Injectable Medications and IV Fluids BSA

Chapter 13

Objectives

- Perform IV admixtures calculations: drip rate (drop/ unit time), infusion rate, total drug weight, and concentration of the admixtures among others.

- Distinguish between IV continuous infusion, intermittent infusion and IV push.

- Review the chemotherapeutic agents doses based on weight and BSA.

Rate of flow

- Large IV solutions should be adminis... slowly.
- The infusion set is adjusted to deliver a chosen number of drops / min.
- The rate of infusion depends on the medication, the volume & desired duration for infusion.
- For more information about the accepted rate of infusion, refer to the required reading.

Rate of flow

- Rate of infusion may be expressed as
  - mL/min
  - drop/min
    - 60 drops/ min
  - amount of drug or fluid /unit of time
    - Infuse 1L NS @ 150 mL/hr
  - approximate time for infusion.
    - Infuse 500 mL packed RBC's within 4 hours.
  - mg/hour : see next example

Ondansetron

- "A dose of 8 mg by slow intravenous or intramuscular injection or as a short-time intravenous infusion over 15 minutes immediately before chemotherapy, followed by two further intravenous or intramuscular doses of 8 mg two to four hours apart, or by a constant infusion of 1 mg/hour for up to 24 hours.

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Rate of flow

- If you know the drop factor and you need to calculate the drip rate or time needed for the infusion, the following equation may be useful..

$$Drip\ rate(drop/\min) = \frac{volume(ml)\ x\ drop\ factor(drop/ml)}{time(\min)}$$

Rate of flow

- Sarah is ordered 300ml of dextrose 5% in water over 3 hours, using a given set with a drop factor of 15 drops/ml. Calculate the drip rate (drops/min).

- What is the osmolarity of the dextrose 5%?

Rate of flow

- Calculate the amount of intravenous fluid remaining in a 1000 mL of Normal Saline that has been running at 40 drops/min for 90 minutes. The drop factor is 30 drops/mL.

Rate of flow

- How long does it take to infuse 250 mL of N.S using IV set with drop factor of 60 drops/mL if the infusion rate is 50 mL/hour?

Rate of flow

The Paclitaxil dose for AIDs related Kaposi's Sarcoma is 135 mg/m^2 over 3 hours every 3 weeks. PACLITAXEL VIAL is 150 MG/25 ML VIAL. What is the dose for a 48 inches, 70 lb patient? Calculate the infusion rate in mg/hour?
Calculate the drip rate in drop/min? if the drop factor is 60 drops/mL. (you decided to mix the drug with 250 mL NS IV bag)

Rate of flow

- A patient is ordered 60 mEq in 150 mL of K+. Using a tubing with drop factor of 60 drops/mL, What is the drip rate if the infusion rate is recommended at 1.49 g/hour? knowing that the source of K+ is KCl (M wt 74.5).

Rate of flow

- A patient is ordered 30 mEq in 150 mL of K+. Using a tubing with drop factor of 60 drops/mL, how long would it take for the solution to be infused if the infusion rate is 10 mEq/hour?

- What is the drip rate in mg/hour, gtt/min? knowing that the source of K+ is KCl (M wt 74.5).

Isoproterenol Hydrochloride

- For IV infusion, solutions may be prepared by diluting 1–10 mL of the injection containing isoproterenol hydrochloride 0.2 mg/mL (ratio strength ?) with 500 mL of 5% dextrose injection to provide infusion solutions containing (? - ?) mcg/mL solution.

RL-0511 (8/04)

1 mL   NDC 0409-1410-01

Isuprel®
Isoproterenol
HCl Injection, USP

℞ only

0.2 mg (0.2 mg/mL)
PROTECT FROM LIGHT.
Store at controlled room
temperature 20° to 25°C
(68° to 77°F). [See USP.]
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