

Policy title

Proper handling of accidents with sharp objects or exposure to infectious body fluids



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| Policies and Procedures Record: Clinical | Established entity: Infection Prevention and Control Committee |
| Policy No. | Release Date: |
| page: | approval date: |
| Director approval: | Date of last revision: |
| Applicable to: All employees of the Dental Assistants and Sterilization Division | |

Target:

Establish a clear protocol for dealing with accidents with sharps or exposure to infectious body fluids.

Politics:

- All clinic staff and students are obligated to follow the protocol approved in this policy regarding exposure to infections resulting from puncture accidents or exposure to infectious fluids.

Action:

- In the event of exposure to blood or other body fluids (such as a prick with a sharp object) follow these measures:
 - 1-The work shall be stopped immediately regardless of the type or nature of the work.
 - 2-Allow the wound to bleed and wash it well with warm soapy water. There is no point in applying pressure to the bleeding site. It is not recommended to apply skin sterilizers to the bleeding site, as this may delay wound healing or cause allergic reactions.
 - 3-If the exposure to the infection is on a mucous membrane (such as the eye), rinse well with water or Normal Saline. If there are contact lenses, they should be removed after washing the eyes with water and set aside.
 - 4-If the wound was caused by a sharp object (such as a needle), it is normal for the bleeding to stop within a few minutes (3-9 minutes -Normal Bleeding time). A sterile medical gauze can be placed and light pressure applied to the place of bleeding, but if the wound is definitive or large, or the bleeding did not stop during the normal period, medical help is resorted to.
 - 5-The university bears the material costs of laboratory tests, treatment, and any other procedures that follow this injury, as deemed by the treating physician.


6-The infection control nurse is responsible for preparing and sending a copy of the accident report and the treating physician's report to the general manager, who in turn takes the appropriate action and sends a copy of the report to the human resources unit to address the social security.

7- A copy of the accident report and the attending physician's report shall be kept with the infection control committee.

8- A copy of the attending physician's report is kept in the injured patient's file.

- **Risk Rating:**

- Assessment of the risk of transmission after an accident is of utmost priority in determining whether post-exposure prophylaxis (PEP) is required.
- A plan is made to deal with incidents of exposure to infectious fluids, provided that this plan is clear and available to all medical staff and support medical staff, and that this plan contains an emergency phone number to contact, when necessary, a medical cadre specialized in infectious diseases to determine the necessity of post-exposure prevention work. (PEP) or the type of tests that need to be done for the person who was injured and for the patient (source).

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- The accident is documented with the following details (incident report):
- The name of the person who had the accident.
- How did the accident happen?
- Type of exposure (prick with a sharp object or exposure of mucous membrane to fluid).
- The presence or absence of blood on the instrument that caused the accident.
- The type of tool that caused the accident.
- the time of the accident.
- action taken.
- Was anyone notified of the accident and when?
- Patient details (possible source of infection) if applicable.
- Signature of the persons concerned with the accident.

- Factors affecting the possibility of infection when exposed to body fluids:
 - 1- Accident type (penetration of the skin or exposure of mucous membranes to aerosols).
 - 2- The type and amount of body fluid (blood or saliva).
 - 3- Liquid exposure time (contact time).
 - 4- The type of tool and the type of work through which the accident occurred.
 - 5- Commitment of the person exposed to the accident to protective barriers (gloves, medical gown).
 - 6- The presence of a virus of a certain type in the patient's blood (possible source), specifically, HBV, HCV, HIV virus concentration.

- **Necessary checks:**

- 1- **preliminary examinations- baseline tests.**

- Initial examinations are carried out for the person who has been exposed to the accident as well as to the patient (possible source of infection).
- Blood tests for a person who has had an accident or exposure to bodily fluids:
 - 1- HIV antibody.
 - 2- HCV antibody
 - 3- Antibody to hepatitis B surface Antigen (anti HBs)
- These checks are done as quickly as possible, taking into account the possibility of repeating the checks if necessary (window period).
- If the blood test of the person who had the accident showed safe levels of (anti HBs anti bodies) virus antibodies- HBV(>10 IU/ml) He is safe from exposure to hepatitis C HBV.No need for an extra dose of antibodies.

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- Blood tests of the patient (possible source of infection):

- 1- Prior consent is obtained from the patient before performing these tests.
(Informed consent)

Required checks:

HIV antibody-

HCV antibody-

HBs Ag (hepatitis B surface Antigen)-

- 2- In the event of a positive result for any of the above tests, additional tests are required to determine the level of infection in the patient's blood, such as HBV DNA, HBe Ag. As decided by the specialist doctor.
- 3- Refusal to perform the tests (the patient has the right to refuse to do the previous tests), in which case the patient is considered to be a carrier of viruses and an assessment of the level of risk is conducted and the specialist doctor decides the need for post-exposure prophylaxis (PEP) or long-term follow-up.

2- The result of the patient's examinations (source):

1-Negative tests: This means that the patient is not infected with any infectious virus and that the person who has been infected is not at risk.

- There are rare cases in which the patient may actually be infected with the virus, but the result of the examination is negative (for example, during the window period-window period. The assessment of these cases is up to the specialist doctor.

2-positive virus test, HBV

- If the patient tested positive for the virus, HBV. The result of the examination of the person who was exposed to the puncture accident is returned and the level of antibodies is measured, anti HBV antibodies, if the level <10 IU/ml There is no risk of infection transmission.
- If the level of antibody, anti HBV antibodies, between 10-100 IU/ml, a booster dose of antibodies can be given if the doctor decides to do so.
- If the person who has had a stabbing accident has no immunity to hepatitis C, HBV, and did not receive the vaccine - did not respond to the vaccine or had a low level of antibody, anti HBV antibodies >10 IU/ml The procedure will be as follows:
 1. The person who had the accident is given one dose of the antibody (Hepatitis B immunoglobulin HBIG) During 48-72 hours.
 2. Hepatitis C vaccine is given within one week of the accident, then the second dose is given after a month - two months, and the third dose after 6 months, then the response level is measured
- If the above procedures are not followed, the risk of injury will be 6.3% for patients who are HBe-Ag negative or more than 30% for patients who are positive.



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3-Positive virus test for HCV:

- 1- There is no precautionary measure (PEP, If the patient is a carrier of the virus, HCV).The risk of infection in this case ranges from1.8-10% depending on the condition of the patient and the source of infection. In this case, the person who was exposed to the accident is re-examined 3 and after 6 months, in addition to the initial examinations, functional tests of the liver are also carried out, and it is preferable to follow up the case through a specialist for referral.
- 2- Positive virus test, HIV
If the patient is infected with the virus, HIV.The risk of transmitting infection ranges from0.3% (After an accident with a blunt object) and 0.09% (Exposure of mucous membranes to gastric spray).
There is a precautionary measure after exposure (PEP) for virus, HIV. It is a result of its side effects and the high degree of toxicity. It is not administered except by a specialized doctor and after determining the level of risk. This procedure consists of a group of antiviral drugs (Anti Retroviral Drugs) usually given for a period 3-4 weeks under the supervision of a specialist.

Follow-up: Initial examinations are repeated for the person who has been in the accident 3 And after 6 months, if any symptoms of a viral infection appear, a specialist doctor is immediately consulted.

- **Recommendations:**

- All members of the medical staff and the supporting medical staff are required to take the hepatitis C vaccine, HBV, It is documented.

- **Terms:**

- Accidents: In this policy are all cases of exposure to blood, saliva or other body fluids that carry the risk of transmitting a viral infection, specifically HBV,HCV,HIV. The most important of these incidents are cases of penetrating pricking of the skin or mucous membranes of the eyes, nose, mouth, or loose skin (such as broken skin) of a possible source of infection such as blood or other body fluids (eg by droplets).

Certified:

Head of the infection control committee