Chapter 11. Sexually Transmitted Diseases

General Guidelines

Persons identified as having one sexually transmitted disease (STD) are at risk for others and should be screened as appropriate. Partners of persons with an STD should be evaluated and treated as appropriate. Emphasis should be placed on prevention as well as treatment of STDs.

Considerations in HIV-infected Patients

Genital ulcer diseases, such as syphilis and herpes simplex virus (HSV) infection, predispose to transmission and acquisition of HIV infection. The presentation, serology, natural history, and treatment response of syphilis may be altered in the context of HIV disease. HSV infection is often more severe and prone to relapse. It may require a higher dose and longer duration of therapy. Lesions may be atypical in appearance in the context of advanced HIV disease. Human papillomavirus (HPV) infection is common and associated with cervical and anal dysplasia/cancer. See Chapter 7 for Pap smear recommendations in this population. The increasing resistance of gonorrhea has resulted in changes in antibiotic recommendations. Treatment of pelvic inflammatory disease may be problematic. Routine periodic screening for STDs is recommended in at risk HIV-infected patients.

Diagnosis and Treatment

Chancroid

Syndrome is painful genital ulcer(s) with shaggy border and exudate at base associated with tender inguinal adenopathy.

Presumptive diagnosis is made by clinical appearance of lesion and ruling out other causes of genital ulcer disease (RPR; Tzanck smear, HSV culture, or dFA [direct fluorescent antibody] test).

Treatment:

- Ceftriaxone 250 mg IM once or
  azithromycin 1 gram po once or
  ciprofloxacin 500 mg po bid x 3 days or
  erythromycin 500 mg po tid x 7 days
**Chlamydial Infection**

Syndromes include urethritis, epididymitis, cervicitis, salpingitis, proctitis, and lymphogranuloma venereum.

Diagnosis is made presumptively by demonstration of PMNs without gram-negative diplococci on gram stain of discharge and confirmed by urinary nucleic acid amplification assay (preferably of first void specimen).

Treatment:

- Doxycycline 100 mg po bid x 7 days or azithromycin 1 gram po once

Recent sex partners of patients with chlamydial infection should be treated presumptively.

**Genital Warts**

Syndrome is one or more skin-colored papular lesions at sites of sexual contact. These may occur externally on the penis, vulva, or perineal region, or internally in the vagina or rectum. Genital warts are caused by human papillomavirus, which is a risk factor for cervical and anal dysplasia/cancer.

Diagnosis is made by clinical appearance.

Treatment: All of the listed modalities are about equally effective, and there is a high rate of relapse although frequency is variable.

- Podophyllin 0.5% solution or gel (available with prescription)
  Apply bid x 3 days followed by 4 days of no therapy
  May be repeated as necessary for total of 4 cycles

- Imiquimod 5% cream (available with prescription)
  Apply qhs tiw for up to 16 weeks; wash area with soap and water in morning

- Cryotherapy

- Trichloroacetic acid

- Laser therapy

- Surgical removal
**Gonorrhea**

Syndromes include urethritis, epididymitis in men, cervicitis and salpingitis in women, rectal, pharyngeal, and disseminated infection.

Diagnosis is made presumptively by demonstration of intracellular gram-negative diplococci and confirmed by urinary nucleic acid amplification (men only) or culture.

Treatment of uncomplicated infection:

- Ceftriaxone 250 mg IM once (preferred) or cefixime 400 mg po once (alternative) or azithromycin 2 grams po once (alternative)

  plus (in patients not receiving azithromycin for GC treatment)

- Doxycycline 100 mg po bid x 7 days or azithromycin 1 gram po once

Treatment of complicated infection:

- Ceftriaxone 1 gram IM or IV qd x 7-10 days

Recent sex partners of patients with gonorrhea infection should be treated presumptively for gonorrhea and chlamydial infection.

**Herpes Simplex Virus**

Syndrome is multiple clustered vesicular lesions on erythematous base; primary infection is followed by variable frequency of recurrences.

Diagnosis is made presumptively by clinical appearance of lesions and confirmed by Tzanck smear, HSV culture, or dFA test.

Treatment:

- Primary infection $\rightarrow$ acyclovir 400 mg po tid x 7-10 days or famciclovir 250 mg po tid x 7-10 days or valacyclovir 1 g po bid x 7-10 days (not recommended in HIV-infected patients; see Chapter 12)

- Recurrent infection $\rightarrow$ acyclovir 400 mg po tid x 5 days or famciclovir 125 mg po tid x 5 days or valacyclovir 1 g po bid x 7-10 days (not recommended in HIV-infected patients; see Chapter 12)
• Topical acyclovir offers little or no therapeutic benefit

• Prophylaxis for patients with frequent recurrences →
  acyclovir 400 mg po bid or
  famciclovir 250 mg po bid or
  valacyclovir 1 g po bid x 7-10 days (not recommended in HIV-infected patients; see Chapter 12)

**Lymphogranuloma Venereum**

Syndrome of proctitis has been described in HIV-infected MSM. It presents with purulent rectal discharge and tenesmus associated with tender inguinal adenopathy. A genital papule or ulceration at the site of inoculation may also be present. It is caused by the L serovars of *Chlamydia trachomatis*.

Diagnosis is suspected clinically and can be confirmed by serologic testing. Other infectious causes of proctitis should be excluded.

Treatment:

• Doxycycline 100 mg po bid x 21 days or
erthromycin 500 mg po qid x 21 days

**Molluscum Contagiosum**

Syndrome is multiple clustered pearl-like papular lesions on site of physical contact, but autoinoculation may also occur. It is caused by a pox-like virus.

Diagnosis is made by clinical appearance.

Treatment:

• Cryotherapy
• Curettage
• Trichloroacetic acid

**Pubic Lice**

Syndrome is genital pruritus.

Diagnosis is made by recognition of lice or nits on pubic hair.
Treatment:

- Permethrin 1% cream rinse applied to affected areas and washed off after 10 minutes
- Alternative therapies include pyrethrins with piperonyl butoxide (applied to affected area and washed off after 10 minutes) and oral ivermectin (250 mcg/kg and repeated in 2 weeks)

Recent sex partners of patients with pubic lice should be treated presumptively.

**Scabies**

Syndrome is a scattered pruritic, papular eruption with characteristic "burrows" sometimes noted. An aggressive form of the infestation with atypical manifestations has been described in immunocompromised patients.

Diagnosis is made by clinical appearance of skin lesions and confirmed by scraping/oil mount demonstrating the parasite.

Treatment:

- Permethrin cream 5% applied from neck down and washed off after 8-14 hours
- Alternative therapies include oral ivermectin (200 mcg/kg and repeated in two weeks) and lindane (1% lotion or 30 grams of cream applied from neck down and washed off after 8 hours)

Recent sex partners and household contacts of patients with scabies should be treated presumptively.

**Syphilis**

 Syndromes: Primary stage manifested by chancre; secondary phase manifested by mucocutaneous disease; and tertiary phase, after prolonged latency period, manifested by neurologic disease.

Diagnosis is made by clinical presentation and positive serology (RPR or VDRL plus confirmatory test [FTA-abs or MHA-Tp]).
Treatment:

- Primary, secondary, and early latent (< 1 yr duration) → benzathine penicillin 2.4 mU weekly x 1

- Late latent (> 1 yr duration) and tertiary → benzathine penicillin 2.4 mU weekly x 3

- Neurosyphilis (any stage) → penicillin G 18-24 mU/day x 10-14 days followed by regimen for late latent syphilis

- Alternative Rx is doxycycline or tetracycline x 2-4 weeks (except for neurosyphilis)

RPR or VDRL will generally convert to negativity within 1-2 years in patients who have primary, secondary, or early latent syphilis. In patients with late latent and tertiary syphilis, RPR or VDRL may remain serofast at a low positive titer.

Lumbar puncture should be performed in patients with neurologic symptoms or signs to assess for central nervous system involvement. Some experts recommend that it be performed in HIV-infected patients in their absence when the RPR or VDRL is positive at a high titer (>1:32) or when the CD4 count is <350 cells/mm³.

Recent sex partners of patients with primary, secondary, or early latent syphilis should be treated presumptively.

**Trichomonas**

Syndrome is foamy vaginal discharge sometimes in association with urethritis.

Diagnosis is made by vaginal wet mount showing flagellated single-celled organisms.

Treatment:

- Metronidazole 2 grams po once or 500 mg po bid x 7 days or tinidazole 2 grams po once

Recent sex partners of patients with trichomonas infection should be treated presumptively.
Prevention

Educate those at risk for STDs regarding effective means for reducing transmission through use of barrier methods and behavioral changes. Identify and screen populations at high risk. Promptly diagnose and treat patients with symptomatic infection. Evaluate, treat, and counsel their sexual partners.