2002 STD Treatment Guidelines

Division of STD Prevention, CDC

STD Prevention and Control

- Education and counseling to reduce risk of STD acquisition
- Detection of asymptomatic and/or symptomatic persons unlikely to seek evaluation
- Effective diagnosis and treatment
- Evaluation, treatment, and counseling of sexual partners
- Preexposure vaccination—hepatitis A, B

Prevention Messages

- Prevention messages tailored to the client’s personal risk; interactive counseling approaches are effective
- Despite adolescents greater risk of STDs, providers often fail to inquire about sexual behavior, assess risk, counsel about risk reduction, screen for axx infection
- Specific actions necessary to avoid acquisition or transmission of STDs
- Clients seeking evaluation or treatment for STDs should be informed which specific tests will be performed

Prevention Methods

Male Condoms

- Consistent/correct use of latex condoms are effective in preventing sexual transmission of HIV infection and can reduce risk of other STDs
- Likely to be more effective in prevention of infections transmitted by fluids from mucosal surfaces (GC, CT, trichomonas, HIV) than those transmitted by skin-skin contact (HSV, HPV, syphilis, chancroid)

Spermicides

- N-9 vaginal spermicides are not effective in preventing CT, GC, or HIV infection
- Frequent use of spermicides/N-9 have been associated with genital lesions
- Spermicides alone are not recommended for STD/HIV prevention
- N-9 should not be used a microbicide or lubricant during anal intercourse

The Diseases

- Curable?
- Characteristics
- Treatment: Learn the basics
HSV 1 & 2

HSV Serologic Tests
- If you are sending cultures to lab you must specify type specific assay for HSV1 and HSV2 infection. Request the most specific assay available at your institution.
- Often it is difficult to get a good sample and you must rely on history and clinical

Characteristics of HSV
- Incurable with chronic recurrences
- Asymptomatic shedding
- Painful lesions
- Frequency and severity of outbreaks varies with regard to health, stress, individual

Treatment Genital Herpes
First Clinical Episode
Acyclovir 400 mg tid
or
Famiclovir 250 mg tid
or
(Valtrex) Valacyclovir 1000 mg bid

*Duration of Therapy 7-10 days*

Treatment Genital Herpes
Episodic Therapy
Acyclovir 400 mg three times daily x 5 days
or
Acyclovir 800 mg twice daily x 5 days
or
Famiclovir 125 mg twice daily x 5 days
or
Valacyclovir 500 mg twice daily x 3-5 days
or
Valacyclovir 1 gm orally daily x 5 days

Treatment Genital Herpes
Daily Suppression
Acyclovir 400 mg bid
or
Famiclovir 250 mg bid
or
Valacyclovir 500-1000 mg daily
Genital Herpes in HIV Infected

- May have prolonged or severe episodes with extensive genital or perianal disease
- Episodic or suppressive antiviral therapy often beneficial

Genital Herpes in Pregnancy

- Available data do not indicate an increased risk of major birth defects (first trimester)
- Limited experience on pregnancy outcomes with prenatal exposure to valacyclovir or famciclovir
- Acyclovir may be used with first episode or severe recurrent disease
- Risk of transmission to the neonate is 30-50% among women who acquire HSV near delivery

Genital Herpes Counseling

- Natural history of infection, recurrences, asymptomatic shedding, transmission risk
- Individualize use of episodic or suppressive therapy
- Abstain from sexual activity when lesions or prodromal symptoms present
- Risk of neonatal infection

Syphilis

Characteristics of Syphilis

- *T. Pallidium*
- Primay, Secondary and Tertiary stages
- Curable, but can be latent & asymptomatic
- Skin lesions
- Neurodegenerative
- “the great imitator”
- Always positive RPR

Treatment of Syphilis

**Primary, Secondary, Early Latent**

**Recommended regimen**

- Benzathine Penicillin G, 2.4 million units IM
- **Penicillin Allergy**
  - Doxycycline 100 mg twice daily x 14 days
  - Ceftriaxone 1 gm IM/IV daily x 8-10 days (limited studies)
  - Azithromycin 2 gm single oral dose (preliminary data)

*Use in HIV-infection has not been studied
Primary/Secondary Syphilis

Response to Treatment

- No definitive criteria for cure or failure are established
- Re-examine clinically and serologically at 6 and 12 months
- Consider treatment failure if signs/symptoms persist or sustained 4x increase in nontreponemal test
- Treatment failure: HIV test, CSF analysis; administer benzathine penicillin weekly x 3 wks
- Additional therapy not warranted in instances when titers don’t decline despite normal CSF and repeat therapy.

Treatment of Syphilis

Latent Syphilis

Recommended regimen
Benzathine penicillin G 2.4 million units IM at one week intervals x 3 doses

Penicillin allergy*
Doxycycline 100 mg orally twice daily
or
Tetracycline 500 mg orally four times daily

Duration of therapy 28 days; close clinical and serologic follow-up; data to support alternatives to penicillin are limited.

Special Considerations in Syphilis

- Management of sex partners
- Pregnancy
- Congenital syphilis

Chancroid

Characteristics of Chancroid

- Curable
- *Haemophilus ducreyi*
- Genital ulcer

Treatment of Chancroid

Azithromycin 1 gm orally
or
Ceftriaxone 250 mg IM in a single dose
or
Ciprofloxacin 500 mg twice daily x 3 days
or
Erythromycin base 500 mg tid x 7 days
Chancroid: Management Considerations

- Re-examination 3-7 days after treatment
- Time required for complete healing related to ulcer size
- Lack of improvement: incorrect diagnosis, co-infection, non-compliance, antimicrobial resistance
- Resolution of lymphadenopathy may require drainage

Chancroid: Management of Sex Partners

Examine and treat partner whether symptomatic or not if partner contact ≤ 10 days prior to onset

Urethritis

- Curable
- Mucopurulent or purulent discharge
- Can be asymptomatic

Treatment of Nongonococcal Urethritis

Azithromycin 1 gm in a single dose or Doxycycline 100 mg bid x 7 days

Treatment of Nongonococcal Urethritis

Alternative regimens
- Erythromycin base 500 mg qid for 7 days
- Erythromycin ethylsuccinate 800 mg qid for 7 days
- Ofloxacin 300 mg twice daily for 7 days
- Levofloxacin 500 mg daily for 7 days
Chlamydia Screening

- Annual screening of sexually active women ≤ 25 yrs
- Annual screening of sexually active women > 25 yrs with risk factors
- Sexual risk assessment may indicate more frequent screening for some women
- Re-screen women 3-4 months after treatment due to high prevalence of repeat infection

Characteristics of Chlamydia

- Curable, but can cause permanent damage
- Asymptomatic
- Mucopurulent discharge

Treatment of Chlamydia

Azithromycin 1 gm single dose
or
Doxycycline 100 mg bid x 7d

Alternative regimens

Erythromycin base 500 mg qid for 7 days
or
Erythromycin ethylsuccinate 800 mg qid for 7 days
or
Ofloxacin 300 mg twice daily for 7 days
or
Levofloxacin 500 mg for 7 days
**Treatment of Chlamydia in Pregnancy**

**Recommended regimens**
- Erythromycin base 500 mg qid for 7 days
  or
- Amoxicillin 500 mg three times daily for 7 days

**Alternative regimens**
- Erythromycin base 250 mg qid for 14 days
  or
- Erythromycin ethylsuccinate 800 mg qid for 14 days
  or
- Erythromycin ethylsuccinate 400 mg qid for 14 days
  or
- Azithromycin 1 gm in a single dose

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**Neisseria gonorrhoeae**

**Characteristics of gonorrhoeae**
- Curable, but can cause permanent damage
- Asymptomatic
- Mucopurulent discharge

**Treatment of gonorrhoeae**

**Cervix, Urethra, Rectum**
- Cefixime 400 mg
  or
- Ceftriaxone 125 IM
  or
- Ciprofloxacin 500 mg
  or
- Ofloxacin 400 mg/Levofloxacin 250 mg

*PLUS Chlamydial therapy if infection not ruled out*

**Pharynx**
- Ceftriaxone 125 IM in a single dose
  or
- Ciprofloxacin 500 mg in a single dose

*PLUS Chlamydial therapy if infection not ruled out*
Treatment of gonorrhoeae in pregnancy

- Cephalosporin regimen
- Women who can’t tolerate cephalosporin regimen may receive 2 g spectinomycin IM
- No quinolone or tetracycline regimen
- Erythromycin or amoxicillin for presumptive or diagnosed chlamydial infection

Antimicrobial Resistance in the treatment of gonorrhoeae

- Geographic variation in resistance to penicillin and tetracycline
- No significant resistance to ceftriaxone
- Fluoroquinolone resistance in SE Asia, Pacific, Hawaii, California
- Surveillance is crucial for guiding therapy recommendations

Vaginitis

Characteristics of Candida Vaginitis

- Curable
- Thick white discharge, “cottage cheese”
- Itchy
- Microscopy

Treatment of Candida Vaginitis

**Intravaginal regimens**
- Butoconazole, clotrimazole, miconazole, nystatin, tioconazole, terconazole

**Oral regimen**
- Fluconazole 150 mg in a single dose

Recurrent Candida Vaginitis

- Four or more symptomatic episodes/year
- Vaginal culture useful to confirm diagnosis and identify unusual species
- Initial regimen of 7-14 days topical therapy or fluconazole 150 mg (repeat 72 hr)
- Maintenance regimens- clotrimazole, ketoconazole, fluconazole, itraconazole
- Non-albicans VVC- longer duration of therapy with non-azole regimen
### Candida Vaginitis: Management of Sex Partners
- Treatment not recommended
- Treatment of male partners does not reduce frequency of recurrences in the female
- Male partners with balanitis may benefit from treatment

### Treatment of Candida Vaginitis in Pregnancy
- Only topical intravaginal regimens recommended
- Most specialists recommend 7 days of therapy

### Characteristics of Trichomoniawisis
- Curable
- Discharge
- Microscopy

### Treatment of Trichomoniawisis
**Recommended regimen**
Metronidazole 2 gm orally in a single dose

**Alternative regimen**
Metronidazole 500 mg twice a day for 7 days

**Pregnancy**
Metronidazole 2 gm orally in a single dose

### Trichomoniawisis: Management of Sex Partners
- Sex partners should be treated
- Avoid intercourse until therapy is completed and patient and partner are asymptomatic
**Bacterial Vaginitis**

Characteristics Bacterial Vaginosis
- Curable
- Fishy odor
- KOH test
- Microscopy, clue cells

**Treatment of Bacterial Vaginitis**
- Metronidazole 500 mg twice daily for 7 days
  - or
- Metronidazole gel 0.75%, 5 g intravaginally once daily for 5 days
  - or
- Clindamycin cream 5%, 5 g intravaginally qhs for 7 days

**Pelvic Inflammatory Disease**

Curable, but can cause permanent damage!

**Characteristics of Pelvic Inflammatory Disease**

- **Minimum Diagnostic Criteria**
  - Uterine/adnexal tenderness or cervical motion tenderness
- **Additional Diagnostic Criteria**
  - Oral temperature >38.3°C  Elevated ESR
  - Cervical CT or GC  Elevated CRP
  - WBCs/saline microscopy  Cx discharge

**Bacterial Vaginitis: Management of Sex Partners**

Woman’s response to therapy and the likelihood of relapse or recurrence not affected by treatment of sex partner.
Pelvic Inflammatory Disease

**Definitive Diagnostic Criteria**
- Endometrial biopsy with histopathologic evidence of endometritis
- Transvaginal sonography or MRI showing thick fluid-filled tubes
- Laparoscopic abnormalities consistent with PID

Hospitalization in Pelvic Inflammatory Disease

- Surgical emergencies not excluded
- Pregnancy
- Clinical failure of oral antimicrobials
- Inability to follow or tolerate oral regimen
- Severe illness, nausea/vomiting, high fever
- Tubo-ovarian abscess

Treatment of Pelvic Inflammatory Disease

Oral & Parenteral

Pelvic Inflammatory Disease: Management of Sex Partners

- Male sex partners of women with PID should be examined and treated for sexual contact 60 days preceding pt’s onset of symptoms
- Sex partners should be treated empirically with regimens effective against CT and GC

Human Papilloma Virus

- Incurable, chronic disease
- Asymptomatic
- Genital warts
- Link to cervical cancer
Treatment of Papillomavirus

• Primary goal for treatment of visible warts is the removal of symptomatic warts
• Difficult to determine if treatment reduces transmission

Treatment of Papillomavirus

Patient-applied
Podofilox 0.5% solution or gel or Imiquimod 5% cream (Aldara)

Provider-administered
Cryotherapy or Podophyllin resin 10-25% or Trichloroacetic or Bichloroacetic acid 80-90% or Surgical removal

Treatment of Papillomavirus in pregnancy

• Imiquimod (Aldara), podophyllin, podofilox should not be used in pregnancy
• Many specialists advocate wart removal due to possible proliferation and friability
• HPV types 6 and 11 can cause respiratory papillomatosis in infants and children
• Preventative value of cesarean section is unknown; may be indicated for pelvic outlet obstruction

Cervical Cancer Screening

• Women with STD hx may be at increased risk of cervical cancer
• Clinics that offer pap screening without colposcopic f/u should arrange for referral
• Management of abnormal pap provided per Interim Guidelines for Management of Abnormal Cervical Cytology (NCI Consensus Panel)
• Emerging data support HPV testing for the triage of women with ASCUS Pap tests

Vaccine Preventable STDs

Hepatitis A

• MSM
• Illegal drug users
• Chronic liver disease, hepatitis B and C infection
Hepatitis B

- History of STD, multiple sex partners, sexually active MSM
- Illegal drug use
- Household members, sex partners of those with chronic hepatitis B
- Hemodialysis, occupational blood exposure