Hospital Infection Control-Kasturba Hospital, Manipal

Post exposure prophylaxis guidelines for Occupational exposure

Definition of occupational exposure:
An occupational exposure that may place a worker at risk of HIV/HBV/HCV infection is a percutaneous injury, contact of mucous membrane or contact of skin (especially when the skin is chapped, abraded or afflicted with dermatitis or the contact is prolonged or involving an extensive area) with blood, tissue or other body fluids.

Steps to be taken after occupational exposure:

Immediate measures following an exposure:
- Needle sticks and cuts should be washed with soap and water.
- Splashes to the nose, mouth or skin should be flushed with clean water.
- Eyes should be irrigated with clean water or saline.
- Pricked finger should not be put into the mouth.
- Do not use antiseptics or squeeze the wound.
- Report the exposure immediately to duty medical officer (DMO) in casualty.
- PEP should be started as soon as possible. There is no role for PEP beyond 72hrs after exposure.

PEP for HIV exposure:
- DMO should fill up the PEP form provided in the casualty.
- DMO should note down the details of exposure and send all investigations as mentioned in the PEP form.
- PEP should be combination of at least 3 anti-retroviral drugs.
- DMO is authorized to start PEP but can give prescription for only 3 days.
- PEP drugs will be provided free of cost in hospital pharmacy for all the hospital employees.
- HCW should be warned about potential side effects of PEP drugs and should report immediately to infection control officer.
- Only Infection control officer has to authorize full course of PEP.
- Total duration of PEP is for 28 days
- HIV ELISA for exposed HCW should be repeated at 6 weeks and 12 weeks after exposure.
- During the course of PEP HCW should use barrier method of contraception.
- Casualty in-charge nurse should hand over PEP forms to infection control nurse.
- Infection control nurse should periodically document and audit all exposures.
Post exposure prophylaxis guidelines for Occupational exposure

- Decision to start PEP following an exposure to potential HIV positive patient should be based on below table.

<table>
<thead>
<tr>
<th>EXPOSURE RISK</th>
<th>SOURCE</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Skin and mucosal contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intact skin</td>
<td>HIV positive or unknown</td>
<td>No prophylaxis</td>
</tr>
<tr>
<td>Intact mucosa</td>
<td>HIV positive or unknown*</td>
<td>PEP</td>
</tr>
<tr>
<td>Abraded skin/mucosa with brief/small exposure</td>
<td>HIV positive or unknown*</td>
<td>PEP</td>
</tr>
<tr>
<td>Abraded skin/mucosa with prolonged / large exposure</td>
<td>HIV positive or unknown*</td>
<td>PEP</td>
</tr>
<tr>
<td>2. Needle stick injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid needle/ superficial injury</td>
<td>HIV positive or unknown*</td>
<td>PEP</td>
</tr>
<tr>
<td>Hollow needle / deep injury</td>
<td>HIV positive or unknown*</td>
<td>PEP</td>
</tr>
</tbody>
</table>

*Decision to start PEP should be done in consolation with infection control officer.

PEP regimen

- Tenofovir disoproxil fumarate(TDF) 300 mg + Emtricitabine 200mg 1-0-0
  - Or
  - Tenofovir disoproxil fumarate(TDF) + Lamivudine 150mg 1-0-1

  +

- Atazanavir + ritonavir (ATV/r) (300+100) 0-0-1(with food)
  - Or

- Raltigavir 400mg 1-0-1**

** Raltigavir can be started if HCW has contraindication for ARV/r
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Post exposure prophylaxis (PEP) and Vaccination against Hepatitis B exposure

- All HCW should be vaccinated against Hepatitis B virus
- Schedule - 0, 1, 6 months.
- Dose - Adults - 1 ml, Children (<19 years) - 0.5 ml
- Site and route - IM Deltoid (should not be administered in the gluteal region). Children less than 1-year-old on anterio lateral thigh.
- Anti HBsAG titer should be tested 1-2 months after 3rd dose of vaccine.
- HCW with anti HBsAg titre >10 mIU/ml is considered a responder. Responders need not be further vaccinated or tested for Anti HBsAg titer.
- Anti HBs titre is <10million mIU/ml after 3 doses of vaccine, repeat vaccine series should be initiated. Anti HBs titres are still <10mIU/ml even after second series of vaccination, HCW is considered non responder.
- Non responder should he reoffered to Infection control and management Department for further management.

Recommendation for post exposure prophylaxis (PEP) for exposure to Hepatitis B

<table>
<thead>
<tr>
<th>Source</th>
<th>Unvaccinated</th>
<th>Vaccination and immune status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Anti HBs Ag titer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 10mlU/ml</td>
</tr>
<tr>
<td>HBsAg positive</td>
<td>Initiate vaccination and HBIG</td>
<td>No treatment</td>
</tr>
<tr>
<td>HBsAg negative</td>
<td>Initiate Vaccination</td>
<td>No treatment</td>
</tr>
</tbody>
</table>
| Unknown         | Initiate Vaccination          | No treatment          | If high risk source – vaccinate and administer Hepatitis B immunoglobulin(HBIG)** | Test anti HBsAG titer
|                 |                           |                  | • >10 m IU- No treatment |
|                 |                           |                  | • <10 m IU- Vaccinate   |

*HBIG - Hepatitis B Immunoglobulin, Dose - 0.06 ml/kg ,IM

** Contact infection control officer if ready vaccinated.
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**PEP for hepatitis C exposure**

- PEP is not recommended for hepatitis C exposure. HCV viral load should be done 4-6 weeks after exposure. If positive, HCW should be referred to Gastroenterology (GEC) department or Medicine department for further management.