Collaborative Regional Benchmarking Group

Arterial Line Management in Critical Care

Aim: To provide guidance on the management of arterial lines in Critical Care
Scope: All adult patients with arterial lines in Critical Care

ASSESS and DOCUMENT

Each shift assess and document
- cannulation site for signs of infection using a recognised phlebitis assessment tool e.g. VIP or VAS
- continued need for arterial cannula

Arterial Cannulation

Arterial Cannulation allows for continuous blood pressure measurements and frequent arterial blood sampling

Contraindications include

Patient refusal	Surgery near proposed insertion site
Local sepsis	Presence of or potential for fistula
Coagulopathy	Anatomical abnormality
Limb ischaemia	

Seek advice from medical team in cases of haematoma, haemorrhage, distal pain, altered sensation, signs of infection or prolonged capillary refill

STANDARD ARTERIAL LINE MANAGEMENT	
1	Effective hand hygiene and ANTT must be performed when accessing arterial line for blood sampling and dressing changes.
2	Always 'scrub the hub' with 2% Chorhexidine/70% alcohol for 15 seconds and allow to dry before taking blood samples. (Use alternative when allergy present)
3	Ensure the flush bag is 0.9% Normal Saline and the pressure is maintained at 300mmHg.
4	Zero the transducer each shift and after each patient repositioning.
5	Use a semi permeable dressing and only change when there is excessive moisture, the dressing is loose or during a transducer line change.
6	Change the transducer line and needle free port as per manufacturers instructions

ADDITIONAL CONSIDERATIONS

- Always ensure arterial line alarms are switched on
- Keep insertion site visible at all times if possible
- Ensure the line is patent and free of blood at all times.
- Always ensure a red arterial transducer and red needle free devices are used to prevent accidental drug administration.
- Insertion and removal must be performed by a practitioner assessed as competent to do so.

NEVER

NEVER administer medications via the arterial cannula. It can lead to paraesthesia, severe pain, motor dysfunction, compartment syndrome, gangrene and limb loss

Please see your units full guidelines for more information

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West Yorkshire Critical Care & Major Trauma Operational Delivery Networks
North Yorkshire & Humberside Critical Care Network NHS
NHS Operational Delivery Network NoECCN North of England Critical Care Network