Safe Intravenous Fluids

Safe administration of medicines

- Right Patient
- Right documentation
- Right drug
- Right action
- Right route
- Right form
- Right time
- Right response
- Right dose

Patient safety

- Infusion therapy standards are relevant to any care setting in which vascular access devices are used.
- Follow hospital polices, procedures and practice guidelines
- Fluid overload/electrolyte imbalance
- Do not allow infusions to run dry

Goal of Vascular Access Management

To prevent problems and maintain IV care

- Phlebitis
- Dislodgement
- Infection

Complications

Phlebitis

- Chemical
- Mechanical
- Infection

Signs & Symptoms

- Erythema, warmth and oedema at the site.
- Pain at the site and/or along the length of the vein.
- A hard, red and cordlike thread at the insertion site and immediately above.
- A sluggish infusion rate on gravity flow.

V. I. P. Score (Visual Infusion Phlebitis Score)

VIP score should be evaluated during each shift and documented on the observation chart

I.V. site appears healthy	**0**	**No signs of phlebitis** ☐ OBSERVE CANNULA
One of the following is evident: ● **Slight pain near I.V. site or slight redness near I.V. site**	**1**	**Possible first signs of phlebitis** ☐ OBSERVE CANNULA
Two of the following are evident: ● **Pain near I.V. site** ● **Erythema** ● **Swelling**	**2**	**Early stage of phlebitis** ☐ RESITE CANNULA
ALL of the following are evident: ● **Pain along path of cannula** ● **Erythema** ● **Induration**	**3**	**Medium stage of phlebitis** ☐ RESITE CANNULA ☐ CONSIDER TREATMENT
All of the following are evident & extensive: ● **Pain along path of cannula** ● **Erythema** ● **Induration** ● **Palpable venous cord**	**4**	**Advanced stage of phlebitis or start of thrombophlebitis** ☐ RESITE CANNULA ☐ CONSIDER TREATMENT
All of the following are evident & extensive: ● **Pain along path of cannula** ● **Erythema** ● **Induration** ● **Palpable venous cord** ● **Pyrexia**	**5**	**Advanced stage of thrombophlebitis** ☐ INITIATE TREATMENT ☐ RESITE CANNULA

Infection

- Infection is a major potential complication of Vascular Access Devices.
- There are two main types of infection associated with cannulation, local and systemic.
- Local infection is confined to the insertion site.
- Systemic infection affects the whole body.

Serious infections

- Bacteria entering the bloodstream. Bacteria in the blood is termed ‘bacteremia’.

- If bacteremia is accompanied by symptoms such as pyrexia and rigors), this is termed Septicemia.

Common IV fluids

- Normal saline solution (NS, 0.9% NaCl) Isotonic solution (contains same amounts of sodium and chloride found in plasma). It contains 90 grams of sodium chloride per 100 ml of water. It is indicated for use in conjunction with blood transfusions and for restoring the loss of body fluids.
- Compound sodium lactate (Hartmann's) - Isotonic solution (replaces electrolytes in amounts similarly found in plasma). It contains sodium chloride, potassium chloride, calcium chloride, and sodium lactate. It is indicated for use as the choice for burn patients, and in most cases of dehydration. It is also recommended for supportive treatment of trauma.

Circulatory Overload

- Monitoring is important
- Accurate fluid balance chart!
- **Signs & Symptoms**
- Weight gain
- High bounding pulse
- Peripheral oedema
- Hoarseness
- Dyspnoea

Treatment

- Stop the infusion
- With holding fluids
- Diuretics
- Monitor patient

IV prep and giving

Assess the site

Prime tubing, clearing air.

Identify tubing parts that are to remain sterile

Apply ANTT principles throughout procedure.

Document tubing change and site care.

- 1000mls over
- 12 hours
- 20 drops per ml

Calculation of Intravenous Flu

- METHOD I: Three-Step

Step 1:

$$\frac{\text{Amt of soln}}{\text{hrs o administer}} = \text{mL/hr}$$

Step 2:

$$\frac{\text{mL per hr}}{\text{60 minutes}} = \text{ml/min}$$

Step 3:

$$\text{Ml/min} \times \text{gtt/ml} = \text{gtt/min}$$

Do’s & Don’t’s

- Do not break lines when changing patients clothes
- Do not put kinks in the tubing
- Use roller clamp to close when changing patients clothes
- Remember to unclamp
- Do not flush if not trained to do so
- Do use prescribed Normal saline flush (unless posiflush)
- Do know how to report adverse incidents
- Do know the infusion device you are using
- Do not use if not familiar with the device

Demonstration ANTT

- Prepare IV bag