

INTRAVENOUS CANNULA INSERTION

This LOP is developed to guide safe clinical practice in Newborn Care Centre (NCC) at The Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this Local Operations Procedure (LOP).

Using this document outside the Royal Hospital for Women or its reproduction in whole or part, is subject to acknowledgement that it is the property of NCC and is valid and applicable for use at the time of publication. NCC is not responsible for consequences that may develop from the use of this document outside NCC.

INTRODUCTION

An intravenous cannula is inserted into a small peripheral vein to provide access for intravenous fluid administration, medication, blood products and/or blood sampling for diagnostic tests. Sterile technique using aseptic non-touch technique (ANTT) principles must be adhered to throughout the procedure.

1. AIM

- To insert an intravenous cannula safely and aseptically
- To secure the PIV correctly

2. PATIENT

- Neonate

3. STAFF

- Medical and nursing staff

4. EQUIPMENT

- Dressing Pack
- Appropriate size cannula (eg. 24g – 14mm long)
- 2mL slip-lock syringe
- SAFTI-JECT SV® (T-extension Set) x1
- Tegaderm Film (small)
- Correctly pre-cut Elastoplast
- Oral Sucrose
- Chlorhexidine Acetate Aqueous Solution 0.05% w/v (Blue solution)
- 5mL amp of 0.9% Sodium Chloride
- Needleless Bung
- Armboard (appropriate size)
- Green IVC Alert Sticker
- Sterile plastic drape (60cm x 45 cm)
- Blue Incontinent Sheet
- Blue Tray

NOTE: Consider possible need for Long Line Insertion before cannulating Cubital Fossa or Saphenous vein. Avoid using a Scalp vein if possible.

Maximum attempts to cannulate = 2 at each attempt.
Potentially difficult cannulation may require more attempts and will require discussion with senior medical staff.

ROYAL HOSPITAL FOR WOMEN
LOCAL OPERATING PROCEDURES
NEONATAL SERVICES DIVISION

Approved by
 Quality & Patient Care Committee
 Date: 6/10/16

INTRAVENOUS CANNULA INSERTION cont'd

5. CLINICAL PRACTICE

1. A *Clinical Procedure Safety Checklist Level 1* is to be performed and insert in infant's notes. (Picture 1)

Clinical Procedure Safety Checklist Level 1	
Patient's Name _____	MRN _____
Correct Patient Identification Confirmed <input type="checkbox"/>	Known Allergy/Adverse Reaction Check Yes <input type="checkbox"/> No <input type="checkbox"/>
Informed consent <input type="checkbox"/>	
Procedure Name	
Procedure 1	_____
Procedure 2	_____
Procedure 3	_____
Proceduralist's Name: _____	Date: _____
Proceduralist's Signature: _____	Designation: _____
S0804 090615	

Picture 1

2. Use alcohol hand rub (AHR) solution or wash hands.
3. Clean the Blue plastic tray with speedy wipe. Collect equipment in the tray. (Picture 2)

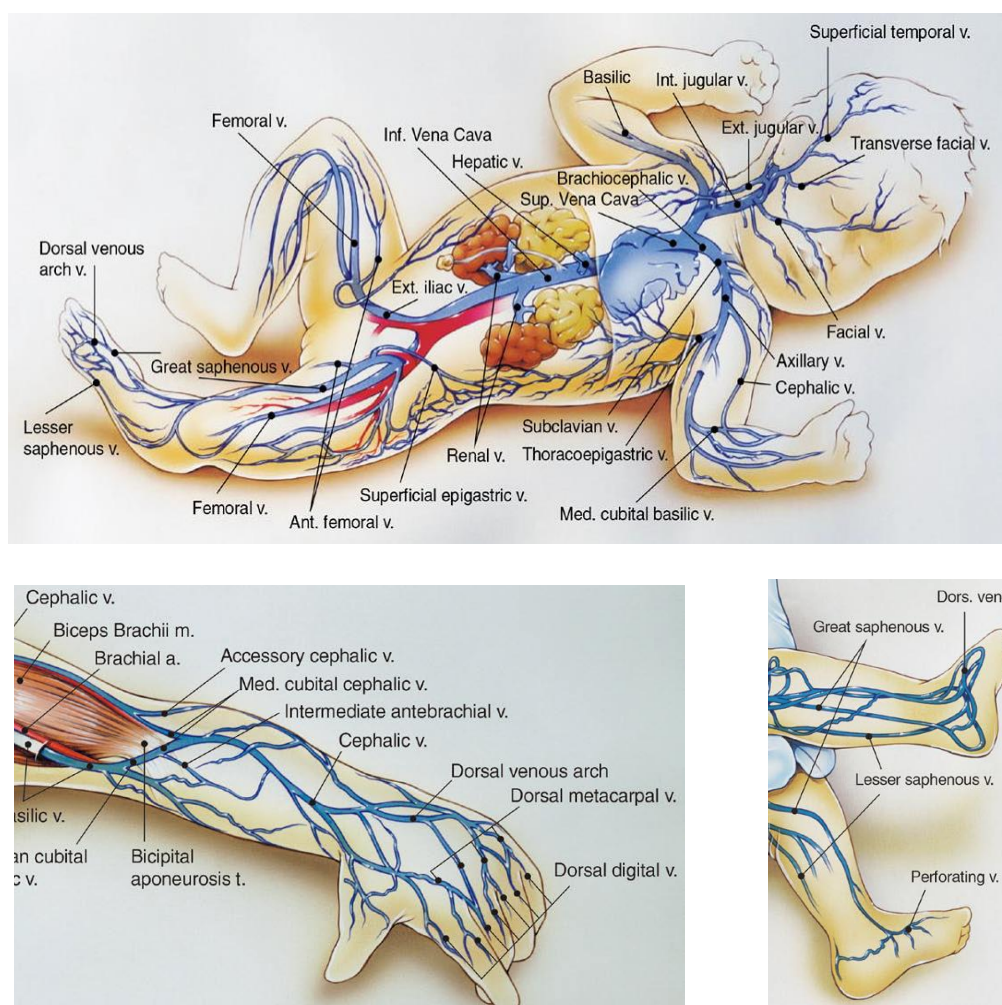


Picture 2

4. Clean the work surface area to be used.
5. Prepare strappings to secure the cannulated limb:
 - Cut Elastoplast to appropriate size and length x 2.
 - Back the middle section of the Elastoplast with cotton wool or Elastoplast. (Pictures 4)
 - Make a small slit in the middle of one of the 2nd elastoplast. (Picture 5)
 - Use an appropriate size board.
6. Proceduralist washes hands or uses AHR.

INTRAVENOUS CANNULA INSERTION

7. Examine the infant and select an appropriate vein on a limb to cannulate. (See Pictures 3 for vein selection).



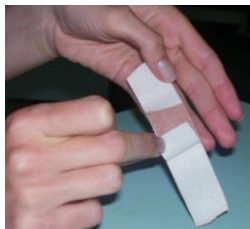
Pictures 3

Pettit, J. & Mason Wyckoff, M. (1997). Peripherally Inserted Central Catheters in Guideline for Practice, 2nd. Ed.. National Association of Neonatal Nurses, U.S. A. 4700 W.Lake Avenue, Glenview, IL 60025, p13; p18

8. Prepare the infant for cannulation: (R1)
- Wrap the infant snugly with the selected limb exposed for the procedure.
 - Position the infant in a comfortable posture.
 - Insert the selected limb to axilla or groin through a cut-hole in a blue inco-pad.
 - Provide oral sucrose for pain-relief when needed.

INTRAVENOUS CANNULA INSERTION cont'd

9. Prepare equipment for cannulation: (R2)
 - Position a Sharps Disposal Container close by.
 - Place all collected equipment onto table.
 - Open dressing pack onto blue tray.
 - Open remaining packets of equipment onto dressing pack (Pictures 4).



Pictures 4



- Use AHR or hand wash. Put sterile gloves on.
 - Prime the SAFTI-JECT SV® with Normal Saline. Leave syringe attached to the T-extension set.
 - Make a small hole in the plastic drape.
10. Use a piece of antiseptic saturated gauze to hold while cleaning.
 11. Using a plastic forcep, clean the whole limb with appropriate antiseptic saturated gauze. Allow to air dry.
 12. Repeat cleaning, focusing on the insertion site.
 13. Insert the limb through the hole of the sterile plastic drape.
 14. Use sterile gauze to apply tourniquet to the limb.
 15. Cannulate the vein whilst protecting key parts and key sites from contamination.
 16. Remove/loosen tourniquet.
 17. Remove the stylet and attach the T-extension set to cannula.
 18. Dispose sharps correctly.
 19. Flush the cannula.
 20. Secure the cannula with tegaderm.
 21. Secure the limb to an appropriate size armboard with Elastoplast. (R3) Ensure correct alignment of limb to armboard (Picture 5)



Picture 5

22. Remove and discard drapes and equipment. Remove gloves.
23. Perform Hand Hygiene.
24. Record details of cannulation on Green Sticker. Insert in infant's notes and record any adverse events.

6. DOCUMENTATION

- Progress Notes
- Observation Chart

7. EDUCATIONAL NOTES

- PIVs are most commonly used in hospitalised patients.
- They are primarily used for therapeutic purposes such as administration of medications, fluids and/or blood products as well as blood sampling.
- PIVs are usually considered low risk but can be associated with complications such as hematoma, phlebitis, pain and infection.

ROYAL HOSPITAL FOR WOMEN
LOCAL OPERATING PROCEDURES
NEONATAL SERVICES DIVISION

Approved by
 Quality & Patient Care Committee
 Date: 6/10/16

INTRAVENOUS CANNULA INSERTION cont'd

8. RELATED POLICIES/PROCEDURES/CLINICAL PRACTICE LOP

- Management of PIV device
- Extravasation and Infiltration Injuries – Prevention And Management

9. RISK RATING

- Medium

10. NATIONAL STANDARD

-

11. REFERENCES

- Centres for Disease Control and Prevention Guidelines for the Prevention of Intravascular Catheter related infections. MMWR 2002; 51 (No.RR-10) [pg 11 – 13]
- Dillon, MF., Curran, J., Martos, R., Walsh, C., Walsh, J., Al-Azawi, D., Lee, CS., O'Shea, D. (2008). Factors that affect longevity of intravenous cannulas a prospective study: QJ Med. 101:731-735.
- Harrison, D., Johnston, L., & Loughman, P. (2003). Oral sucrose for procedural pain in sick hospitalized infants: A randomised-controlled trial. Journal of Paediatric and Child Health, (39), 591-7
- NSW Health Policy Directive, (30th October 2007). Correct Patient, Correct Procedure and Correct Site. *Department of Health, NSW*. NSW Department of Health Safety Alert SN: 003/07. Extravasation of IV fluids – care of the cannula site in neonates and children. Document No. PD2007_07, File No. 06/280
- Royal Children's Hospital Melbourne; Clinical Guidelines: (2007) Peripheral Intravenous Device management.
http://www.rch.org.au/clinicalguide/cpg.cfm?doc_id=12105
- Tripepi-Bova KA, Woods KD, Loach MC, (Sept. 1997). A comparison of transparent polyurethane and dry gauze dressings for peripheral I.V.catheter sites: rates of phlebitis, infiltration, and dislodgment by patients. Am J Crit Care, 6(5):377-81.

12. ABBREVIATIONS AND DEFINITIONS OF TERMS

ANTT	Aseptic Non-Touch Technique	AHR	Alcohol Hand Rub
NCC	Newborn Care Centre	PIV	Peripheral Intravenous

RATIONALES	
Rationale 1	To provide security and comfort to the infant.
Rationale 2	To organise equipment and avoid cross-contamination prior to starting the procedure
Rationale 3	To immobilise the limb correctly. To prevent accidental removal.

13. AUTHOR

Primary	4 th Nov. 2005	CNC KB Lindrea
Revised	24 th Nov. 2015	CNC KB Lindrea
Revised	3 rd March 2016	CNC KB Lindrea

REVISION & APPROVAL HISTORY

Neonatal Services Division Quality Committee

FOR REVIEW : OCTOBER 2021