current guidelines for safety during flight for infants with a history of neonatal lung disease.

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KU was funded by the Siriraj Hospital, Thailand. PDS and SS are funded by the National Health and Medical Research Council, Australia.

Competing interests: none.

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LUNG ALERT

Reliability of a pulmonary embolism management algorithm

▲ van Belle A, Buller HR, Huisman MV, *et al* for the Christopher Study Investigators. Effectiveness of managing suspected pulmonary embolism using an algorithm combining clinical probability, D-dimer testing, and computed tomography. *JAMA* 2006;**295**:172–9

The combination of clinical scoring systems and D-dimer testing is increasingly being used to stratify probabilities of pulmonary embolism (PE). This study was targeted to assess the clinical effectiveness of an algorithm using clinical decision rules, D-dimer testing, and CT scans in patients with suspected PE. The primary outcome measures were fatal or symptomatic venous thromboembolism (VTE) at 3 months follow up.

A total of 3306 eligible patients with suspected PE (age >18 years, 57.4% female, 18.3% inpatients) were prospectively enrolled from 12 hospitals. Using a modification of Well's clinical decision rules, PE was considered unlikely in 2206 (66.7%). PE was excluded in 1057 (32%) of those following a normal D-dimer test (1149 had an abnormal test), but 29 of the 1057 were anticoagulated for other reasons. At 3 months, five patients (0.5%) suffered VTE. Clinically, 1100 (33.3%) were considered likely to have had a PE.

For the above 2249 (1100+1149) requiring a CT scan, PE was excluded in 1505 (69 were anticoagulated for other reasons, 18 (1.3%) suffered VTE), CT scanning confirmed PE in 674 patients, 20 CT scans were inconclusive (one VTE), and 50 did not have a CT scan (two VTE). The prevalence of PE was 12.1% (226/2206) in the clinically ''unlikely'' group compared with 37.1% (408/1100) in the clinically ''likely'' group ($p<0.001$).

The authors conclude that this diagnostic strategy is effective and associated with a low risk of subsequent VTE. Limitations of this study include the use of two different kinds of CT scanner (multidetector and single detector) with potentially different pick up rates. The prevalence of PE of 23.2% (266/1149) in the ''clinically unlikely PE and abnormal D-dimer'' group shows that a clinical scoring system alone is inadequate.

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