Paediatric Pathology Society


Without measuring the intrathoracic air pressure by means of a manometer, followed by embedding the suspected lung tissue in nitrocellulose, many cases of ectopic air in the thorax will escape detection. This is unfortunate because the finding of air 'in the wrong place' can help to establish the cause of death. In the present study, interstitial lung emphysema occurred in 7% of all the babies who died in the first week of life, and it is concluded that this precedes most of the cases of mediastinal emphysema and pneumothorax seen in the newborn.

A sudden rise in intrathoracic pressure applies a shearing force to the alveolar margins in contact with the periarterial sheaths which may then rupture, allowing alveolar air to enter the interstitium.

Predisposing diseases in the newborn were hyaline membrane disease, intracranial haemorrhage, renal dysgenesis, and adrenal hypoplasia.

Forced respiration in an attempt to recover from anoxia is thought to be the commonest cause, but in this study of 100 cases of interstitial pulmonary emphysema in the newborn, mouth-to-mouth respiration as a cause of the lung pneumatosis was seen in only 4%, which is much lower than expected.

Necrosis of vocal cords in infants. G. J. Cullity and J. L. Emery. Department of Pathology, Children's Hospital, Western Bank, Sheffield S10 2TH.

Vocal cord lesions in infants have been reported at necropsy in association with sudden unexpected death (SUD) by 4 different groups of observers in the last 20 years. The lesions are generally described as deep-seated foci of necrosis or inflammation in the true vocal cord. Some have described them in up to 90% of cases of unexplained SUD, and most believe them to be pathognomonic. The aetiology and pathogenesis are unknown. Similar ulcerated lesions were described in 1962 by Osborn and Flett in newborn infants dying with respiratory distress syndrome and believed by them to result from vocal cord spasm. We have studied the vocal cords in an unselected group of 117 infants and children, comprising 55 cases of SUD by history, 55 hospital deaths in infants and children, and 7 stillbirths. The lesions seen have been classified histologically into 7 groups. When allowance is made for the effects of intubation, the same pattern of lesions is present in all but the stillbirth group. This argues against a specific pathogenetic mechanism confined to the cot death situation. The lesions certainly occur before death, and suggest the existence of a laryngeal disorder which merits further study.

Reference

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