

King Saud University

College of Medicine

Department of Medical Education

Riyadh, KSA

**Intravenous (IV) Cannulation**

**OBJECTIVE: To apply an intravenous (IV) cannulation to an appropriately selected vein**

**MATERIALS: IV solution or drug, IV set, IV catheter or cannula, clean gloves, alcohol swab, transparent dressing or tape, tourniquet.**

***D: Appropriately done PD: Partially done ND: Not done/Incorrectly done***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **STEP/TASK** | **D** | **PD** | **ND** |
|  | **Preparation** |  |  |  |
|  | Introduce yourself to the patient. |  |  |  |
|  | Confirm patient’s ID. |  |  |  |
|  | Explain the procedure and reassure the patient. |  |  |  |
|  | Get patient’s consent. |  |  |  |
|  | Wash hands. |  |  |  |
|  | Prepare the necessary materials. |  |  |  |
|  | Check the doctor’s order and the reason for cannulation. |  |  |  |
|  | Put on a pair of clean gloves. |  |  |  |
|  | Position the patient in a lying or sitting position and uncover arm completely. |  |  |  |
|  | **The procedure** |  |  |  |
|  | Apply tourniquet 10 cm above injection site.  *(Make sure it is not too loose or too tight. When necessary, check if pulse is still present.)* |  |  |  |
|  | Select the site and appropriate vein for injection. |  |  |  |
|  | Visualize and palpate the vein using the pads of the fingertips.  *(If veins are not visible ask patient i) to close and open the hand ii) apply gentle taps*  *iii) apply warm/hot pad to selected site to help dilate the veins.)* |  |  |  |
|  | Clean the site with an alcohol swab using an expanding circular motion or a single wiping from distal to proximal. Do it for 3 times with different swabs. Let it air dry. |  |  |  |
|  | Prepare and inspect the catheter.  Slightly pull the needle from the cannula, turn, and inspect for any defects. |  |  |  |
|  | Stabilize the vein and apply counter tension to the skin. |  |  |  |
|  | Insert the stylet through the skin at an angle of 30-45 degrees and make sure the bevel is up. |  |  |  |
|  | Observe for "flash back" of blood in the chamber of the stylet to confirm a successful entry. |  |  |  |
|  | Reduce the angle of the needle and advance approximately 1 cm further into the vein. |  |  |  |
|  | Slowly advance the catheter over the needle and into the vein while keeping tension on the vein and skin. |  |  |  |
|  | Release the tourniquet and quickly remove the needle over the catheter while pressing at least 0.5 cm above the insertion site to prevent backflow of blood.  Connect the intravenous tubing immediately and open the regulator. |  |  |  |
|  | **After the procedure** |  |  |  |
|  | Anchor the catheter firmly in place by the use of transparent dressing or tape.  *DO NOT interrupt the flow rate.* |  |  |  |
|  | Regulate the rate of flow according to the doctor’s order. |  |  |  |
|  | Ensure that the patient is comfortable. |  |  |  |
|  | Dispose of sharps and waste material according to infection control standards. |  |  |  |
|  | Remove the gloves and wash hands. |  |  |  |
|  | Document the procedure. |  |  |  |