A 68-year-old man underwent emergency admission to Osaka Saiseikai Senri Hospital with sudden-onset dyspnea. He had a history of inferior vena cava (IVC) filter implantation (ALN Implants Chirurgicaux, France) 6 years earlier due to pulmonary artery embolism during pelvic fracture surgery following a paragliding accident. He self-discontinued anticoagulation therapy, however, 2 years later. He had no other past history or comorbidity, and had been in good condition until the current presentation. Physical examination was unremarkable other than shortness of breath or cold sweat. Laboratory tests indicated elevated D-dimer (10.0 µg/mL). Enhanced computed tomography (CT) indicated pulmonary embolism (Figure A). Both the CT and venography showed an occlusive thrombus extending beyond the filter (Figure B, C) from the left iliofemoral vein. After a temporary IVC filter (Neuhaus Laboratories, USA) insertion (Figure D), he received continuous i.v. infusion of unfracti

tated heparin for 3 days, followed by initiation of a direct oral anticoagulant (DOAC), rivaroxaban, 30 mg/day for 3 weeks and 15 mg/day thereafter. At 2 weeks after the start of the DOAC, contrast-CT showed no thrombus in the pulmonary artery and the temporary filter was removed. The occlusive thrombus, however, was still detected in and around the filter (Figure E). Follow-up CT at 5 months showed complete resolution of the thrombus (Figure F).

DOAC are appropriate for deep venous thrombosis, but their efficacy for IVC thrombosis remains uncertain. In the present case, the occlusive filter thrombus completely disappeared on continuous use of DOAC.

To our knowledge, this is the first report of successful treatment of occlusive filter thrombus using DOAC.

Disclosure

The authors declare no conflict of interest.

Figure. (A, C) Pulmonary embolism and an occlusive thrombus extending beyond the filter from the left iliofemoral vein. (B) Venography showed total occlusion of the inferior vena cava (IVC) and appearance of collateral flow. (D) A temporary IVC filter (Neuhaus) was inserted above the implanted ALN filter. (E) At 2 weeks, the occlusive thrombus in and around the filter was still detected. (F) At 5 months, no thrombus was obvious.