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IMAGES IN NEONATAL MEDICINE.....

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Pneumopericardium in a term infant on nasal continuous positive airway pressure

We report neonatal pneumopericardium in a term infant with gestational age of 39 weeks. The pneumopericardium developed during the second day of postnatal age. There was no evidence of other forms of air-leak. The infant was treated with nasal CPAP delivered for respiratory distress and was not mechanically ventilated before pneumopericardium occurred. His plain chest radiograph showed a halo of air around the heart (fig 1). In the case there was no clinical evidence of cardiac air tamponade and the pneumopericardium resolved spontaneously. The next day, control chest radiograph and echocardiogram showed complete resolution of the pneumopericardium.

Pneumopericardium is a rare form of neonatal air-leak syndrome with high morbidity and mortality. It is almost invariably preceded by other forms of air-leak.¹ Neonatal pneumopericardium is usually a complication of positive-pressure ventilation in premature infants with respiratory distress.² The mechanism by which pneumopericardium is not well understood, but it is probably due to passage of air along vascular sheaths. The clinical signs of pneumopericardium range from asymptomatic to the full picture of cardiac tamponade. Asymptomatic patients should be observed closely with chest radiograph but symptomatic patients should be treated emergently by pericardiocentesis.

Figure 1 Chest x ray film showing a radiolucent halo around the heart in a 2-day-old infant with pneumopericardium.

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