

Answers

CHAPTER 20 NURSING CARE OF PATIENTS WITH HIV AND AIDS

AUDIO CASE STUDY

Mrs. Harris and HIV

1. Incidents of HIV are increasing for adults age 50 and older and for Black individuals.
2. Unprotected sex (e.g., no condom or no dental dam for oral sex), multiple partners.
3. No, HIV is transmitted only through infected blood, semen, vaginal secretions, or breast milk. AIDS can occur as the end stage of an HIV infection.

VOCABULARY

Sample sentences will vary for the Vocabulary problems.

1. AIDS
2. CD4 T lymphocyte
3. Genotyping
4. Opportunistic infections
5. AIDS wasting syndrome
6. Viral load

DIAGNOSTIC TESTS

1. HIV antigen/antibody combination (fourth-generation) immunoassay detects both HIV-1 and HIV-2 antibodies and HIV-1 p24 antigen. If the test is positive, an antibody immunoassay test to differentiate between HIV-1 and HIV-2 antibodies should be done. If the combination immunoassay is positive but the antibody differentiation immunoassay is nonreactive or inconclusive, an HIV-1 nucleic acid test should be done for confirmation.
2. CD4 T lymphocyte count is essential for initial evaluation of the status of the immune system and need for antiretroviral therapy (ART). In healthy adults, levels average approximately 332 to 1,642 cells/microL. It is recommended that CD4 T lymphocyte counts be performed at 3- to 6-month intervals when ART is deferred. Those who begin ART should be tested at 3 months. For those who have consistent CD4 levels above 300 cells/microL, suppressed viral load testing is recommended every 3 to 6 months or when clinically needed for 2 years, and then annually.

3. Viral load testing measures the amount of HIV RNA in plasma and is extremely important for determining prognosis and risk of opportunistic infections and for monitoring response to ART. Viral load should be performed before starting ART, within 1 month afterward, then at 3 to 4 months for 2 years. After 2 years, monitoring for consistently suppressed viral load is done every 6 months or for detectable viremia every 3 months.
4. Genotyping measures resistance to currently available antiviral treatments. This information guides health-care providers in choosing treatment regimens that will be most effective against each individual's virus.

HIV

1. blood, semen, vaginal secretions, breast milk
2. many
3. early
4. window

HIV AND AIDS

1. False. The end stage of an HIV infection is AIDS.
2. True
3. False. Anyone may become infected with HIV if exposure occurs.
4. True
5. False. An incubation period occurs following exposure, so testing 1 to 2 days later would be inconclusive; antigens are detectable 2 weeks after infection with the virus. Antibodies form usually within 3 weeks to 3 months. Early detection HIV tests detect HIV infection as soon as 1 week after potential exposure.
6. False. Standard precautions are used with all patients, so isolation is not routinely necessary for patients with AIDS unless ordered for special reasons.

CRITICAL THINKING AND CLINICAL JUDGMENT

1. The patient is told that he is HIV positive because he has been infected with HIV but does not have AIDS at this time. With therapy, an HIV infection is now a chronic, sometimes progressive immune disorder. If AIDS develops, there is no cure, but it may be manageable.
2. AIDS occurs when the CD4 T lymphocyte cell count is less than 200 cells/microL and/or when there is the presence of an opportunistic infection or cancer.

3. To prevent pneumocystis pneumonia and toxoplasmosis opportunistic infections from developing.
4. (a) Sam is malnourished, which can be very challenging to overcome once it occurs. Candidiasis, medications, and peripheral and central nervous system disease tend to decrease the senses of taste and smell. This, along with discomfort, anorexia, and fatigue, predisposes the patient with AIDS to nutritional deficiencies. Interventions to prevent malnutrition are essential to implement.
- (b) **C:** I am concerned about Sam Donner's nutritional status.
U: I'm uncomfortable that he has no appetite and is fatigued while being 6 feet tall and weighing 135 pounds.
S: I believe that his safety is at risk.
- (c) Medicated swish and swallows, topical anesthetic sprays, and flavor enhancers may promote increased food intake. Pain relief, activity, and sleep may also be helpful.
5. Dementia occurs from encephalopathy caused by direct infection of brain tissue by HIV.
6. Possible transmission to a nurse can occur from bodily secretions or blood of an infected person coming into contact with a nurse's blood through a break in the nurse's skin or needle stick, or through contact with mucous membranes.
7. The recommended disinfectant is household bleach in a 1:10 dilution mixture prepared daily. Use it to disinfect body fluid spill areas, to clean toilet seats and bathroom fixtures, and to clean inside the refrigerator to avoid growth of mold. Rinse clothing and wash separately from other clothes with 1 cup of bleach if soiled with blood, urine, feces, or semen. Dishes and silverware are washed in hot, soapy water and rinsed thoroughly or placed in dishwasher.

CLINICAL JUDGMENT

1. Is he taking his medication with food? When does he take the medication? Is it around the same time each day?
2. PrEP, condoms, dental dams, and use of oral condoms during oral sex.
3. Atorvastatin, steroids, calcium channel blockers, and certain mental health medications.
4. Hypertension, hyperlipidemia, and tobacco use.

REVIEW QUESTIONS

*The correct answers are in **boldface**.*

1. (1, 5) are correct. HIV is transmitted from human to human only through infected blood and sexual secretions, and from an infected mother to her unborn baby or to her infant via breast milk. (2, 3, 4, 6) are incorrect.
2. (1, 3, 5, 6) are correct. CD4 T lymphocyte testing is done before antiretroviral therapy is started and at 3 months after beginning antiretroviral therapy. Then, those who have consistent CD4 levels above 300 cells/microL and suppressed viral load are tested every 3 to 6 months for 2 years or as clinically needed, and then annually. (2, 4) are incorrect.
3. (3, 4, 5) are correct. The only fluids from a person infected with HIV that can transmit HIV include blood, semen, preseminal fluid, vaginal secretions, rectal fluids, and breast milk. (1, 2, 6) These fluids do not transmit HIV.
4. (1, 2, 3, 4) are correct. These diagnostic tests are used to identify an HIV infection. (5) A urinalysis does not identify the presence of HIV.
5. (2) is correct. Water-soluble fiber foods reduce diarrhea by solidifying loose, watery stools and holding water. (1, 3, 4) do not necessarily have an effect on diarrhea.
6. (1) is correct. (2, 3, 4) With antiretroviral therapy, these more severe opportunistic infections occur less commonly.
7. (4) is correct. Guidelines for HIV screening of pregnant women recommend that HIV counseling and then voluntary testing be offered during routine prenatal care for all pregnant women and again in the third trimester for women at high risk. (1, 2, 3) do not follow the guidelines.
8. (2, 6) are correct. Safe food items can include steaming-hot foods and self-peeled fruits. So, cooked vegetables are safer. (1, 3, 4, 5) Foods that contain uncooked eggs (Caesar dressing), soft cheese, or raw foods are riskier for infection.
9. (2) is correct. Standard precautions are used for all patients. (1, 3) Personal protective equipment is only needed when there will or could be contact with blood or body fluids. (4) HIV is not an airborne-transmitted virus that requires wearing a mask.
10. (1, 3, 5, 6) are correct. Viral load testing is done before antiretroviral therapy is started and within 1 month after beginning antiretroviral therapy. Then it is done for those who have consistently suppressed viral loads every 3 to 4 months or as clinically needed for 2 years, and then every 6 months thereafter. (2, 4) are incorrect.
11. (1, 3, 4) are correct. HIV risk reduction includes using condoms and dental dams (latex sheets) as a barrier for the mouth and genitals or anus every time. Latex is used because other materials have large pores that allow HIV to pass through. Condoms should be new for each sex act. Studies show that high-risk sexual behavior associated with contracting sexually transmitted infections puts people at increased risk for HIV exposure. (2, 5, 6) An estimated one in eight people are not aware of being infected, so precautions should be used every time. Petroleum- or oil-based lubricants such as petroleum jelly, cooking oil, shortening, or lotions can damage latex condoms. Adults over 50 tend to think of condoms only as a birth control measure, which is only one of their purposes.
12. (4) is correct. Flu-like symptoms indicate a reaction to abacavir sulfate (Ziagen) may be occurring. (1, 2, 3) are not symptoms of a reaction to abacavir sulfate.

13. (2) is correct. HIV is a chronically managed disease with treatment. (1) HIV is not an acute disease. (3) HIV with treatment is no longer a life-ending disease. (4) Remissions and exacerbations do not occur.
14. (2, 4, 5) are correct. The goal of highly active antiretroviral therapy is to improve survival rates, delay progression of HIV disease, and reduce HIV load to undetectable levels. (1, 3, 6) Since HIV causes decreased CD4 T lymphocytes, the goal of highly active antiretroviral therapy is to reduce the HIV load so that CD4 T lymphocytes will increase, which improves immune system function rather than suppresses it.
15. (1, 2, 3, 4) are correct. Ways to prevent HIV infection include abstinence, testing for HIV at the time of labor to begin treatment if needed, avoiding injection drug use, and autologous (self) blood transfusion. (5) Female condoms do help reduce the risk of HIV.
16. (1, 3, 4) Reducing infection risk can be done with good hygiene (hand washing, toothbrush washing), and promptly reporting infection signs. (2, 5, 6) Reusing dishes, eating deli foods that may harbor bacteria, and sharing a razor increase the risk of infection rather than decrease it.