Case of Pulmonary Embolism

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A 65-year-old man was admitted with a pulmonary embolism. He complained of progressive exertional dyspnea followed by thrombophlebitis of his left lower limb for several weeks before admission. Venography showed multiple thrombi in the varicose left small saphenous vein. A pulmonary perfusion scintigram revealed multiple perfusion defects in both lungs; the ventilation scintigram was normal. The patient was placed on heparin 20 000 U/d IV for 7 days and urokinase 240 000 U/d IV for 4 days and was also given warfarin 2.5 mg/d PO during the same period of time.

Pulmonary helical CT (X Vision; Toshiba Medical System) was performed with 5-mm-thick sections and a 3-mm/s table increment rate. The patient received 100 mL of contrast medium (60% solution of iopamidol; Schering) at the rate of 3 mL/s with 15-second delay. Three-dimensional pulmonary CT angiography (3DCTA) was obtained by the shaded-surface-rendering method at a 1.5-mm pitch.

The 3DCTA on admission depicted clearly deformed pulmonary arterial trees (Figure 1), whereas the 3DCTA taken 2 weeks later demonstrated marked improvement in pulmonary arterial configuration (Figure 2). These findings were compatible with the patient’s clinical recovery. The 3DCTA was very useful in the diagnosis and the follow-up study of pulmonary embolism.
Figure 1. 3DCTA obtained before thrombolytic therapy demonstrated that many branches of pulmonary artery were obliterated abruptly by thrombi. Top, Anterior aspect of cardiovascular system; bottom, posterior aspect.

Figure 2. Many branches of pulmonary artery could be visualized, along with abolishment of thrombi by treatment.
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