Mishap averted with an axillary stethoscope

A stethoscope placed over the precordium, or in the axilla, is one of the prescribed monitors to use during anaesthesia,1 since it monitors both the cardiac and breath sounds. However, currently, it is being used infrequently.2 We describe the anaesthetic management of a child in whom a critical incident was averted with the use of an axillary stethoscope.

A 21-day-old term neonate was scheduled for right thoracoscopic-assisted excision of a right posterior mediastinal mass, that was diagnosed antenatally. The child developed respiratory distress 18 days postnatally, was intubated with a size 3 nasal endotracheal tube and was stabilised in the intensive care unit (ICU). He was scheduled for an emergency thoracoscopy and mass excision, to be carried out in the prone position. The child was received from ICU, having been intubated, and was maintained on oxygen, air, isoflurane with atracurium and fentanyl boluses. The monitors that were used were pulse oximetry, an electrocardiogram, noninvasive blood pressure, capnography and a stethoscope placed in the left axilla. Once the child was turned prone, the breathing circuit was changed to a semi-closed system and ventilated manually. The airway pressure and exhaled tidal volumes were also monitored. The surgeons were instructed to create a pneumothorax of only 4-5 cm H$_2$O pressures for the thoracoscopic procedure. Within a few seconds of insufflation, the breath sounds were not heard through the stethoscope, in spite of no change in compliance being felt in the reservoir bag. There were no associated changes in the heart rate and oxygen saturation. It was immediately noted that the insufflation pressures were 13 cm H$_2$O due to default settings in the endoscopic machine. Immediately, the thorax was desufflated. This critical incident was noticed and corrected within a few seconds, and a major catastrophe was prevented due to monitoring with an axillary stethoscope. Thoracoscopic procedures in infants and smaller children pose more intraoperative problems than those in older children, and their anaesthetic management requires vigilant monitoring.3 This case report recommends the use of an axillary stethoscope as an easily available, noninvasive monitor in the early detection of complications, and especially in the case of procedures that are carried out in positions other than the supine position. Even though the precordial stethoscope has been replaced with newer monitoring modalities, we would like to stress the importance of this noninvasive, simple, and easily available device, especially in developing countries that have economical constraints.

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References