

● 4235 6-08

● Sexually Transmitted
Diseases and Other Common

● Vaginal Infections

- Learning objectives
 - Compare the various types of vaginal infections and STIs and the signs, symptoms, and treatments of each
 - Describe care of the woman/man with an infectious disorder of the reproductive tract
 - Use the nursing process as a framework for care of the patient with a vulvovaginal infections.
 - Use the nursing process as a framework for care of the patient with sexually transmitted infections.
 - Identify preventative measures that can reduce the incidence and spread of infection
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- Concepts
 - Comfort/Pain
 - Skin integrity
 - Health maintenance/promotion
 - Immunity/infection
 - Psychosocial
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- Introduction
 - Disorders of female reproductive system usually anxiety producing
 - Requires that nurses have knowledge, understanding and skill in patient teaching
 - Nurse's role related to prevention
 - Must also be sensitive to clients' discomfort in discussing and dealing with these problems

- Normal Vagina
- Has normal pH of 3.5-4.5
 - pH maintained in part by normal vaginal lactobacillus acidophilus bacteria that produce lactic acid
- Acidity is first line of defense against infections
- Anything that alters pH of vagina alters normal flora, increases risk of infections

- Vulvovaginal Infections
- Vaginitis is inflammation of vagina
 - Maybe accompanied by urethritis
 - Discharge irritating may cause itching, odor, redness, burning, edema
- Risk factors for vulvovaginal infections
 - Pregnancy
 - Menopause
 - Poor hygiene
 - Tight and/or synthetic clothing
 - Frequent douching
 - Allergies
 - OCs, antibiotics
 - DM
 - Intercourse with infected partner
 - Oral-genital contact
 - HIV infection

- Candidiasis (Monilia)
 - Most common cause of vaginitis
 - Is fungal or yeast that normally colonizes vagina
 - Under certain circumstances, normal flora changes, yeast takes over, pH 4.5 or less
 - Steroids
 - Antibiotics
 - OCs

- DM
- AIDS
- Pregnancy
- If reoccurs frequently, need to see MD/NP
- Not an STI, but men can get itching and redness of glans
- Signs
 - Watery to thick white cottage cheese look
 - Causes itching, irritation, results in redness of vulva, pain with void
 - Symptoms more severe just prior to menses
- Diagnosis
 - Microscopic identification of spores and hyphae
- Treatment goal to eliminate symptoms
 - Use antifungal agents: miconazole (Monistat), nystatin (Mycostatin), clotrimazole (Gyne-Lotrimin) and terconazole (Terazol) vaginally for 1-7 nights
 - Oral med fluconazole (Diflucan) as single dose
 - OTC meds only if client certain has yeast
- Vulvovaginal Infections
- Bacterial Vaginosis (BV)
 - Caused by overgrowth of anaerobic bacteria, lack of lactobacilli
 - Symptoms
 - Fish like odor, especially after sex, during menses
 - Heavier than normal discharge, usually gray to yellowish-white
 - Risk factors
 - Douching
 - Smoking
 - Multiple sex partners
 - STDs
 - Increased sexual activity
 - Not an actual STI
 - Diagnosis
 - Whiff test – KOH added to secretions
 - Wet mount – clue cells visible
 - pH > 4.7
 - Associated with PTL, endometritis, and UTI
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- Treatment
 - Metronidazole (Flagyl) bid x 7 days
 - Clindamycin (Cleocin) vaginal cream or suppositories also effective
 - Partner treatment not effective

● Sexually Transmitted Infections (STIs)

- Transmitted thru sexual activity
- High risk behaviors
 - Unprotected sex with multiple partners or a partner with multiple partners
 - Use of drugs and alcohol, impair judgment, decision making
- Are epidemic today, highest incidence in adolescents and young adults
- Methods of contraception have impact on risk for transmission of infections
 - Condoms best
- Some viral STIs remain in body for lifetime, may have long term complications
- With STIs, avoid intercourse until all partners treated

● Trichomoniasis

- Caused by protazoan
- Symptoms
 - Vaginal discharge, thin or frothy, malodorous, yellow-green to brownish-gray in color
 - Vulvar itching, edema, redness
 - Men usually have no symptoms
- Diagnosis
 - By wet mount
- Treatment
 - Metronidazole (Flagyl) in single 2 gram dose
 - Avoid alcohol for 24 hours after treatment
 - Metallic taste
 - Avoid in first trimester of pregnancy, while breastfeeding

- Chlamydia
- Caused by Chlamydia trachomatis
- Often coexists with gonorrhea (GC)
- Especially high occurrence in teens, young adults
- Often asymptomatic, makes diagnosis, control difficult
- Symptoms if present
 - Yellowish vaginal discharge and painful urination
 - Men can have thin, milky penile discharge, dysuria
- Let untreated can ascend, result in pelvic inflammatory disease (PID) or epididymitis in men
- Treatment
 - Azithromycin (Zithromax)
 - Doxycycline (Vibramycin)
 - Ofloxacin (Floxin)
 - Levofloxacin (Levaquin)
 - Erythromycin
- Treatment usually includes treatment for GC as well since often coexist
- Nursing Management
 - Reportable disease

- Gonorrhea (GC)
- Caused by Neisseria gonorrhoeae
- Often asymptomatic, if symptoms present includes
 - Purulent vaginal discharge, purulent penile discharge
 - Dysuria
 - Painful intercourse
- Diagnosis
 - By culture
- Also associated with PID
- Treatment

- Cefixime (Suprax)
- Ceftriaxone (Rocephin)
- Ciprofloxacin (Cipro)
- Often coexists with chlamydia, so treat for both
- Nursing Management
 - Reportable disease

- Pelvic Inflammatory Disease (PID)
- Begins with cervicitis (infection of endocervical canal), then infection ascends to uterus, tubes, ovaries and pelvic cavity
- GC and chlamydia most common cause
- Symptoms
 - May be asymptomatic or low grade to severe
 - Purulent vaginal discharge, irregular bleeding
 - Dyspareunia (painful intercourse)
 - Lower abdominal or pelvic pain
 - Increased pain with defecation
 - Positive chandelier sign with movement of cervix
 - General malaise, fever, anorexia, nausea, headache
- Complications
 - Infertility, ectopic pregnancies r/t scarring of tubes
 - Rupture of abscess
 - Adhesions resulting in chronic pelvic pain
 - Septic shock
- Treatment
 - Broad spectrum antibiotic therapy for 14 days
 - May need IV antibiotics as in -patient
- Nursing management
 - Bedrest in semi-Fowlers to facilitate drainage
 - VS

- Assess vaginal drainage
 - Administer analgesics as needed
 - Heating pad to abdomen
 - Education r/t transmission, prevention, signs and sx of re-infection and ectopic
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- Human Papillomavirus (HPV)
 - Most common STI
 - More than 80 strains exist, some associated with cervical cancer
 - Infections can be latent, sub-clinical or evident, so may not have symptoms
 - Types 6 & 11 cause condylomata (warts) on vulva, perineum and vagina, low risk for cervical cancer
 - Men may have warts on penis, scrotum, perineum
 - Types 16, 18, 31, 33, 45 don't cause warts, but associated with cervical changes
 - 16 and 18 cause most cases of cervical cancer
 - Most women with HPV don't develop cervical cancer
 - Diagnosis
 - DNA test
 - Colposcopy with acetic acid
 - Visible warts
 - Infection often eradicated by immune system
 - Prevention
 - Vaccine (Gardasil) prevents transmission of 2 HPV strains that cause most cases of cervical cancer
 - Recommend that vaccine be routinely given to all girls ages 11-12, young as 9 up to age 26
 - Three doses, second one given 2 months after first, third given 6 months after first
 - Treatment
 - External warts
 - Trichloroacetic acid (TCA), podophyllin topical treatments done by practitioner
 - Podofilox (Condylox) and imiquimod (Aldara) topical treatment done by client – prescription required
 - Neither should be used in pregnancy, mild pain, irritation common

- Electrocautery and laser used in large number of warts
- Treatment usually eradicates warts not virus, may recur
- May resolve spontaneously
- Education
 - Should have annual pap
 - Condom use doesn't cover all areas that transmit virus
- Nursing role
 - Client often angry with diagnosis, nurse provides support and facts

- Herpes Simplex Virus (HSV)
 - Is recurrent life-long viral infection
 - Belongs to same family as shingles, chicken pox, cold sores
 - Causes herpetic lesions (blisters) on external genitalia, cervix, vagina, penis, scrotum
 - Also on mouth, skin, and conjunctivae
 - Is sexually transmitted or by self inoculation
 - Stress good handwashing to prevent spread
 - Can be spread even when no symptoms
 - Initial outbreak usually very painful
 - Can be asymptomatic
 - Recurrences less painful
 - Number of recurrences vary person to person
 - Recurrences may be associated with
 - Stress, sunburn
 - Inadequate rest and nutrition
 - Menses
 - Symptoms
 - Symptoms begin to emerge 2-12 days after infection
 - Begins with redness, swelling
 - Macules to papules to vesicles then appear
 - Vesicles rupture within 1-7 days
 - Ulcers form which crust over , heal in about 7-10 days
 - Flu like symptoms may appear 3-4 days after lesions emerge

- Enlarged lymph nodes in groin
- Dysuria
- When symptoms gone, virus ascends into nerve ganglia, is dormant
- Diagnosis
 - Made clinically, viral culture
- Treatment
 - No cure, treatment aimed at relieving symptoms
 - Antiviral agents can suppress symptoms, shorten course , lessen viral shedding, recurrence
 - acyclovir (Zovirax),
 - valacyclovir (Valtrex)
 - famciclovir (Famvir)
- In pregnancy, woman with active herpes can infect baby at birth, calls for C/S

● Nursing Process: Care of the Patient With Genital Herpes: Assessment

- Health history
- Examination
- Assess for risk factors for STDs.

● Nursing Process: Care of the Patient With Genital Herpes: Diagnosis

- Acute pain
- Risk for infection
- Risk for spread of infection
- Anxiety
- Deficient knowledge

● Nursing Process: Care of the Patient With Genital Herpes: Planning

- Major goals include
 - Relief of pain and discomfort,
 - Control of the infection and its spread
 - Relief of anxiety

- Knowledge of and adherence to treatment regimen
 - Knowledge regarding implications for the future
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- Interventions
 - Proper hygiene
 - Clean, soft, loose, absorbent clothing
 - Avoid ointments and powders.
 - Encourage fluid intake and good nutrition.
 - Measures related to discomfort with urination
 - Instructions regarding medications
 - Rest
 - Measures to prevent reinfection and spread of infection
 - Measures to reduce anxiety
 - Reportable disease
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- Human Immunodeficiency Virus (HIV)
 - Remains a critical public health issue world wide
 - Young, minority females fastest growing AIDS population
 - Why? Semen has high quantity of HIV, remains in vagina, injury to vaginal tissue with intercourse
 - Usually thru heterosexual exposure
 - Risk increases with presence of open lesion
 - More likely to develop cervical cancer, need Pap smears
 - Impacts reproduction
 - All pregnant women offered screening after counseling
 - Nonoxynol – 9 may increase risk even tho kills virus
 - Virus transmitted in body fluids usually by intimate contact:
 - Blood
 - Seminal fluid

- Vaginal secretion
- Amniotic fluid
- Breast milk
- Diagnosis
 - EIA – antibody test
 - Western Blot – antibody test to confirm EIA
 - Viral load test – measures viral DNA in serum
- Nurses role
 - Education r/t
 - Prevention
 - Testing
- Main stages of disease
 - Acute HIV infection – no symptoms to severe flu like symptoms 3 weeks after infected, symptoms last about 1-3 weeks
 - HIV Asymptomatic – client feels well, but is infectious, lasts about 8-10 years
 - AIDS defined as presence of opportunistic disease
- Stage also determined by CD4 +T cell count
- Prevention
 - Eliminate risky behaviors
 - HCW use Universal Precautions
- Treatment
 - No cure
 - Antiretrovirals like zidovudine limit viral replication
 - Are expensive, with major side effects
 - Long term compliance low
 - Treatment in advanced disease focuses on symptomatic relief
- Nursing management
 - Reportable disease

- Syphilis
- May be acquired sexually or congenitally
- Stages reflect time from infection and symptoms
- Syphilis stages if untreated
 - Primary
 - 2-3 weeks after inoculation, painless chancre emerges
 - Heals in about 6-8 weeks
 - Highly infectious at this stage
 - Secondary
 - Is generalized infection, occurs about 2-8 weeks after initial infection
 - Skin lesions erupt, involves, trunk, palms of hand, soles of feet
 - Transmission can occur thru contact with lesions
 - After secondary stage, is period of latency
 - My last several years
 - No signs, symptoms of syphilis
 - Tertiary
 - Final stage, frequently no signs, symptoms
 - Affects multiple organs : heart, blood vessels, and CNS
 - Can cause paralysis and psychosis
- Diagnosis
 - Directly identify spirochete from lesion
 - Serologic tests
 - VDRL
 - RPR
 - FTA-ABS
- Treatment
 - In all stages best Tx is penicillin
 - Can also use ceftriaxone and doxycycline
- Nursing management
 - Is reportable disease
 - Since lesions highly infectious, wear gloves during contact, wash hands

- Pediculosis Pubis (Crabs)
- Lice localized to pubic area, transmitted by sexual contact
 - Can infest chest, axillary, and facial hair, eyebrows and eyelashes
 - Presence of lice in eyebrows or eyelashes of pre-pubescent child suggests sexual abuse
- Symptoms
 - Intense itching, especially at night
- Diagnosis
 - Visualization of live lice or their nits
- Treatment
 - Bathe with soap and water
 - Then apply Kwell, Elimite or Nix to affected areas
 - Remove remaining nits
- Potential for secondary infection
- Nursing management
 - Educate about treatment which includes sexual partner
 - Remove nits
 - Wash in hot water all bedding, clothing
 - Vacuum carpets

- Urinary Tract Infection (UTI)
- Normal urinary tract sterile
 - Infection caused by bacteria in tract, often fecal organisms
- Classified as upper or lower UTI
 - Lower
 - Includes cystitis, prostatitis and urethritis
 - Upper
 - Includes chronic or acute pyelonephritis (infection of renal pelvis)
- UTI more common in women

- Lower UTI
 - Most common UTI
 - Risk factors
 - Failure to completely empty bladder
 - Obstructed urinary flow
 - Decreased immune system
 - Instrumentation of urinary tract
 - Inflammation or abrasion of the urethral mucose
 - Contributing factors
 - Pregnancy, diabetes, neurologic disorder, gout
 - Symptoms
 - Often symptomatic
 - Dysuria
 - Burning
 - Frequency (more often than q 3 hours)
 - Nocturia
 - Incontinence
 - Suprapubic or pelvic pain
 - If neglected can lead to septic shock
 - Diagnosis
 - Urine culture
 - Microscopic study with WBC (pyuria)
 - Dipstick test for WBCs and nitrites
 - Should also consider STI as possible cause
 - Treatment
 - Antibacterial for 3-4 or 7-10 days depending on med
 - Commonly used meds
 - Trimethoprim-sulfamethoxazole (TMP-SMZ, Bactrim, Septra)
 - Nitrofurantoin (Macrobid, Macrochantin, Furadantin)
 - Ciproflxacin (Cipro)
 - Levofloxacin (Levaquin)
 - Urinary analgesic used to relieve discomfort
 - Phenazopyridine (Pyridium)
- Upper UTI
 - Pyelonephritis
 - Cause
 - By ascension of bacterial from lower UTI to kidney
 - Or by obstruction that causes urine stasis such as bladder tumors, enlarged prostate, and stones
 - May be acute or chronic

- Chronic results in scarred kidneys that don't function
- Acute pyelonephritis
 - Symptoms
 - Acutely ill – fever, chills, bacteriuria, pyuria
 - Low back and/or flank pain
 - Nausea, vomiting
 - Headache, malaise
 - Painful urination, frequency
 - Diagnosis
 - CVA tenderness
 - Culture and sensitivity
 - Treatment
 - Outpatient treatment unless signs of sepsis, dehydration, N/V
 - Must be reliable, responsible
 - Usual course is 2 week treatment with TMP-SMZ, ciprofloxacin, or gentamicin with ampicillin
 - Should have re-culture 2 weeks after med completed
 - Potential complication
 - Chronic or recurring infection needing long term antibiotics
- Toxic Shock Syndrome (TSS)
- Rare potentially fatal condition
- Caused by toxin producing strains of Staphylococcus aureus
 - Toxins
 - Alter capillary permeability, allows fluid to leak from vessels, results in hypovolemia, hypotension and shock
 - Causes damage to organs and tissue
 - Precipitates coagulation defects (DIC)
 - Use of high absorbency tampons or diaphragm hold bacteria if left for long periods of time
- Symptoms
 - Sudden spiking fever, flu like symptoms (headache, sore throat, vomiting, diarrhea)
 - Hypotension
 - Generalized sunburn-like rash
 - Skin peeling from palms and soles 1-2 weeks after illness onset
- Treatment
 - Fluid replacement

- Vasopressor drugs
- Antimicrobial drugs
- Client education
 - Prevention strategies
 - Wash hands prior to inserting tampon or diaphragm
 - Change tampon q 4 hours
 - Don't use super absorbent tampons
 - Use pads at night
 - Don't use diaphragm during menses
 - Remove diaphragm within time recommended by health care provider