



NCCU CLINICAL GUIDELINES
SECTION: 2

RESPIRATORY PROBLEMS AND MANAGEMENT

Section 2: Respiratory problems and management
Transillumination of the chest
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TRANSILLUMINATION OF THE CHEST

To detect abnormal air collections within the chest cavity in an infant suspected of having an air leak or any respiratory supported infant who deteriorates with asymmetrical chest wall movement or air entry.

Transillumination can be done by any staff member deemed competent or a trainee under direct supervision from a competent staff member. If an abnormal air collection within the chest cavity is suspected, a Medical Officer competent in needle aspiration of the chest must be contacted immediately to attend the unit.

Any suspicion of an accumulation of air by transillumination should be confirmed by a chest X ray if time permits.

Emergency needle aspiration equipment is kept in a container at each infant's bay for ICU infants.

For infants suspected of having fluid in the chest cavity see ICC insertion

EQUIPMENT

- High intensity fiber-optic cold light source (transilluminator)
- Cardiopulmonary monitoring
- Blood pressure monitoring

PROCEDURE

1. Lower the lights in the room to enable hyperlucent areas to be seen if present. (use black gown if needed)
2. Place the transilluminator along the posterior axillary line on the side on which the air collection is suspected. The transilluminator may be moved up and down along the posterior axillary line and above the nipple to detect any areas of increased transmission of light.
3. For pneumopericardium: Place the transilluminator in the third or fourth intercostal space on the left midclavicular line and angle the light towards the xiphoid process to detect any areas of increased transmission of light.
4. Transilluminate both sides of the chest to give a comparison.

Note: Severe subcutaneous chest wall oedema and pulmonary interstitial emphysema may give false-positive.