Chapter 55
Care of the Patient with HIV/AIDS

History of HIV
- Remains somewhat obscure
- The earlier case dates to 1959
- It has been estimated that HIV began to radiate from its source around the 1930s
- HIV has been recognized as a clinical syndrome since the early 1980s
- In 1987, the CDC reported three cases of occupationally acquired HIV in health care providers

HIV Modes of Transmission
- Sexual intercourse is by far the most common mode of transmission
- In the US, as many as half of newly diagnosed cases are related to IV drug use
- HIV is transmitted from human to human through infected blood, semen, cervicovaginal secretions, and breast milk
- Vertical transmission of HIV, or transmission from mother to fetus, can occur during pregnancy, during delivery, or through postpartum breastfeeding
- The three most common modes of HIV transmission are anal or vaginal intercourse, contaminated drug injecting equipment and paraphernalia, and transmission from mother to child
HIV Modes of Transmission cont’d

- HIV is not spread by
  - Air or water
  - Insects
  - Saliva
  - Tears
  - Sweat
  - Casual contact
  - Sharing dishes
  - Closed-mouth kissing

Occupational Exposure to HIV

- Almost 25,000 adults who developed AIDS before 2003 were health care workers. This represents 5% of all AIDS cases among adults who had a known occupation.
- Most of the health care workers who have been infected with HIV are nurses.
- If a health care worker does have a needlestick resulting in exposure to a known HIV-infected person, transmission risk is at just about 0.3%.
- Transmission risk is increased if the health care worker suffers a deep injury at the time of the exposure.

Spectrum of HIV Infection

- HIV
- AIDS
HIV

- Encompasses the immune system’s progressive dysfunction produced by the viral activity within the host
- Signs and symptoms include night sweats, weight loss, diarrhea, unexplainable fevers, and fatigue

AIDS

- At this stage, the host can no longer protect itself and the body is injured
- The CD4+ count is fewer than or equal to 200 cells/mm³

Progression of HIV Infection

- The early symptomatic phase of HIV infection occurs when the CD4+ cell count drops below 500 cells/mm³
- Early symptoms include constitutional problems such as persistent unexplained fevers; recurrent, drenching night sweats; chronic diarrhea; headaches; and fatigue
- A physical examination may reveal persistent generalized lymphadenopathy
- One of the most common infections seen in individuals with early symptomatic disease is oral candidiasis
- Neurologic manifestations of HIV disease occur in more than 90% of individuals who are infected
Progression of HIV Infection cont’d

AIDS
- AIDS is the acronym used to describe the end stage of the spectrum of HIV infection
- CD4+ count decreases
- The number of viruses detectable in the blood increases rapidly
- Without treatment, the median time from an AIDS diagnosis to death averages 1 1/3 years

Trends
- Beginning in 1996, the use of highly active antiretroviral therapy (HAART) greatly increased among persons with HIV infection in the United States
- Since that time, fewer people have developed AIDS

Risk Factors
- Men who have sex with other men (MSM) comprise the biggest proportion of HIV/AIDS patients
- Hispanics and African Americans have been disproportionately infected with HIV
- African-American adults and adolescents are 10 times more likely to be diagnosed with AIDS than Caucasian adults and adolescents
Cultural Considerations

- Hispanics have a higher prevalence rate since 2000 in the US
- Undocumented residents are reluctant to seek care
- Language barriers increase difficulty in finding effective care

Blood and Blood Products

- Since 1985, blood banks in the US have screened all donated blood for HIV-1 antibodies
- Since 1992, they have also screened for HIV-2
- Blood from donors who are deemed high risk or who test positive for HIV is discarded
- In addition to HIV, blood is currently screened for HTLV-1, HTLV-2, hepatitis B virus, West Nile virus, Trypanosoma cruzi, and hepatitis C virus

Perinatal Transmission

- HIV infection can be transmitted from a mother to her infant
  - During pregnancy
  - At the time of delivery
  - Through breastfeeding
- In the United States, it is estimated that approximately 30% of infected mothers will transmit HIV to their infants
- Approximately 50% to 70% of the transmissions occur late in utero or intrapartum
Pathophysiology

- HIV is classified as a “slow” retrovirus
- After infection with these types of viruses, a long time passes before specific signs and symptoms appear
- The virus is incorporated into the host’s genetic material

Symptoms

- Night sweats
- Weight loss
- Diarrhea
- Unexplainable fevers
- Fatigue

HIV Diagnostic Testing

- Enzyme-linked immunosorbent assay (ELISA)
- Western blot
- OraQuick
HIV Laboratory Testing

- Viral load monitoring
- CD4+ cell count monitoring
- Resistance testing

Multidisciplinary Care

- Physician who specializes in HIV disease
- Social worker
- Case manager
- Dietitian
- Nurse
- Mental health professional

Physician

- Prescribes medications
- Antiretroviral therapy
- Monitor viral load
- Monitor lab values
Social Worker/Case Manager

- Focus on pointing patients to needed resources
- The case manager works closely with the social worker in planning for and meeting patient needs

Mental Health Professional

- Patients with HIV/AIDS are frequently in denial
- Because of denial, HIV/AIDS patients often neglect mental health

Nursing Interventions

- Establish rapport
- Treat in a nonjudgmental manner
- Prevent infection
- Provide patient education
- Encourage adherence to medication regimen
Palliative Care

- Not synonymous with hospice
- Enables patient to achieve the highest level of comfort

Opportunistic Diseases Associated with HIV

- Candidiasis of bronchi, trachea, esophagus, or lungs
- Invasive cervical cancer
- Coccidioidomycosis
- Cryptococcosis
- Cryptosporidiosis, chronic intestinal (greater than 1 month's duration)
- Cytomegalovirus disease (particularly CMV retinitis)
- Encephalopathy, HIV-related
- Herpes simplex

Opportunistic Diseases Associated with HIV cont’d

- Histoplasmosis
- Isosporiasis, chronic intestinal (greater than 1 month's duration)
- Kaposi’s sarcoma
- Lymphoma, multiple forms
- Mycobacterium avium complex
- Tuberculosis
Opportunistic Diseases Associated with HIV cont’d

- *Pneumocystis jiroveci pneumonia*
- *Pneumonia, recurrent*
- *Progressive multifocal leukoencephalopathy*
- *Salmonella septicemia, recurrent*
- *Toxoplasmosis of brain*
- *Wasting syndrome due to HIV*

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The Nurse’s Role in Coping

- Assess coping styles
- Encourage healthy patterns of coping
- Encourage patient to focus on positives instead of losses
- Aid patient in controlling anxiety
- Use therapeutic communication

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Minimizing Social Isolation

- Clarify misperceptions
- Provide patient and family education
- Direct patients and families to support groups
Assisting with Grieving

- Listen
- Encourage patient to explore feelings
- Provide referrals to formal counseling
- Refer to clergy

Adherence

- Adherence can be difficult due to side effects of medications and cost
- A multidisciplinary approach can help ensure adherence to regimen

HIV Prevention

- HIV is a preventable disease
- Abstinence
- Monogamy
- Limit number of sex partners
- Condom use
- Use water-based lubricants
- Avoid IV drug use
The Nurse's Role in Prevention

- First and foremost, protect yourself
- Provide patient education
- Counsel patients on avoiding risks