SEXUALLY TRANSMITTED INFECTIONS

CHLAMYDIA

epi: most common STI AND reported bacterial infection. W > M. Age = 18-26 yo

risk factors: young age (<25), new/multiple partners in prior 3 months, hx of chlamydia, inconsistent condom use

patho: infection of gram⁻ bacteria Chlamydia trachomatis

life cycle - metabolically inactive elementary bodies attach and penetrate into cells within 6-8hrs → in host, EB differentiate into active reticulate body → replicate → infect other cells

Clinical: symptoms of cervicitis, PID, urethritis, perihepatitis, rectal, conjunctivitis/pharyngitis

cervicitis → discharge, bleeding, pelvic pain, abdominal pain, chills

PID → N/V, fever, chills, low back pain, dyspareunia, post-coital bleeding

Urethritis → more common in men. Dysuria, pyuria.

PE → muco/purulent discharge and friability

- conjunctival cobblestoning or injection. Abdominal or pelvic tenderness

diagnosis: NAAT preferred via vaginal swab. Not routinely cultured.

treatment: Doxycycline 100 mg PO bid x 7 days. Alternatives - azithro (1g PO once) or levoflox (500mg x 7d)

Goals - prevent complicated infections, ↓transmission, sx relief, prevent reinfection

Indications for empiric tx → recent exposure, sx, high risk

counseling: med adherence. Abstinence until both partners treated

FU testing at 3 months for ALL pts

"Test of cure" at 4 wks for some (pregnancy, persistant sx, nonadherence)

screening: Women <25 → annually. Pregnant → first tri. HIV+ → annually.

GONORRHEA

epi: 2nd most common. Peak: 20-24

risk factors: young age (<25), new/multiple partners in prior 3 months, hx of gonorrhea, inconsistent condom use, low SES, substance abuse

patho: gram⁻ coccus

4 phases: attachment to mucosal cell surface, penetration/invasion, proliferation, local inflammatory response or systemic dissemination

Clinical: sx of cervicitis, PID, urethritis, perihepatitis, bartholinitis, conjunctivitis/pharyngitis

cervicitis → discharge, bleeding, pelvic pain, abdominal pain, chills

PID → N/V, fever, chills, low back pain, dyspareunia, post-coital bleeding

Urethritis → more common in men. Dysuria, pyuria.

Bartholinitis → enlargement, tenderness of gland

If disseminated then leads to purulent arthritis OR triad of tenosynovitis, dermatitis, and polyarthritis

PE → copious amount of muco/purulent discharge and friability

- conjunctival discharge, abdominal tenderness, joint pain

diagnosis: NAAT preferred via vaginal swab. Not routinely cultured.

treatment: cefriaxone 500 mg IM once. Alternatives - ceftriaxone 1g IM if >300 lbs

If antimicrobial resistance high dose azithro w/ gentamicin

Counseling and screening same as above

HSV

epi: HSV 1/2 both common and can cause genital warts

risk factors: new/multiple partners, inconsistent condom use

patho: transmitted through **direct contact** of secretions in **seropositive** individual actively **shedding virus**. Symptoms last **10-14 days**, but virus remains dormant in perixaxonal sheath of sensory nerves

↳ **reactivation** → virus travels from sensory nerves to mucocutaneous sites

Clinical: **painful** genital ulcers, itching, dysuria, fever,

PE → **grouped 2-4 mm vesicles** w/ underlying erythema (4 days after exposure)

progresses to vesicopustules, erosions, ulcerations

diagnosis: **viral culture** direct swab of vesicular lesions (ideally within **72 hrs**)

- **HSV PCR** if direct swab not possible
- **Tzank smear** - low sensitivity

treatment: initially, **acyclovir** (400 mg tid x 7-10d), **famciclovir** (250 mg tid x 7-10d), **valacyclovir** (1g bid x 7-10d)

recurrent → **episodic** self administered for outbreaks. Taken at first sign of prodromal sx

acyclovir (800 mg tid x 2days), **famciclovir** (1g PO bid x 24 hrs), **valacyclovir** (500 mg bid x 3days)

Chronic suppressive daily for pts w/ freqvent/severe recurrence. ↓risk of activation.

acyclovir (400 mg bid), **famciclovir** (250 mg PO bid), **valacyclovir** (500-1000 mg qd)

SYPHILIS

early - wks to months after infected. Primary, secondary, early latent

late - progress to late latent or tertiary. Any time 1-30yrs after infected

epi: Western Pacific and African regions. **Men** > women.

patho: caused by bacterium **treponema pallidum**. Transmitted via direct contact with an infectious lesion during sex

Clinical

early: primary → **chancre**

secondary → **rash** on **palms** and **soles**, fever, malaise

late: tertiary → **cardiovascular complications**, **gummatous disease**

neurosyphilis: meningitis, vision/hearing loss → **dementia**

diagnosis: **Serologic testing** and **dark field microscopy** → **spirochetes** (immediate diagnosis)

↳ **non-treponemal** only positive after chancre development

treponemal antibody absorption/particle agglutination assay confirms positive non-treponemal

treatment: **early** → **penicillin IM once** (doxy, ceftriaxone alternatives)

late → **penicillin IM weekly for three weeks** (doxy, ceftriaxone alternatives)

CONDYLOMA ACUMINATUM genital warts

risk factors: sexual activity, smoking, immunosuppression

patho: caused by **HPV** → most commonly strains **6** and **11**. Virus invades the cell of the epidermal basal layer through **microabrasions**

Clinical: **visible warts** on PE. can be painful, pruritic, bleeding (**1-5 mm**)

diagnosis: **Clinical**. Biopsy if uncertain

treatment: If **bothersome** or cause **psychologic distress**. Can resolve on their own

- **limited vulvar** → **imiquimod** at home (5% cream 3x week up to 16 wks)
- **limited vaginal** → **trichloroacetic acid**. Laser ablation is option
- **extensive/bulky** → **Surgery**. Laser ablation preferred over excision
- **recurrent** → **repeat therapy**. If refractory → surgery or intralesion interferon + TCA

PELVIC INFLAMMATORY DISEASE

epi: age 15-25
risk factors: multiple partners, young, previous STI/PID, inconsistent condom use

patho: acute infection of upper genital tract structures (uterus, oviducts, ovaries)
commonly caused by neisseria gonorrhoeae and chlamydia trachomatis
chronic infection → inflammatory damage → scarring, adhesions, obstruction of fallopian tubes → loss of ciliated epithelial cells → impaired ovum transport
- causes ↑risk of infertility and ectopic pregnancy

Clinical: intense pelvic pain, vaginal discharge, dyspareunia, abnormal vaginal bleeding
constitutional → fever, chills
Perihepatitis → RUQ pain
PE → acute cervical motion tenderness and uterine/adnexal tenderness on bimanual exam are defining characteristics
- Common findings: abdominal tenderness (lower quadrants), purulent discharge
If severe → rebound tenderness, fever, decreased bowel sounds

diagnosis: Clinical in sexually active young females w/ ↑risk factors who present w/ pelvic pain and cervical motion/uterine/adnexal tenderness on PE
Labs: HCG, NAAT for GC/CH
Laparoscopy can confirm diagnosis

treatment: outpatient - ceftriaxone IM + doxy + metronidazole x14 days
Hospitilize IF
- severe clinical illness (>101°F, N/V)
- pelvic abscess
- pregnancy
- inable to take, ↓response, or nonadherence to oral meds

Stay until 24-48 hrs of sustained improvement

Complications:
chronic pelvic pain from inflammation, scarring, adhesions
infertility infection can cause damage to fallopian tubes (chlamydia more common)
↑risk of ectopic pregnancy also from damage