Circulation Reports
Circ Rep 2021; 3: 686–687
doi:10.1253/circrep.CR-21-0089

Five-Year Intra-Arterial Evaluation After Fluoropolymer-Based Drug-Eluting Stent Implantation for a Superficial Femoral Artery

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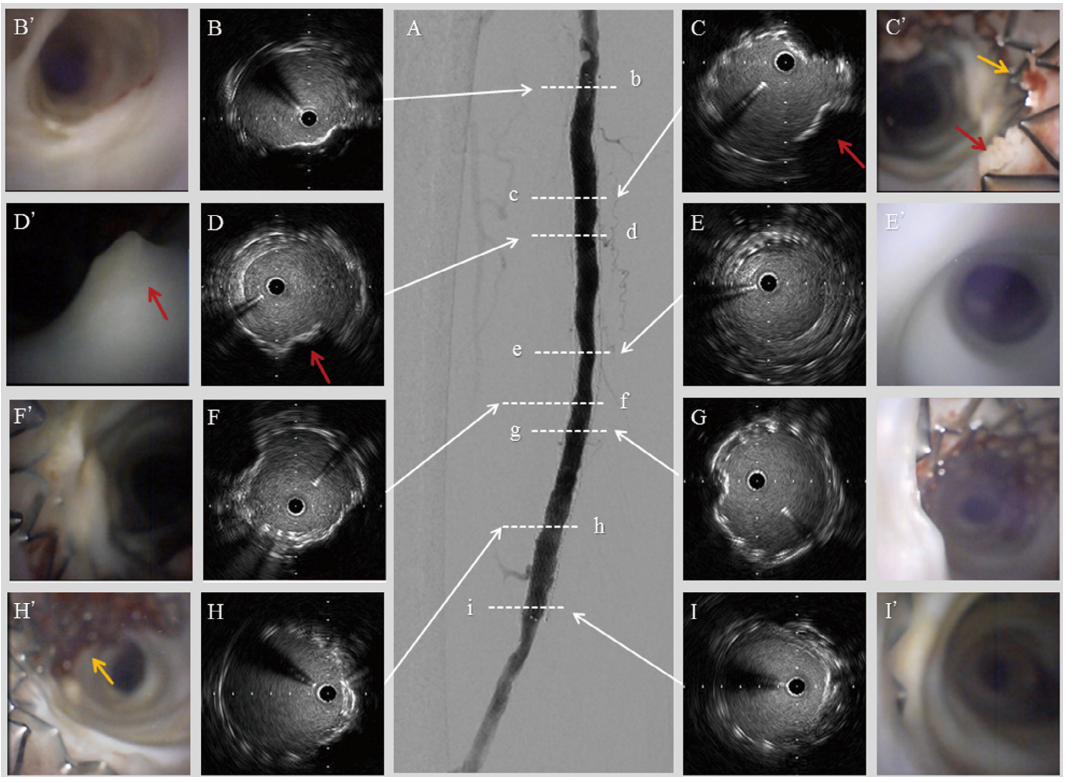

Figure. (**A**) Digital subtraction angiography of the stented lesion. (**B**–**I**) Intravascular ultrasound and (**B'**–**I'**) angioscopy findings at sites b–i, shown in (**A**), respectively. Red thrombus on uncovered stent struts (**C'**,**H'**; yellow arrows) and eruptive calcified nodules (**C**,**C'**,**D**,**D'**, red arrows) were observed.

Although previous trials reported that Eluvia (Boston Scientific, Marlborough, MA, USA), a fluoropolymer-based drug-eluting stent, achieves durable patency in the treatment of femoropopliteal lesions,[1] there are no long-term investigations on the sustainability of this stent's performance.

An 80-year-old man with dyslipidemia and smoking complained of right life-disabling claudication due to lesions in the middle part of the superficial femoral artery and was successfully treated by implantation of a 7.0×150-mm Eluvia. Five years after Eluvia implantation, right claudication recurred under continuation of dual antiplatelet therapy.

Received July 13, 2021; revised manuscript received September 5, 2021; accepted September 7, 2021; J-STAGE Advance Publication released online October 8, 2021 Time for primary review: 27 days
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ISSN-2434-0790

An initial angiogram showed severe stenosis of a de novo popliteal lesion and that the Eluvia stent was patent. After treating the popliteal lesion, we evaluated the intra-arterial status of the stented site using intravascular ultrasound and angioscopy (**Figure**) and found white neointima covering approximately all stent struts, although some parts were visible with a red thrombus and eruptive calcified nodules (**Figure C**,**C'**,**D**,**D'**,**H**).

A previous study reported that stent struts were well covered by neointima 3 months after Eluvia implantation.[2] Although most of the struts were well covered 5 years after implantation in the present case, red thrombus and eruptive calcified nodules were observed on the focal uncovered stent struts, which suggested delayed arterial healing. Late stent failure, including late-term restenosis, could be attributed to delayed arterial healing caused by the cytotoxic effect of paclitaxel; therefore, we recommend careful long-term follow-up after Eluvia implantation.

Disclosures

None.

IRB Information

This study was approved by the Ethics Committee of Kansai Rosai Hospital (Reference no. 2102002).

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