Dual energy CT pulmonary angiography: findings in a patient with chronic thromboembolic pulmonary hypertension

A 55-year-old woman became increasingly breathless over a 9-month period. Systolic pulmonary artery pressure was estimated at 50 mm Hg by echocardiography. CT pulmonary angiography was performed using a dual energy technique whereby datasets are simultaneously acquired at 80 kV and 140 kV. Differential absorption of these energy spectra by iodine molecules in intravenous contrast medium is exploited to generate a map of parenchymal perfusion in addition to standard grey-scale images. 1

Multiple laminated thrombi and web stenoses were demonstrated and their functional significance elegantly shown by corresponding perfusion defects on the dual energy perfusion images (figs 1 and 2). Pulmonary thromboendarterectomy was performed and recovery was uneventful.

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