**INSERTING PERIPHERAL I.V. CANNULA**

Intravenous cannulation allows access to the peripheral blood stream for therapeutic or diagnostic purposes using a flexible cannula.

1. **Insertion site**

The most common sites are dorsum of the hand, forearm and cubital fossa (beware of the movement in the elbow). Dorsum of the foot or ankle area is also accessible but should not be used routinely in adult patients due to the high risk of thrombosis.

1. **Indications**

* Administration of medicines
* Fluid and electrolyte replacement
* Administration of parenteral nutrition
* Administration of blood/blood products
* Administration of contrast dye for diagnostic procedures

1. **Contraindications**

* Injury or infection in insertion site area
* Presence of A-V shunt for hemodialysis
* History of breast and/or axillar lymph node removal, due to the risk of lymphedema
* Paresis of the limb
* Massive edema
* Patient’s refusal

1. **The equipment**

* I.V. cannula
* Extension tubing
* 10 ml syringe
* 0.9 % NaCl solution (Sodium Chloride)
* Skin disinfection
* Swabs
* Tourniquet
* Sterile dressing to secure the cannula
* Tape
* Non-sterile gloves
* Emesis basin
* Sharps container
* Lock cap
* Bed or clothes protection drape

1. **The procedure**

* Prepare the equipment
* Perform hand hygiene
* Explain the procedure to the patient
* Remove the syringe and fill with Sodium Chloride
* Remove the extension tubing, connect to the syringe and fill with Sodium Chloride, remove all bubbles
* Disinfect hands and put on non-sterile gloves
* Position the patient comfortably and choose insertion site
* Apply tourniquet and ask the patient to open and close fist several times
* Palpate the vein and clean the site with alcohol swab
* Stretch the skin over the vein with your non-dominant hand
* Hold the cannula in your dominant hand with bevel up and insert it at a 10 to 30 degree angle (approximately 1cm), watch for blood in the flashback chamber
* Gently advance the cannula over the needle while withdrawing the guide
* Release the tourniquet
* Apply pressure over the vein (beyond the cannula tip), place clean swab under the hub, remove the needle and connect the extension tubing
* Dispose of the needle in the sharps container
* Check for the blood flow and flush the cannula with Sodium Chloride
* Secure the cannula with sterile dressing
* Remove the syringe and cap the extension tubing with needleless cap, tape the tubing to the skin
* Mark the dressing with the date of insertion
* Clean the patient’s skin as needed and dispose of the used equipment
* Document the procedure

1. **Possible complications**

* Kinking of the cannula
* Obstruction of the cannula
* Hematoma
* Accidental puncture of an artery
* Paravenous insertion
* Embolism
* Thrombophlebitis

1. **Administration of medicines into peripheral I.V. cannula**

Administer only medications designed for i.v. use. Prepare in aseptic conditions.

* **Equipment:** syringe with medication, 10ml syringe with flush (aqua pro injectone or 0.9% Sodium Chloride), alcohol swab, emesis basin
* **Procedure:**
* Perform hand hygiene and put on non-sterile gloves
* Explain the procedure to the patient
* Clean the needleless tubing cap with alcohol swab
* Connect the syringe with flush and gently flush the tubing with 2,5 to 5ml of the fluid, check for resistance, pain, burning or edema at insertion site. Place the syringe carefully back to the wrapping
* Connect the syringe with medication and slowly administer
* Flush the tubing with Sodium Chloride or Aqua pro injectione
* Dispose of the equipment and document the procedure