Margaret H. Rollins School of Nursing
Nursing Care of Adults- Nursing 102
Administration of Subcutaneous Heparin and Enoxaparin (Lovenox) 2021

Preparation of Equipment

1. Visualize the order on the electronic medical record (EMR) and compare with medication administration record (MAR). While in MAR, also verify time medication is due as well as time/location of last administration.

2. Note patient allergies. Note that baseline lab values are within a safe range for administration of this medication.

3. Gather equipment:
    a. EMR
    b. 3ml syringe with needle (any size needle – you will change it anyway)
    c. Additional 25g, 5/8" needle
    d. Alcohol wipes
    e. Heparin vial (carefully check concentration; Heparin is dispensed in widely varying amounts) or enoxaparin (Lovenox) prefilled syringe (check dose on syringe)
    f. Gloves (inside the client room, immediately prior to administration)

4. Perform hand hygiene.

5. Inspect the medication – look for discoloration, cloudiness or precipitate, expiration date.

6. Verify medication label matches that patient's medication administration record (MAR) and calculate the correct dosage needed - confirm with instructor for 2nd check.

For Heparin:

7. Remove plastic cap and clean vial's rubber stopper with an alcohol wipe.

8. Remove the syringe cap and pull the syringe plunger back until the volume of air in the syringe equals the volume of drug to be withdrawn from the vial.

9. Place vial on a flat surface and insert the needle into the vial.

10. Inject the air, invert the vial, and withdraw the prescribed amount of medication, keeping the bevel of the needle below the level of medication. Ensure correct amount of medication in syringe, remove any bubbles or air spaces, and withdraw needle from the vial.

11. Using the scoop technique, recap the needle and check again to ensure medication dosing is correct. Remove needle and safely set aside until discarded in sharps container.

12. Apply a new sterile needle for injection to prevent superficial tracking of Heparin. A 25-gauge 5/8 inch needle is recommended.

For Enoxaparin (Lovenox):

13. Choose correct dose/pre-filled syringe. Do not expel the bubble in the syringe to prevent loss of medication.

Implementation

1. Perform hand hygiene upon entering patient room.

2. Confirm the patient's identity by asking name and birth date and by comparing with the patient's ID band and EMR. Follow appropriate scanning procedure.

3. Check allergy band and verbally verify with patient.

4. Explain the procedure to the patient and provide privacy.

5. Select an appropriate injection site.
    a. The preferred site for a heparin injection is the lower abdominal fat pad, 2 inches (5cm- three fingers) beneath the umbilicus, between the right and left iliac crests.

    b. The preferred site for an Enoxaparin (Lovenox) injection is the left or right anterolateral or posterolateral abdominal wall ("love handles"). If abdominal administration contraindicated for a patient, may use outer thigh.

    c. Choose a site that is free of scars, bruises, incisions, lesions, or other abnormalities.

    d. Always rotate sites from one side to the other. Verify last injection site with patient.

6. Perform hand hygiene again and apply gloves.

7. Position the patient in a supine or reclining position and drape to only expose the injection site.

8. Ensure all supplies are in easy reach so that you are not turning your back on the patient at any time.

9. Gently clean the injection site with alcohol, beginning at the center of the site and moving outward in a circular motion. Allow the skin to dry before injecting the medication to avoid a stinging sensation.

10. Remove the needle cap with your non-dominant hand and set aside.

11. With your non-dominant hand, grasp the skin around the injection site gently, but firmly to elevate the subcutaneous tissue.

12. If 2 inches of tissue can be grasped, needle will be inserted at a 90-degree angle. If 1 inch can be grasped, a 45-degree angle will be used (rare). If the injection is given too superficially, bruising may occur.

13. Tell the patient that he/she will feel a needle stick.

14. Hold the syringe (bevel up if using a 45-degree angle) in the dominant hand between the thumb and forefinger. Quickly, in a dart-like fashion, insert the whole needle length.

15. After the needle is in place, release the grasped tissue and stabilize the lower end of the syringe with the non-dominant hand. Move the dominant hand to the plunger. Avoid

moving the syringe; movement may cause bruising. Do not aspirate for blood return as this may cause a hematoma and tissue damage.

16. Inject the Heparin/Enoxaparin (Lovenox) slowly into the fat pad, leave the needle in place for 5-10 seconds, and then withdraw needle gently but quickly at the same angle used for insertion.

17. With non-dominant hand, pick up the 2x2 gauze pad and apply light pressure to the site. Do not massage the site as this may cause bruising.

18. With dominant hand, cover the needle with safety sheath. Do not re-cap the needle. To activate the Enoxaparin (Lovenox) safety sheath, after the syringe is removed from patient's view, firmly push on the plunger until sheath covers the needle.

19. Remove gauze pad and check the injection site for bleeding and bruising. Reapply pressure if oozing is present. If no bleeding, discard gauze pad.

20. Dispose of the needle(s) and syringe in the nearest sharps container.

21. Remove gloves and perform hand hygiene.

22. Ask the patient to report any concerns.

23. Complete documentation in the EMR.