in new technologies evaluating the localization of pulmonary embolism. *Am J Respir Critic Care Med* 2000;**162**:2232–7.
20 **Remy-Jardin M**, Tillie-Leblond I, Szapiro D, *et al*. CT angiography of pulmonary embolism in patients with underlying respiratory disease: impact of multislice CT on image quality and negative predictive value. *Eur Radiol* 2002;**12**:1971–8.
21 **Janssens JP**, Herrmann F, MacGee W, *et al*. Cause of death in older patients with anatomo-pathological evidence of chronic bronchitis or emphysema: a case-control study based on autopsy findings. *J Am Geriatr Soc* 2001;**49**:571–6.
22 **Pineda LA**, Hathwar VS, Grant BJ. Clinical suspicion of fatal pulmonary embolism. *Chest* 2001;**120**:791–5.

LUNG ALERT

Reduced lung function at birth may be a risk factor for later asthma

▲ Håland G, Lødrup Carlsen KC, Sandvik L, *et al*. Reduced lung function at birth and the risk of asthma at 10 years of age. *N Engl J Med* 2006;**355**:1682–9.

A wheeze during childhood may be related to the development of asthma in later life, especially if it is a ''transient early wheeze''. The authors have studied whether lung function abnormalities in a child shortly after birth could be used as a predictor of asthma at age 10.

The lung function of 802 newborns was measured (mean age 2.7; SD 0.9 days) using a pneumotachograph with a face mask during quiet tidal breathing. These data were used to calculate peak tidal expiratory flow/total expiratory time (T_{ptef}/T_e) and respiratory-system compliance.

At 10 years the children were assessed for a diagnosis of asthma based either on history, previous diagnosis, hyperresponsiveness, treadmill induced bronchoconstriction and/or clinical examination. At this time 616 (77%) remained under follow-up; 2 were excluded on the basis of insufficient data.

$T_{ptef}/T_e < 0.2$ or the median and respiratory-system compliance less than the median were used as possible predictors of asthma. Results show that lung function abnormalities have a low positive predictive value for asthma at 10 years, but may be a risk factor for later childhood asthma.

Adjustments were made for intrauterine smoke exposure, parental asthma, rhinoconjunctivitis and sex. However, any adjustment for environmental factors and ethnic differences were not made clear. Also, the diagnostic criteria for asthma were changeable depending on variations in the definition of wheeze or the threshold for starting asthma treatment.

This was an interesting study that makes clear the highly variable nature of asthma and airway development in early childhood. Further study will be required in order to assess whether lung function testing, in combination with other assessment tools of airway development in early child, will provide enough information to influence early intervention with children deemed to be at risk of developing asthma.

Raymond Ramnarine
FY1 Respiratory Medicine, Homerton University Hospital; raymondr@doctors.org.uk