Glasgow Clinical Trials Unit
NHS GG&C Clinical Research Facility

MANDATORY

GUI 17.044A – Paediatric insertion of a peripheral venous catheter

Insertion of a peripheral venous cannula (PVC) is required to facilitate the administration of medicines, intravenous fluids, blood and or blood products while the patient is participating in a research study. It will also be used for the purpose of blood sampling as per protocol. This document applies to all healthcare workers delivering this service to infants, children and young people for all studies conducted by Glasgow Clinical Research facility (GCRF).

The registered practitioner / designated healthcare worker will work in partnership with medical staff, and will at all times assess and prioritise duties, seeking the co-operation of medical staff when necessary to ensure that patient needs are met.

After a maximum of **two attempts** and cannulation has been unsuccessful, the registered practitioner / designated healthcare worker will seek the co-operation of another competent experienced registered practitioner / doctor to perform this procedure.

If after a third attempt cannulation has been unsuccessful the procedure should be abandoned and the relevant people informed.

Further attempts should only be attempted at the request of the patient/parent/guardian and should not exceed 5 attempts in total.

Equipment required

- Personal protective equipment (PPE), e.g. non-sterile gloves, protective apron, safety goggles/visor/mask with eye shield for both members of staff.
- Tray for equipment with or with out dressing trolley.
- Non-sterile swabs.
- Near patient sharps disposal bin.
- Clean or single patient only use tourniquet.
- Chlorhexidine 2% in 70% isopropyl alcohol applicator.
- Appropriate size cannula dependent on patient assessment and rationale for cannula.
- Anaesthetic extension set.
- Cannula adhesive, transparent semi-permeable dressing and completed date and time strip to be applied to insertion site once cannula inserted.
- Needle free connector x 2 for anaesthetic extension set.
- 10ml syringe
- 5 – 10mL 0.9% sodium chloride (priming and flush solution which should be prescribed).
- Clinical waste bag.
- Limb splint if necessary.
- Length of non-compression bandage/sleeve-like cover to protect cannula once in place.

Procedure

- Hands should be decontaminated and personal protective equipment (PPE) worn prior to insertion of the IV cannula in accordance with the NHS GG&C Hand Hygiene Policy and infection control guidelines.

- Check integrity of all packing and expiry date are appropriate.
- Use local anaesthetic spray as appropriate.
- Position the patient safely in accordance with 'Good Practice Guidance in Respect of Holding and Restraint 6.14 Guideline' with the assisting healthcare worker securely supporting the selected limb.
- Palpate a vein for cannulation and apply tourniquet at least 7-8cm above selected insertion site. If the patient's condition permits, the assisting healthcare worker's hand can be positioned above the selected IV site and act as a tourniquet
- Disinfect the skin with Chlorhexidine 2% in 70% isopropyl alcohol applicator for at least 30 seconds and allow the skin to air dry – another 30 seconds. Do not pat the area dry.
- Avoid repalpating the vein or touching the skin. If, however, the procedure does require you to repalpate or touch the skin, the site will require to be disinfected again.
- Decontaminate hands and don gloves.
- Fold down wings of cannula and inspect device for any defects. **DO NOT WITHDRAW THE NEEDLE.**
- Anchor vein by applying tension to skin below the site and insert the needle / cannula bevel up at an angle of 10.-.45 degrees dependent on device.
- Level the device and advance the cannula a few millimetres into the vein and withdraw needle slightly, observing flashback of blood in shaft. Maintaining anchor tension with one hand and holding the flashback chamber or thumb plate with the other, advance the cannula forward over the needle
- Only one IV cannula should be used for each cannulation attempt.
- Release tourniquet and apply digital pressure above tip of cannula and remove needle. Discard directly into sharps bin. **NEVER RE-INSERT THE NEEDLE.**
- Attach the primed anaesthetic extension set.
- Apply sterile, vapour permeable, transparent IV cannula dressing along with the dated and timed strip
- Flush cannula with 5mls of sterile 0.9% sodium chloride using a push pause technique which has been checked and prescribed in accordance Medicine Policy 1.6A or with the symptomatic relief policy.
- If required, the limb which has been used should be gently splinted using an appropriately sized splint, leaving the cannula site visible for easy and regular inspection.
- If patient is able to understand, along with parent / guardian they should be informed to notify healthcare team if the cannula should become displaced, or any connections are seen to be loose or coverings soiled.
- Discard PPE and dispose of waste appropriately and decontaminate hands as per policy.
- Ensure patient is left in a comfortable and safe position.
- Document in patient's nursing notes and case report form regarding the completed procedure.
- Record the administration of sodium chloride 0.9% flush on prescription administration records.

If it is necessary for the cannula to remain in-situ overnight or the patient can leave the department between investigations the family and patient must be provided with training in the event the cannula becomes dislodged. An emergency care kit with gauze swabs and plaster should be given. It should be documented in participant health record and study documents that family have been trained and are happy to take patient out-with the facility

Referenced Documents

- RHSC Insertion of Intravenous cannula and on-going care Protocol 8.5
- Nursing and Midwifery Council (2008) The Code: Standards of conduct, performance and ethics for nurses and midwifes

- NHS GGC Hand Hygiene Policy and infection control guidelines
- Good Practice in Respect of Holding and Restraint 6.14 Guideline with the assisting healthcare worker securely supporting the selected limb
- Nursing and Midwifery Council (2008) Standards for medicine management

Document History

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