

ARTERIAL LINE - PERIPHERAL INTRA-ARTERIAL LINE SET-UP

This Local Operating Procedure 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 Operating Procedure.

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

It is important to use a closed-circuit infusion line for arterial access.

1. AIM

- To set up the Safeset Intra-Arterial Line (IAL) infusion set correctly and with an aseptic technique

2. PATIENT

- Newborns

3. STAFF

- Medical and nursing staff

4. EQUIPMENT

- Transpac® Safeset
- 50 mL syringe
- Heparinised Saline (Heparin 50 units in 5 mL Sodium Chloride)
- 0.9% Sodium Chloride (for ≥ 34 weeks gestation infants)
- 0.45% Sodium Chloride (for < 34 weeks gestation infants)
- 5 mL syringe
- 2 x 18g blunt drawing-up needle
- Additive labels
- Neutral Detergent
- Blue Tray
- 2% chlorhexidine + 70% isopropyl alcohol swab

NOTE:

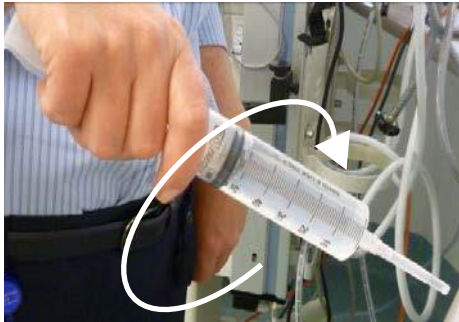
Change Safeset intra-arterial infusion set every 48 hours.

5. CLINICAL PRACTICE

Procedure:

1. Perform hand hygiene.
2. Clean work-surface and blue tray with neutral detergent.
3. Collect equipment using the blue tray.
4. Perform hand hygiene.
5. Draw up prescribed Sodium Chloride (45 mL).
6. Draw up prescribed Heparinised Saline (5 mL).
7. Add Heparinised Saline to Sodium Chloride to make a 50 mL solution (50 units in 50 mL).
8. Re-sheath the needle and gently rotate the solution to mix (Picture 1).
9. Attach the 50mL syringe to the Transpac® Safeset (Pictures 2 & 3).

ARTERIAL LINE - PERIPHERAL INTRA-ARTERIAL LINE SET-UP



Picture 1

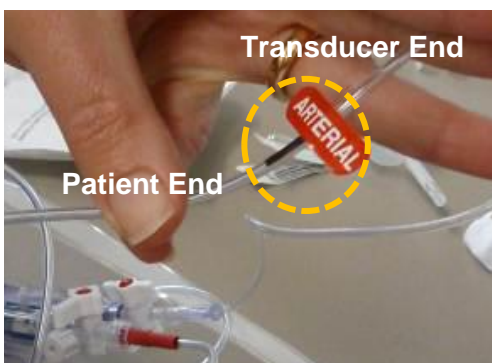


Picture 2

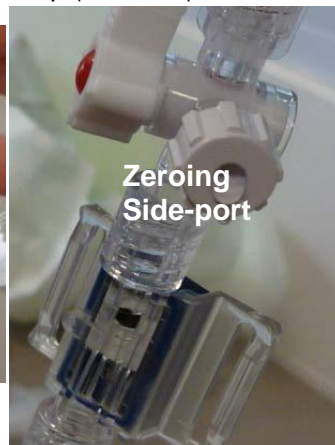


Picture 3

10. Attach the arterial label to the spot just above the black demarcation line on the set (Picture 4).
11. Prime the zeroing port by turning the three-way tap off to the patient (Picture 5).
12. Replace the white cap with a red cap (Picture 6).



Picture 4



Picture 5



Picture 6

13. Unlock and pull back plunger to 3mL of reservoir (Pictures 7 & 8).
14. Squeeze flush device (yellow plastic wings) at the transducer (Picture 9) and push the syringe plunger simultaneously and slowly until solution fills the reservoir chamber (Picture 10).



Picture 7



Picture 8



Picture 9

NEONATAL SERVICES DIVISION

Approved by Quality & Patient Care Committee
July 2018

ARTERIAL LINE - PERIPHERAL INTRA-ARTERIAL LINE SET-UP cont'd

15. Point Reservoir tip up (one-way stopcock on the top). Close the reservoir plunger into the "Locked" position (Pictures 11, 12 & 13).



Picture 10



Picture 11



Picture 12



Picture 13

16. Ensure all air bubbles are purged out of the line and transducer.
17. Scrub the hub of the T-piece with 2% chlorhexidine + 70% isopropyl alcohol swab. Allow to dry.
18. Connect to the infant's intra-arterial access.
19. Dispose packaging and clean work-surface.
20. Perform hand hygiene.
21. Attach completed labels to the syringe and at the patient end of the line.

6. DOCUMENTATION

- eMR nursing notes
- Routine Care Plan
- Neonatal Observation Chart
- Fluid/Gas Prescription Chart
- NICUS database

7. RELATED POLICIES/PROCEDURES/CLINICAL PRACTICE LOP

- Arterial Line – Blood Sampling

8. RISK RATING

- Low

NEONATAL SERVICES DIVISION

Approved by Quality & Patient Care Committee
July 2018

ARTERIAL LINE - PERIPHERAL INTRA-ARTERIAL LINE SET-UP cont'd

9. NATIONAL STANDARD

- Standard 1 Governance for Safety and quality in Health Service Organisation
- Standard 3 Preventing and Controlling Healthcare Associated Infections
- Standard 4 Medication Safety

10. ABBREVIATIONS AND DEFINITIONS OF TERMS

NCC	Newborn Care Centre	IAL	Intra-Arterial Line
-----	---------------------	-----	---------------------

11. REFERENCES

- ANTT® Clinical Practice Framework, Version 3.1. Copyright 2013. The Association for Safe Aseptic Practice (ASAP). www.antt.org.

12. AUTHOR

Primary	15/7/2013	KB Lindrea (CNC), J Sheils (NE)
Revised	30/9/2014	D Cooper (RN)
	20/7/2018	KB Lindrea (CNC), NCC LOPs Committee

REVISION & APPROVAL HISTORY

July 2018 Revised and Approved NCC LOPs Committee
September 2014 Revised and Approved NCC Policy/Procedure Working Group
July 2013 Primary

FOR REVIEW: 2023