

Clinical Tract

Group case studies

Laboratory diagnosis and monitoring of HIV

Case 1. Testing after sexual contact

The scenario

Cindy, a young woman walks into the clinic. She has a new partner, David, and wanted to delay sex until they knew each other better. The previous night, however, he told her he did not want to wait and she agreed under pressure. Since neither of them used a condom, they had unprotected sex. He evaded her questions when she asked him afterwards whether he ever had an HIV test.

She now requests an HIV test to find out whether he infected her with HIV.

Questions

1. Can you diagnose HIV infection one day after exposure? Explain the term window period.
2. What would an HIV test tell you now?
3. When will you tell her to come back for a follow-up test?

Case 2. HIV testing and monitoring in adults

The scenario

A 26-year-old woman walks into the VCT clinic. She says she wants to do an "AIDS test".

Questions

1. What pertinent questions would you ask her about her history?
2. What type of test would you offer her? What are you looking for in the blood?
3. Are you really testing for AIDS? Motivate your answer.
4. Name possible human mistakes that can happen if you do an HIV test or any other test.
5. If this HIV test should be positive, would you confirm it in any way?
6. What would the next step be at clinic level to evaluate the stage of HIV disease?
7. For this test in question 6, explain what the following counts would mean:
 - a. Above 500
 - b. 200-500
 - c. below 200
8. If she is in need of antiretrovirals, what test needs to be done before antiretrovirals are initiated?
9. If she starts taking antiretrovirals:
 - a. What are the indicators in the blood that you are going to monitor? How frequently will you do it?
 - b. What will indicate treatment success?
 - c. What will indicate possible treatment failure?

Case 3. HIV testing in children

The scenario

Lindiwe tested HIV positive in pregnancy. She and her baby received nevirapine around the time of delivery. She made the decision not to breast feed since her family can afford formula milk. The baby is now 10 weeks of age. Lindiwe wants to know if her baby has HIV.

Questions

1. What type of test would you offer her? What are you looking for in the blood?
2. Why would you offer her a different test than an adult?
3. Explain the difference in terms between HIV exposure and HIV infection in children.
4. Fortunately this child does not have HIV, but in a child with HIV infection, what marker in the blood is used to monitor the immune system?

