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Learning Objectives:

Cognitive Domain:

1. **Analyze:** Assess the risk of transmission of HBV, HCV, and HIV in the context of a needle-stick injury.
2. **Evaluate:** Prioritize post-exposure prophylaxis (PEP) measures and develop an evidence-based counseling plan.
3. **Synthesize:** Formulate a risk reduction plan, including vaccination and follow-up tests.

Psychomotor Domain:

1. **Perform:** Demonstrate appropriate post-exposure prophylaxis procedures, including wound management and referral for vaccination.
2. **Examine:** Review the patient's vaccination status, medical history, and immediate actions taken following the needle-stick injury.

Affective Domain:

1. **Value:** Show empathy, professionalism, and calm reassurance when counseling the house officer, addressing their anxiety.
2. **Respond:** Provide patient-centered care by actively listening to the house officer's concerns and providing clear, structured guidance on next steps.

✦✦ Summarise

Station Duration:

8-10 minutes

Case Scenario for the Student:

You are a final-year medical student in the Occupational Health Unit. A 26-year-old house officer has just had a needle-stick injury while inserting an intravenous cannula into a patient. The patient's disease status regarding HBV, HCV, and HIV is unknown. The house officer is not vaccinated against HBV and is visibly anxious.

Your task is to counsel the house officer regarding the risk of infection, immediate steps to take, and preventive measures, including the need for testing, post-exposure prophylaxis, and vaccination.

Instructions for the Student:

- Counsel the house officer regarding the risks of transmission of HBV, HCV, and HIV following a needle-stick injury.
- Address the house officer's concerns and anxiety.
- Explain the need for immediate testing, post-exposure prophylaxis, and the HBV vaccination protocol.
- Provide clear guidance on follow-up testing and counseling.

Examiner Guidelines and Marking Schema:

1. Initial Communication and Assessment of the Situation

- Proper greeting and introduction (1 mark)
- Acknowledge the house officer's anxiety and establish rapport (1 mark)

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- Take a brief history of the needle-stick injury (e.g., time of injury, type of needle, depth of injury) (2 marks)
- Confirm the vaccination status of the house officer (2 marks)

2. Risk Assessment and Explanation

- Explain the risks of transmission for HBV, HCV, and HIV (e.g., low risk but depends on factors like the source patient and type of injury) (2 marks)
- Clarify that HBV is preventable with vaccination, but immediate action is needed due to the lack of prior immunization (2 marks)
- Discuss the risk of HCV and the need for follow-up tests (2 marks)
- Explain the post-exposure prophylaxis (PEP) protocol for HIV (if needed based on risk) (2 marks)

3. Immediate Action and Preventive Measures

- Explain wound management (washing the area thoroughly with soap and water) (1 mark)
- Recommend immediate blood tests for the house officer (baseline HBV, HCV, HIV) and the source patient if possible (2 marks)
- Counsel on the need for HBV vaccination and possibly immunoglobulin (HBIG) if high-risk exposure is suspected (2 marks)
- Discuss the need for early follow-up tests at 6 weeks, 3 months, and 6 months (2 marks)

4. Anxiety Management and Empathy

- Address the house officer's anxiety with empathy, using a calm and reassuring tone (2 marks)
- Provide structured, clear information about the next steps (2 marks)
- Ensure the house officer understands that transmission risks are generally low and early intervention reduces the likelihood of infection (2 marks)

5. Professionalism and Effective Communication

- Use clear, simple language (1 mark)
- Summarize the key points effectively (1 mark)
- Demonstrate professionalism throughout the consultation (1 mark)

Total Marks: 25

Examiner Notes:

- The student should be able to clearly explain the risks, emphasize the importance of immediate action, and reassure the house officer.
 - Attention should be paid to providing evidence-based information, addressing the house officer's anxiety, and ensuring understanding of the vaccination protocol.
 - The focus should be on delivering clear, structured advice while maintaining empathy and professionalism.
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Patient Script (Simulated House Officer Role):

- The house officer is a 26-year-old male who is visibly anxious and concerned about contracting a serious infection following the needle-stick injury.
- He had the injury approximately one hour ago while inserting an intravenous cannula, and the patient's blood status for HBV, HCV, and HIV is unknown.
- The house officer has not been vaccinated for HBV and is worried about all three infections.
- If asked, he washed the wound briefly with water but didn't apply antiseptics or take further action.
- He repeatedly expresses anxiety and seeks reassurance about the risks

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