CASE IMAGE

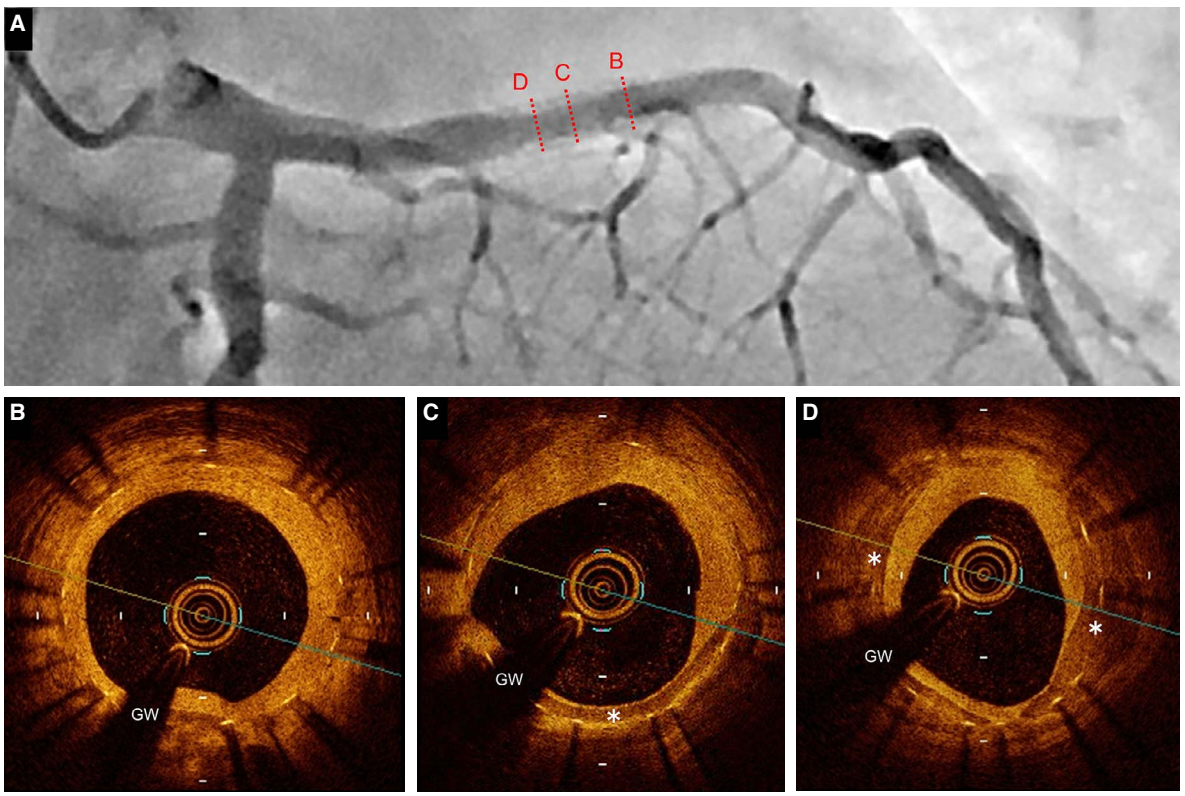
A case of severely calcified neoatherosclerosis-embedded stent struts clearly documented with optical coherence tomography imaging

Optik koherens tomografi görüntülemesiyle açıkça kanıtlandığı gibi ciddi derecede yeni oluşmuş kalsifiye ateroskleroza gömülmüş destek stent

Yusuke Oba
Hiroshi Funayama
Hayato Shimizu
Kazuomi Kario

Division of Cardiovascular Medicine, Department of Internal Medicine, Jichi Medical University School of Medicine, Tochigi-ken, Japan

A 65-year-old Japanese man using peritoneal hemodialysis due to diabetic nephropathy underwent a planned coronary angiography as a preoperative examination. Fourteen years earlier, he had undergone a percutaneous coronary intervention due to acute myocardial infarction and had been implanted with a bare-metal stent in the left anterior descending coronary artery. Although his condition had run a benign course without any recurrence of cardiovascular events, coronary angiography was performed 14 years later in preparation for a living-donor kidney transplantation. Coronary angiography revealed less than 50% restenosis (Figure A). Although Figure B indicates circumferentially covered stent struts, the homogeneous neointima pattern observed with optical coherence tomography (OCT) appeared to suggest smooth muscle cells and extracellular matrix. Figure C demonstrates adluminal attenuation with clear borders within the intrastent tissue, indicating calcified neoatherosclerosis. Moreover, severely calcified neoatherosclerosis-embedded stent struts were clearly documented using OCT (Figure D). Whether this unique characteristic might be limited to patients undergoing hemodialysis treatment remains uncertain.



Figures– Coronary angiography revealed less than 50% restenosis in the left anterior descending artery **(A)**. Circumferentially covered stent struts and a homogeneous neointima pattern were illustrated in 2-dimensional cross sections of optical coherence tomography (OCT) images **(B)**. Adluminal attenuation with clear borders within the intrastent tissue was observed in 2-dimensional cross sections of OCT images **(C)**. Stent struts were completely embedded in severe calcification, as demonstrated by 2-dimensional cross sections of OCT images **(D)**.
GW: Guidewire artifact. *An asterisk denotes calcification.