



Innovations

Vein finder – A cost-effective tool to screen pneumothorax in neonatal intensive care unit



Fig. 1. A vein finder device.



Fig. 2. A vein finder device being used to screen a baby with pneumothorax.

A two day old neonate[†] presented to the Neonatal Intensive Care Unit, department of Paediatrics, Makunda Christian Leprosy and General Hospital, Assam, India, during the month of September 2019. He was depressed at birth, was on ventilatory support and had sudden spontaneous desaturation. A vein finder (Fig. 1) was used, which showed an obvious pneumothorax (Fig. 2), which was confirmed with chest X-ray. Due to this timely intervention, the neonate was saved.

The vein finder makes use of infrared light which helps to screen for pneumothorax. Placing the detector on the neonate's chest produces transillumination, which aids in detection.

Pneumothorax is a common condition in the neonatal intensive care unit (NICU). Fibre-optic cold light source is commonly used to screen for

pneumothorax in the NICU. Although pneumothorax requires an X-ray, when there is a tension pneumothorax, there may not be enough time to wait for an X-ray, as it is an emergency. Furthermore, a cold light source may be expensive for smaller NICUs, but having a screening device such as a vein finder, which is cheap, helps to intervene quickly. Using this device in our sick newborn care unit, especially in resource-limited settings, can save a lot of neonates.

Conflicts of Interest: None.

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[†]Consent to publish clinical information and images obtained from patient's parents.