

ADMINISTRATION OF INTRAVENOUS FLUIDS AND DRUGS BY BOLUS OR INFUSION

Safe administration of fluids and medication is paramount for the neonatal population. Generally due to physiological limitations of the enteral route this has to be administered via the intravenous route by bolus or continuous infusion.

PRINCIPLE

To safely administer intravenous fluids and medicines at the prescribed dose and rate.

To maintain accurate fluid balance

Intravenous medicines/drugs should not be administered with blood transfusions, lipid infusions or total parenteral nutrition.

Maintain the comfort and safety of the infant at all times.

Dispose of used equipment in accordance with Health and Safety and Infection Control policies.

EQUIPMENT

Legible and legal prescription chart.

Gloves as required.

Appropriate sized sterile syringe.

Orange needle for aspiration from rubber bung vials.

Filter straw/needle for aspiration from glass ampoules

0.9% Sodium chloride for infants >1000g

0.45% Sodium Chloride for infants <1000g or where the Serum Na >146mmols/L. (1ml NaCl and 1ml water)

Multi access needle free port.

Alcohol swab.

Relevant drug and diluent, both within expiry date.

Pharmaceutical literature.

Procedure

Action	Rationale
All Medication administered must be checked at each stage of the procedure by TWO of the nursing or medical Team.	To prevent incorrect administration since calculations and doses are often complex.
<p>Check prescription</p> <ul style="list-style-type: none"> - Frequency / interval - Dose / indication / signed - Side effects /contraindications - Compatibility with infusion solutions if established. - If levels are required 	<p>To ensure desired effect dosages need to match the current RCPCH Medicines for Children Guide</p> <p>If derived from a different source must be documented in the Individuals Medical Case Notes and be available for checking.</p> <p>To prevent duplication of doses, to maintain therapeutic levels, to prevent reactions associated with incompatibility, precipitation of the drug or reduce the effect of the drug.</p>
<p>Check Neonatal / Infant Name band for Name and Hospital Number.</p> <p>If present, discuss the need for the procedure with parents.</p>	<p>Right Patient.</p> <p>To reduce parental anxiety and concern</p> <p>To allow dedicated time for concentration by professionals.</p>
<p>Wash and dry hands</p> <p>Apply gloves</p>	<p>To reduce risk of introducing infection.</p> <p>To reduce risk of drug sensitisation to drug for the nurse.</p>
<p>Prepare medication according to manufacturers guidelines and prescription.</p> <p>Use 25G needle for final aspiration of the medication from rubber bung sealed vials.</p> <p>Use Filter straw for final aspiration from glass ampoules.</p>	<p>To provide drug stability.</p> <p>To filter out foreign particles and rubber in the medication.</p> <p>To filter out foreign particles and glass in the medication.</p> <p>To maintain sterility of prepared</p>

<p><i>For bolus administration;</i> Seal contents into syringe using a bung.</p>	<p>medication</p>
<p>Prepare 1-2mls of solution for pre and post administration flush: > 1000g use 0.9% Sodium Chloride. < 1000g use 0.45% Sodium Chloride</p>	<p>In bolus administration</p> <ul style="list-style-type: none"> - allows assessment of patency - clears medication from port so enhancing patency and the life of the cannula. <p>In infusion administration</p> <ul style="list-style-type: none"> - If incompatible with infusion fluid pre flush buffers medication, preventing mixing.
<p>For bolus administration</p> <ul style="list-style-type: none"> - If injecting into an ongoing infusion line, clamp off main infusion line above port. - Inject 0.5-1ml of flush into the prepared port, follow with slow injection of the medication, and complete by further injection of 0.5 - 1ml of Saline Flush. - Observe site for signs of new extravasation / leaking. <p>For administration by Infusion</p> <ul style="list-style-type: none"> - Insert prepared syringe into infusion pump. - Set rate and connect infusion line to prepared port. - If medication compatible with main infusion open clamps and allow mixing. <p><i>Note; Main Infusion fluid volumes may need reduction.</i></p> <ul style="list-style-type: none"> - If incompatible with main infusion solution, clamp off main line, inject 0.5 –1ml Saline flush, allow medication to infuse independently, and follow with further 0.5-1ml Saline flush prior to recommencing main infusion. 	<p>Ensures correct concentration of drug as enters body, i.e. maximizing drug stability effectiveness.</p> <p>Flushing the port ensures complete dosage given. Assists in maintaining the patency of the IV Cannula.</p> <p>Delivers drug at appropriate rate i.e. reducing side effects.</p> <p>To prevent fluid overload. May need to monitor blood glucose levels.</p> <p>If main infusion contains drugs that are assisting in maintenance of</p>

<p><i>Choice of ports for infusion of medication should consider consequences of temporary discontinuation of Main infusion</i></p>	<p>clinical stability e.g. Dopamine, Dobutamine, Prostacyclin, the infusion MUST NOT be discontinued. Alternative sites must be found or the infusion MUST run concurrently.</p>
<p>Dispose of used disposable equipment and gloves as per Trust Guidelines.</p> <p>Wash hands</p> <p>Document completed administration on Prescription Chart.</p>	<p>Protection of the Public and colleagues.</p> <p>Removes medication residues, prevention of Cross infection. Legal requirement</p>
<p>Record any untoward clinical incidences as per Trust Policy.</p>	<p>Application of Clinical Governance principles</p>

References;

East Kent NHS Trust Drug Administration Policy

East Kent NHS Trust Intravenous therapy Policy.

East Kent NHS Trust Infection Control Policy.

Hyde, L.(2002) Legal and Professional Aspects of Intravenous Therapy. Nursing Standard. 16:26; 39-42.

NMC (2002) Guidelines for the Administration of Medicines. NMC;London

NMC (2002) Code of Professional Conduct. NMC:London