

Management and Fixation of Chest Drains during Transport

Incidence

Air leaks occur in 1–2% of all newborn infants. The rate of occurrence increases in ventilated infants where it ranges from 20-30% (Caret 1999)

Clinical Signs

Any number of the following general and specific clinical signs of a pneumothorax may be present

Specific Signs

- Unequal chest movement
- Sudden hypoxia and /or hypocapnoea
- Transient rise in blood pressure followed by a fall
- Tachycardia
- Abdominal distension

Diagnosis

- Transillumination
- Chest X-ray

Management

Insertion of chest drain by ANNP/medical staff (see St Mary's Neonatal Medical Unit handbook for procedure of chest drain insertion).

Where appropriate use local equipment to conserve transport equipment should it be required en route.

Ensure adequate analgesia prior to and during transfer

Fixation of Chest Drain for Transfer

- Ensure drain is sutured in securely with no drainage holes visible above skin level
- Ensure drain not pulling or dragging on skin
- If in hospital setting confirm correct position by X-ray then apply Tagaderm dressing over insertion site and drain
- Connect flutter (Heimlich) valve and unclamp chest drain, each drain should have its own chest drain clamp

Observations and Nursing Actions

- Clearly label drain e.g. right upper, right lower
- Ensure no leak from around site

- Document any valve activity on transport chart e.g. flutter, static
- Continue to monitor vital signs
- Recheck connections especially following transfer of infant from incubator to incubator
- Inform receiving unit that chest drain(s) in situ

References

Carey (1999)

Regional Neonatal Medical Unit, Information & Guidelines, Central Manchester and Manchester Children's University Hospitals NHS Trust. <http://neonate.cmmc.nhs.uk>