

# **SEXUALLY TRANSMITTED DISEASES AND VAGINOSIS/VAGINITIS**

## **TRICHOMONAS VAGINITIS:**

- Symptoms: Profuse frothy yellow-green discharge, vulvitis, itching, dyspareunia, vaginal soreness, lower abdominal discomfort, urinary urgency
- Predisposing factors: Sexual activity, pregnancy, menopause
- Sexual Transmission: Yes (but not always)
- Diagnosis: Positive wet prep with motile organisms with flagella
- Strawberry cervix. Prefers pH >4.5. Mildly positive amine whiff test
- Markedly increased WBC's
- Pathogen: Trichomonas vaginalis

### Treatment:

#### A. Non Pregnant

- Metronidazole 2gm PO x 1 or 500 mg PO BID x 7 days, No ETOH from 24 hours before to 24 hours after use (cure rate 90-95%)
- Treatment of sexual contact recommended
- Avoid sexual contact for 4 days post-treatment (symptom free)
- Treatment failure with Flagyl 2gm PO daily x 3-5 days
- Local treatment (MetroGel) is often ineffective (< 50% cure rate)

#### B. Pregnancy

- May use Metronidazole PO during pregnancy (all trimesters); is not a teratogen (Class B)
- Alternative during pregnancy to treat symptoms is clotrimazole 100mg vaginal tablets (not cream or suppository) for 7-14 days. Cure rate is 20-25% with topical treatment
- Do not use one time dose of Flagyl (2g) during pregnancy as it may cause severe nausea
- Test of cure 4 weeks after treatment recommended during pregnancy as Trich increases risk of PROM, preterm labor

## **CANDIDAL VAGINITIS:**

- Symptoms: White curd-like discharge, pruritus, vulvovaginal edema and erythema, occasional dysuria
- Predisposing factors: Diabetes, antibiotic therapy, pregnancy, OCP use, sexual activity
- Diagnosis: Positive KOH prep with yeast and/or hyphae. Prefers pH 4-5
- May have increased WBCs
- Pathogens: Candida (albicans, tropicalis, glabrata)

### Treatment:

- Intravaginal clotrimazole (preg class B), Miconazole (preg class B), Terconazole (preg class C), or Butoconazole (preg class C). Only topical Azole therapies for 7 days recommended by CDC for pregnant women.
- Fluconazole 150mg PO single dose (preg class C)
- If recurrent or resistant infections consider host factors, resistant organism or involvement of sexual partner. Also consider Fluconazole 150mg PO x1 and repeat 4 days later if unimproved.

- Creams oil-based: might weaken latex condoms and diaphragms

### **BACTERIAL VAGINOSIS:**

- Symptoms: Thin, gray-white discharge with fishy odor, itching, little inflammation, asymptomatic in 50% of cases
- Predisposing factors: Pregnancy, lactation, use of IUD, sexual activity
  - Diagnosis: Clue cells (epithelial cells with oval bacteria attached), Gram-negative bacilli, positive whiff test. Prefers pH > 4.5, thin homogenous discharge adherent to vaginal wall
- Pathogens: Gardnerella vaginalis, Mycoplasma hominis, Anaerobes
- Pregnancy: Increases risk of preterm labor if not treated

#### Treatment:

##### A. Non Pregnant-equally efficacious

- Metronidazole 500mg PO BID X 7days OR
- Metronidazole gel 5gm of 0.75% gel intravaginally daily X 5 days OR
- Clindamycin 300 mg PO BID x 7 days OR
- Clindamycin Ovules 100 mg intravaginally QHS for 3 days

##### B. Pregnancy-treat if symptomatic (or asymptomatic in patients with previous preterm delivery)

- Metronidazole 500 mg PO BID X 7 days OR
- Metronidazole 250 mg PO TID X 7 days OR
- Clindamycin 300 mg PO BID X 7 days (if allergic or unable to tolerate Metronidazole)
- Rescreen patients with previous preterm birth 4 weeks after treatment

### **GONORRHEA (CERVIX, URETHRA, ANUS):**

- Symptoms: Dysuria, urinary frequency, yellow-green purulent discharge
- Predisposing factors: Sexual activity, low socioeconomic class, youth, other STDs
- Diagnosis: Yellow-green discharge, positive culture or a DNA probe, unprotected sexual contact with partner with positive test/diagnosis. If pain on exam then consider PID

#### Treatment (same for pregnant and nonpregnant):

- Ceftriaxone 125 mg IM X1 OR
- Cefixime suspension 400 mg PO X1

\*plus treatment for Chlamydia if not ruled out

#### Alternatives:

- Cephalosporin single dose PO regimen
  - Cefpodoxime 400 mg OR
  - Cefuroxime axetil 1 g
- For patient with severe allergic reaction to Penicillin or Cephalosporins:
  - Azithromycin 2 g po x 1

### **GONORRHEA OF THE PHARYNX:**

- If there is suspicion of oral GC per exposure history or pharyngeal symptoms then a culture should be done on chocolate agar

- Treatment is Ceftriaxone 125 mg IM as a single dose

**CHLAMYDIA TRACHOMATIS CERVICITIS:**

- Symptoms: Purulent endocervical discharge, dysuria, dyspareunia,
- Predisposing factors: Low socioeconomic class, youth, early first intercourse, other STDs, multiple sexual partners
- Diagnosis: Culture or DNA probe, friable edematous cervix

Treatment:

A. Non Pregnant

Recommended regimens

- Azithromycin 1 gm PO X 1 OR
- Doxycycline 100 mg PO BID X 7 days

Alternative regimens

- Erythromycin base 500 mg PO QID X 7days OR
- Erythromycin ethylsuccinate 800 mg PO QID X 7 days OR
- Ofloxacin 300 mg PO BID X 7 days OR
- Levofloxacin 500 mg PO daily for 7 days
- In general it is not mandatory to treat for gonorrhea if only chlamydia test is positive
- Partners should be tested and/or treated empirically

B. Pregnancy

- Azithromycin 1 g PO X 1 OR
- Amoxicillin 500 mg PO TID X 7 days
- Retest 4 weeks after treatment (test of cure, test for reinfection)

**SYPHILIS:**

Caused by T. pallidum, diagnosed from ulcer (Dark field microscopy and direct fluorescent antibody) or serology (RPR and FTA); test for other STD's

A. Non pregnant

1. Syphilis for less then 1 year (primary (ulcer), secondary (rash, mucocutaneous lesions, lymphadenopathy) latent(asymptomatic)

Treatment:

- Benzathine penicillin G 2.4 mil units IM X 1 (half the dose in each buttock)
- Doxycycline 100mg PO BID X 14 days

2. More than 1 year (latent, CV involvement, late benign neurosyphilis)

Treatment:

- Benzathine penicillin G 2.4 units IM weekly X 3
- Doxycycline 100mg PO BID X 4 weeks

B. Pregnancy

- When the patient is pregnant she must be treated with penicillin, even if desensitizing is needed

**CONDYLOMATA ACUMINATA:** (Venereal genital warts)

- Symptoms: Wart like lesion on vulva, vagina, cervix, anus urethra and occasionally rectum. Usually caused by Human Papilloma Virus (HPV) infection
- Predisposing factors: Sexual transmission, HIV, cigarette use, pregnancy
- Diagnosis: Clinical appearance
- Always test for other STDs

Treatment for venereal warts:

A. Provider Administered

- Podophyllin resin 10-25% in benzoin: apply small amount to wart weekly, wash off in 4 hours. Do not use on open wounds (not in pregnancy)
- Trichloroacetic acid 85% (TCA) apply to warts and allow to dry. If excess amount of acid is applied, the treated area should be rinsed with sodium bicarb or liquid soap to remove unneeded acid. Repeat weekly OR
- Cryotherapy with liquid nitrogen or cryoprobe; reapply every 1-2 weeks as needed OR
- Surgical removal by tangential scissors, shave, curettage, electrosurgery or laser surgery
- Immunological therapy by intralesional interferon

B. Patient Administered-**not for use in pregnancy**

- Podofilox 0.5% solution or gel: apply to wart only, avoid contact with skin, apply BID for 3 days, no treatment for 4 days, may repeat for total of 4 cycles OR
- Imiquimod (Aldara) 5% cream: apply to warts three times weekly up to 16 weeks, wash off 6-10 hours later with soap and water

Venereal warts are not an indication for c-section (deliver vaginally) unless warts obstruct birth canal or warts have significant bleeding.

**GENITAL HERPES SIMPLEX VIRUS (NONPREGNANT STATE):**

- A recurrent, lifelong viral infection
- Both HSV-1 and HSV-2 can cause genital herpes. 20% of infection is by HSV-1, but recurrences are much less frequent than HSV-2
- Symptoms: Painful multiple vesicular or ulcerative lesions on vulva
- Diagnosis: Clinical appearance of the lesion; cell cultures remains standard diagnostic tool (high rate of false negative); DNA polymerase chain react (PCR) – sensitivity 95%, coming soon, will detect evidence of virus several days longer than culture will; serologic testing – can detect between HSV-1 and HSV-2, useful in determining whether infection is primary or recurrent
- If lesions present at time of delivery, the patient needs a C-section

Treatment (pregnant and non pregnant):

- Primary infection:
  1. Acyclovir 400mg PO TID for 10 days or 200 mg 5x per day/10 days OR
  2. Famciclovir 250mg PO TID for 10 days OR  
(if immunosuppressed 500 mg PO BID 7 days)
  3. Valacyclovir 1000 mg PO BID for 10 daysNOTE: Treatment may be extended if healing is incomplete after 10 days of therapy
- Recurrent:
  1. Acyclovir 400 mg PO TID for 5 days OR
  2. Acyclovir 800 mg PO BID for 5 days OR
  3. Acyclovir 800 mg PO TID X 2 days OR
  4. Famciclovir 125mg PO BID for 5 days OR
  5. Famciclovir 1000 mg BID X 1 day OR
  6. Valacyclovir 500mg PO BID for 3 days OR
  7. Valacyclovir 1g PO daily x5 days
- Chronic suppression: Can use all up to 1 year (start at 36 weeks until delivery)
  1. Acyclovir 400 mg PO BID
  2. Famciclovir 250 mg PO BID
  3. Valacyclovir 500mg PO daily
  4. Valacyclovir 1 g PO daily

### **GENTIAL HERPES SIMPLEX VIRUS (HSV) IN PREGNANCY:**

Natural history:

- 2% of patients acquire HSV for first time in pregnancy
- HSV-2 = 80% of genital infections
- HSV-1 = 20% of genital infections

Perinatal outcome:

- Risk of vertical transmission of HSV-2 virus from mother to neonate = 50% if newborn is exposed to a first episode lesion; 33% nonprimary first episode
- If exposure is to a recurrent lesion, the risk is 3%
- If mother has chronic HSV infection and shedding virus in asymptomatic manner, the risk of transmission is 0.04%

Diagnosis:

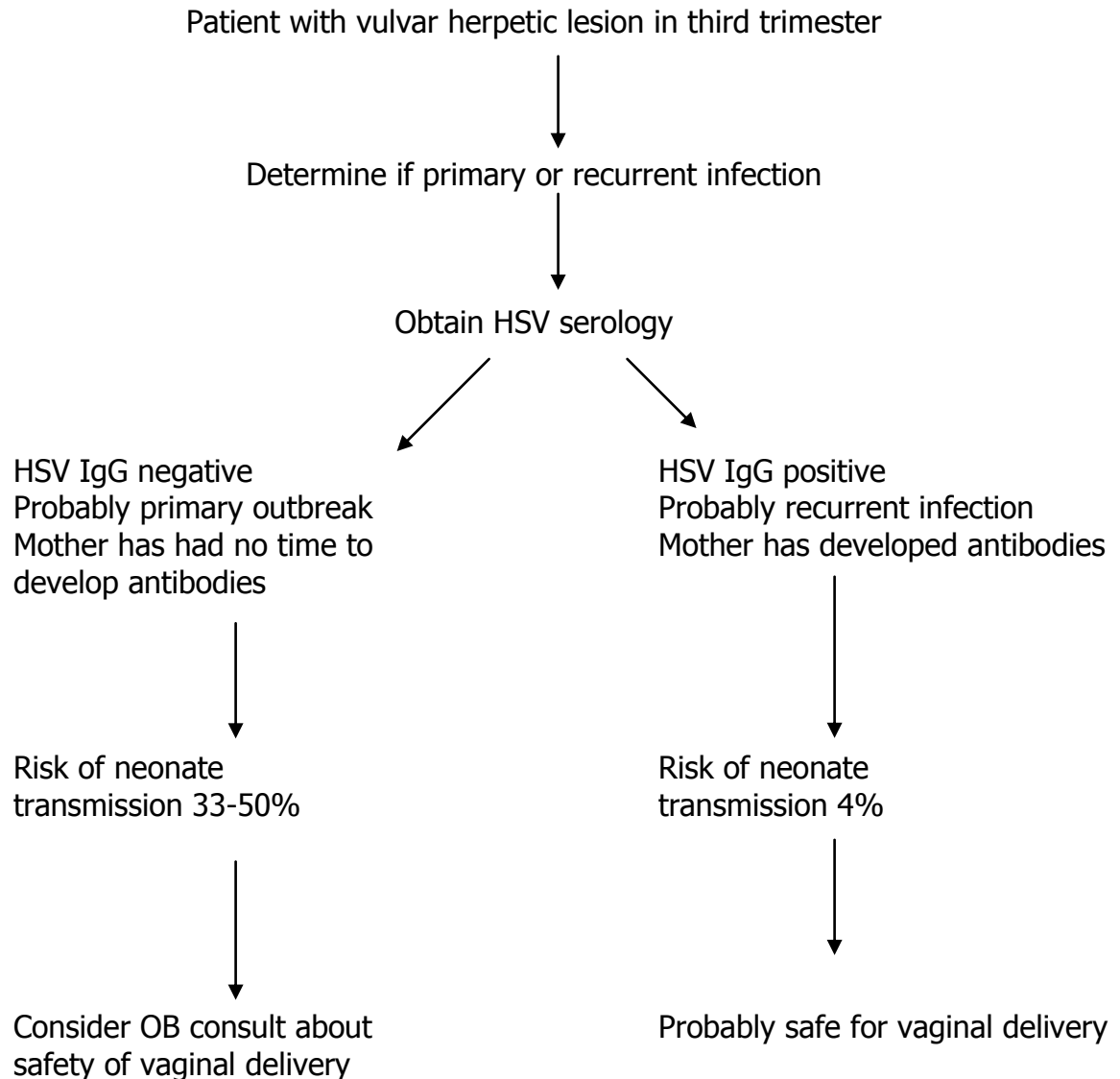
- Determine if mother is having a primary outbreak or a recurrent infection
- Check IgG (see table on following page)

REFERENCES:

CDC STD Guidelines 2006; [www.cdc.gov/std/treatment/2006/toc.htm](http://www.cdc.gov/std/treatment/2006/toc.htm)  
MMWR Weekly April 2007

## THIRD TRIMESTER GENITAL HERPES INFECTION

### 1. Patient with active herpes lesions in third trimester



2. Patient with active herpes lesion at time of labor need to be delivered by C-section.
  - Do complete exam of perineum upon admission to L&D.
3. Patient with history of recurrent genital herpes, but with no active lesions in third trimester
  - No need to check cultures
  - Acyclovir 400 mg PO TID x4 weeks OR Valtrex 500 mg PO BID for herpes suppression to increase the chances of a vaginal delivery.