Injections and Nasogastric Intubation

Dr. Russu Cristian
Injections

Definition:

- Means by which we introduce a substance (most frequent foreign to the body) into the body tissues, with the syringe, for therapeutic or diagnostic purposes.
Injectable substances

- Are delivered in ampoules, vials, sterile containing jars
- The drug substance may be:
  - powder
  - fluid
- If powder or if the vial is accompanied by a solvent, it will be dissolved before injection
- On the container should be specified: :
  - the product
  - route of administration
  - quantity and the concentration
  - validity term
Injection technique

- 3 important steps:
  1. Preparing the syringe
  2. Preparing the region
  3. Injection
1. Preparing the syringe

- Requires two maneuvers: mounting and loading. Both maneuvers are performed respecting asepsis /antisepsis rules.

- Loading: holding the vial in hand, empty liquid from its neck (by shaking, percussion), the vial neck is disinfected using a 70 degrees alcohol swab and cut with a special cell (which was also previously disinfected)

- Mount the aspiration needle (thick needle), insert into the vial and aspirate. In case of loading from the bottle, after previous disinfection, sting the rubber cap.

- After aspiration remove air from the syringe (holding it in vertical position, with the needle up, remove the air until the first liquid drop appears)
Preparing the syringe:
Opening the vial, aspiration of the content
Preparation of injection solution (vial)
Removing air from the syringe
II. Preparing the region

- free skin, without injuries or infections (dermatitis, folliculitis)
- hair removal if necessary
- disinfection with alcohol and betadine
- inform the patient of the maneuver that will be executed
III. Injection (in general)

- The patient will be placed in supine position and the one who performs the injection will adopt a comfortable position.
- Refrigerated medications must be warmed in hand (cause local irritation reaction can occur).
- Injection of large quantities will be made slowly.
- Quickly remove the needle, on the direction of introduction (will be held the syringe and the needle ambou).
- Puncture site is covered with a sterile swab and digital compression will be performed (longer for IA or IV).
Intradermal injection (id)

- The area of choice: front of the forearms (accessible, reduced hair growth)
- Use small syringe (2 ml) and small and thin needles
- Method: After disinfecting, the skin is stretched or folded between fingers I, II (a 4-5 cm fold); insert the needle, with the bevel looking upward, parallel to the skin, strictly intradermal. The injected solution forms a papule ("orange peel").
Subcutaneous injection (sc)

- The solution is injected in the hypoderm
- Areas of choice:
  - Anterolateral area of the thigh
  - Around the navel
  - The back of the arm
  - Lateral thoracic
- Avoid skin covering: vessels, nerves, bone reliefs, internal side of the limbs, face, neck, head
Subcutaneous injection – areas of choice

Insulin injection areas

Front

Back
After skin disinfection, a skin fold is made between fingers I and II. The needle will be inserted parallel to the fold, after which the fold will be released.

Check the position of the needle, by doing side movements. The needle is in the hypoderm if it moves easily.

Aspirate and inject slowly.

After withdrawing the needle, gently massage the place.

For hypoderm, isotonic solutions are used only.
Intramuscular injection (im)

Areas of choice
1. Deltoid region:
   - Anywhere above the radial groove
   - ex: ATPA
2. Anterolateral region of the thigh:
   - In the 1/3 medium anterolateral region of the thigh, in quadriceps or lateral vast muscles
   - Limits: at 3 finger sides from the great trochanter and at 4 finger sides above the patella
   - More common in children
   - Inserting the needle is done perpendicular to the skin, and without external hip rotation.
Into the deltoid muscle
Into the thigh
3. Gluteal region

- Great muscle mass
- Participate less in motion
- Use long needles
- Deep muscle injection site
- Inserting the needle is through a sudden movement perpendicular to the skin surface
- Aspire before injecting the substance
- After injection, sudden withdraw the needle, buffer and massage the area (damaging the parallelism of plans)
Into the gluteal region
Nasogastric intubation

Definition:

- Represents the medical procedure in which we enter into the stomach, using a probe, for different purposes
Necessary materials

- gastric probe
- sterile tubes for collection of the gastric juice
- sterile syringe, kidney tray
- protection field
- vacuum system (if necessary)
- oral analgesic (spray)
Technique

- We explain the procedure to the patient
- The patient sits on a chair and is protected by a field
- We examine the nasal passages to detect a possible septum deviation
- We inject the anesthetic into the nostril, asking the patient to swallow
- Applying lubricant on the probe before swallowing
- We ask the patient to breathe deeply and to gradually swallow the probe
- We check the position of the probe (liquid flowing without resistance)
- Depending on the purpose: sample gastric juice or evacuate gastric contents
- Withdrawing the probe by asking the patient not to inspire