Long-term efficacy of two vena cava filter implants for congenital duplicated inferior vena cava

Efficacité à long terme de l’implantation de deux filtres caves pour une double veine cave inférieure congénitale

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In June 1984, a 61-year-old man presented with pulmonary embolism (PE) in the right lower lobe artery complicating left popliteal deep vein thrombosis. Oral anticoagulants were started. Four months later, the patient complained again of dyspnoea. A lung scan revealed multiple perfusion defects in the left lung suggesting a high probability of PE. No underlying conditions predisposing to thrombus formation were discovered. Since anticoagulation levels had remained within the therapeutic range, placement of an inferior vena cava (IVC) filter was advised.

Venography revealed a right IVC in the normal position and an additional left IVC. The latter originated from the left common iliac vein and ended at the left renal vein, which crossed anteriorly to the aorta joining the right IVC to form a single suprarenal IVC. Two Greenfield filters were inserted percutaneously via the femoral vein into both IVCs. When last seen in March 2008, 24 years after the procedure, the patient was still receiving anticoagulant treatment and had remained free of recurrent clinical thromboembolic events. Fluoroscopy revealed that the two filters were still oriented in parallel directions (Fig. 1). Doppler ultrasound confirmed the absence of migration, tilting or occlusion of the filters (Fig. 2).

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Duplicated IVC results from the non-regression of the left supracardinal vein during fetal development. Its incidence ranges from 0.3 to 3% and its presence should be suspected when recurrent PE occurs after the insertion of an IVC filter. In such cases, dual filter placement may represent a safe and effective treatment against further relapses.

**Competing interest statement**

All authors declare that they have no conflicts of interest.