Coronary Buerger’s disease with a peripheral arterial aneurysm

Mitsuru Abe1, Takeshi Kimura1, Yutaka Furukawa1, Eiji Tadamura2, and Toru Kita1

1Department of Cardiovascular Medicine, Kyoto University Hospital, 54 Kawaharacho, Shogoin, Sakyoku, Kyoto 606-8507, Japan; 2Department of Diagnostic Imaging, Kyoto University Hospital, Sakyoku, Kyoto, Japan

* Corresponding author. Tel: +81 75 751 4255; fax: +81 75 751 3299. E-mail address: mitsuru@kuhp.kyoto-u.ac.jp

This male patient was diagnosed as Buerger’s disease at 25 years of age. He developed ulcers on the first and fifth toes of right foot at 38 years of age, and was admitted to our hospital due to ischaemic leg pain at rest. Physical examination revealed an absence of dorsalis pedis pulses bilaterally. Digital subtraction angiography of right lower leg showed complete occlusion of both anterior and posterior tibial arteries with typical corkscrew-like collateralizations (Panel A). Subsequent coronary angiogram revealed complete occlusion of the middle segment of left anterior descending artery. Corkscrew collaterals (Panel B) and intact right coronary artery supplied blood stream distally. He has no history of angina pectoris, and a thallium scan demonstrated normal myocardial perfusion (Panel C). An aneurysm was incidentally found in the distal segment of right femoral artery (Panel D) by systemic examination of arteries using computed tomography. Three-dimensional reconstruction of the image of computed tomography gave precise image of this aneurysm (Panel E). Only a few cases of coronary involvement and one case of thoracoabdominal aneurysm complicated with Buerger’s disease have been reported. To the best of our knowledge, this is the first case of Buerger’s disease with both coronary artery occlusion and an aneurysm in peripheral artery.

Panel A. Digital subtraction angiography of right lower leg, demonstrating complete occlusion of both anterior (arrows) and posterior (arrow head) tibial arteries with typical corkscrew-like collateralizations.

Panel B. Coronary angiogram revealing complete occlusion (arrows) of left anterior descending artery, filled distally (dotted-lined arrows) via corkscrew collaterals (arrow heads).

Panel C. Thallium myocardial perfusion imaging in the short axis (left) and the vertical long axis (right).

Panels D and E. Axial view (Panel D) and three-dimensional reconstruction (Panel E) of the computed tomographic scan, demonstrating an aneurysm in the distal segment of right femoral artery.