture can cause acute pain

Corpus luteum cyst: Prolonged luteal phase, delayed menses
Dull lower quadrant pain
Adnexal mass
Rule out ectopic

Hemorrhagic CL: rapidly enlarging cyst which bleeds
Ruptures late in luteal phase
Acute onset of pain
Hemoperitoneum
Check CBC, orthostatics
Analgesics, possible laparoscopy

Ovarian Neoplasms:

Benign neoplasms are more common than malignant tumors
Risk of malignancy increases with age
Appearance/characteristics on imaging helpful in management
Management most often surgical because of risk of malignancy
Consider future reproduction desires, risk of malignancy

Tumor frequencies: Adolescents: dermoid
Reproductive age: serous cystadenoma
Peri/Postmenopausal: 25% malignant

Epithelial: 65% of all ovarian tumors
SEROUS CYSTADENOMA is most common

MUCINOUS CYSTADENOMA can become very large

ENDOMETRIOMA

Germ cell: 20-25% of all ovarian tumors

BENIGN CYSTIC TERATOMA/DERMOID

Asymptomatic, unilateral cyst, anterior in pelvis

Comprised of all three germ cell layers

Hair, sebum, teeth, etc.

STRUMA OVARII—functional thyroid tissue

Less than 1% malignant, bilateral 10-20%

Rupture→ chemical peritonitis

Stromal: Solid tumors of sex-cord stroma

Can produce hormones

MEIG'S SYNDROME: Benign ovarian fibroma

Ascites

Right unilateral hydrothorax

Ovarian Carcinoma:

1 in 70 lifetime risk

Highest mortality rate: lack of useful screening, late detection

Early disease asymptomatic, 2/3 with advanced disease at time of diagnosis

Vague symptomatology

Peak incidence 50-60 year old

Risk factors: + family history
+ history of breast carcinoma
nulliparity
talc
obesity

Incessant ovulation

Oral contraceptive use protective

Genetics: Autosomal dominant with variable penetrance

Site-specific familial ovarian CA

Breast/ovarian familial cancer syndrome

BRCA-1

Lynch II syndrome: colon, ovarian, endometrial, breast

Ovarian cancer spreads to peritoneal surfaces by direct extension

Bowel obstruction

Surgical staging aimed at tumor debulking/cytoreduction

Peritoneal washings, TAH/BSO, pelvic and periaortic LN sampling, omentectomy

Adjuvant chemotherapy, possible intraperitoneal treatment, rarely XRT

Fallopian Tubes: Ectopic pregnancy
Salpingitis
Hydrosalpinx
Tubo-ovarian abscess
Paratubal cyst/hydatids of Morgagni
Paraovarian cysts

Fallopian tube carcinoma:
Rare
Classic triad: watery vaginal discharge, pain,
pelvic mass

For an enhanced understanding peruse this supplemental reading:

Cervical dysplasia, Bethesda system, guidelines for management of CIN:
www.asccp.org (American Society for Colposcopy and Cervical Pathology)