



ELSEVIER

Contents lists available at ScienceDirect

Journal of Cardiology Cases

journal homepage: www.elsevier.com/locate/jccase



Case Report

Successful revascularization of advanced coronary artery disease associated with pseudoxanthoma elasticum

Fumiya Anzai, Hiroyuki Kunii*, Yuki Kanno, Masashi Kamioka, Atsushi Kobayashi, Hitoshi Suzuki, Shuichi Saitoh, Yasuchika Takeishi

Department of Cardiovascular Medicine, Fukushima Medical University, Fukushima, Japan

ARTICLE INFO

Article history:

Received 11 January 2017
Received in revised form 25 April 2017
Accepted 11 May 2017

Keywords:

Pseudoxanthoma elasticum
Intravascular ultrasound
Percutaneous coronary intervention

ABSTRACT

Pseudoxanthoma elasticum (PXE) is caused by loss-of-function mutations of the ATP-binding cassette subfamily C member 6 gene.

A 58-year-old man was diagnosed as having PXE based on typical findings in orbital and skin biopsies. Coronary computed tomography (CT) showed severe coronary stenosis in the proximal right coronary artery (RCA), and chronic total occlusion (CTO) of the mid left anterior descending coronary artery (LAD) with bridging collaterals. Coronary angiography revealed 99% stenosis in the RCA (#1) and CTO in the mid LAD (#7) with well-developed collaterals from the LAD to the RCA. We performed percutaneous coronary intervention (PCI) and achieved complete revascularization. Intravascular ultrasound (IVUS) showed a superficial high echoic component around the vessels throughout the length of coronary arteries including non-stenotic regions. In the IVUS findings, the main cause of stenosis of the RCA lesion was large amounts of plaque, and the cause of the CTO in the LAD was coronary negative remodeling. In this case, coronary CT was clinically useful in the identification of ischemic heart disease. Since IVUS demonstrates variable findings in each coronary artery lesion and the morphologic characteristics might alter the strategy of PCI, IVUS should be performed at the time of PCI in PXE patients.

<Learning objective: Pseudoxanthoma elasticum (PXE) has higher incidence of coronary artery disease (CAD). Coronary computed tomography is clinically useful in the identification of CAD in PXE patients. Intravascular ultrasound should be performed at the time of percutaneous coronary intervention in PXE patients, since the stenotic lesions of PXE have some morphological variations with a superficial high echoic component.>

© 2017 Japanese College of Cardiology. Published by Elsevier Ltd. All rights reserved.

Introduction

Pseudoxanthoma elasticum (PXE) is caused by loss-of-function mutations of the ATP-binding cassette subfamily C member 6 gene. This is a recessive disease characterized by elastic calcification leading to dermal and ocular complications [1]. Typical findings among carriers include microscopic dermal lesions, choroidal neovascularization and angioid streaks on fundoscopic examination, and higher incidence of atherosclerotic diseases such as stroke and coronary artery disease (CAD) [2].

Here, we report a case of PXE complicated by advanced CAD with several coronary stenotic lesion morphologies which were successfully treated by percutaneous coronary intervention (PCI).

Case report

A 58-year-old male patient was referred to our hospital for examination of the involvement of CAD associated with PXE. The PXE diagnosis was made using typical findings from orbital and skin biopsies. The patient had a history of smoking with no past or present illness. He had no suspected symptoms of CAD. Electrocardiogram was normal, and echocardiography showed normal cardiac function with no valvular diseases. The coronary computed tomography (CT) image is shown in Fig. 1. Severe coronary stenosis was identified in the proximal right coronary

* Corresponding author at: Department of Cardiovascular Medicine, Fukushima Medical University, 1 Hikarigaoka, Fukushima 960-1295, Japan. Fax: +81 548 1821.
E-mail address: hkunii@fmu.ac.jp (H. Kunii).

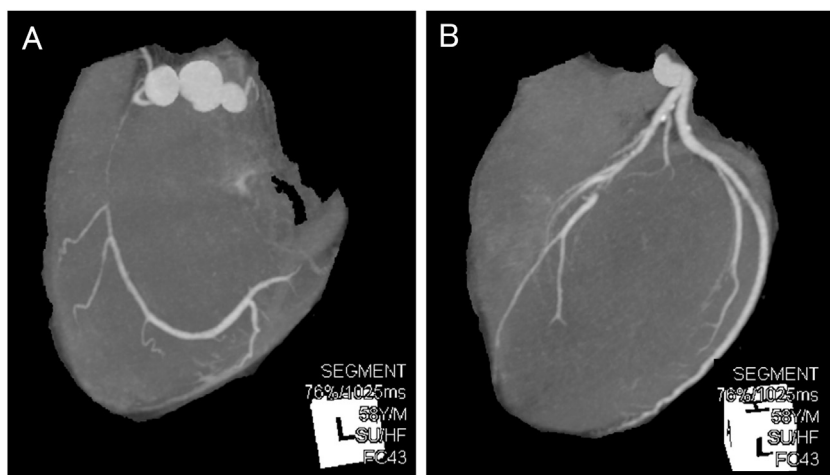


Fig. 1. Coronary computed tomography. (A) Severe coronary stenosis in the proximal right coronary artery. (B) Chronic total occlusion of the mid left anterior descending coronary artery with bridging collaterals.

artery (RCA), and chronic total occlusion (CTO) of the mid left anterior descending coronary artery (LAD) with bridging collaterals was also detected. It should be noted that obvious calcification was not evident in either the RCA or LAD on CT images. Coronary angiography (CAG) revealed 99% stenosis in the RCA (#1) and CTO in the mid LAD (#7) with well-developed collaterals from the LAD to the RCA (Fig. 2). Exercise-rest myocardial perfusion imaging with ^{99m}Tc -sestamibi showed myocardial ischemia in antero-septal regions. Magnetic resonance

angiography (MRA) showed no significant lesions in carotid arteries. Ankle-brachial index (ABI) and cardio-ankle vascular index (CAVI) were normal.

Intravascular ultrasound (IVUS) findings of the RCA revealed a superficial high echoic component around the vessels without acoustic shadowing. This component was observed throughout the length of coronary arteries including the non-stenotic regions. RCA was stenosed by major amounts of plaque (Fig. 3). We performed predilatation with a 2.5×15 mm non-compliant balloon. Next,

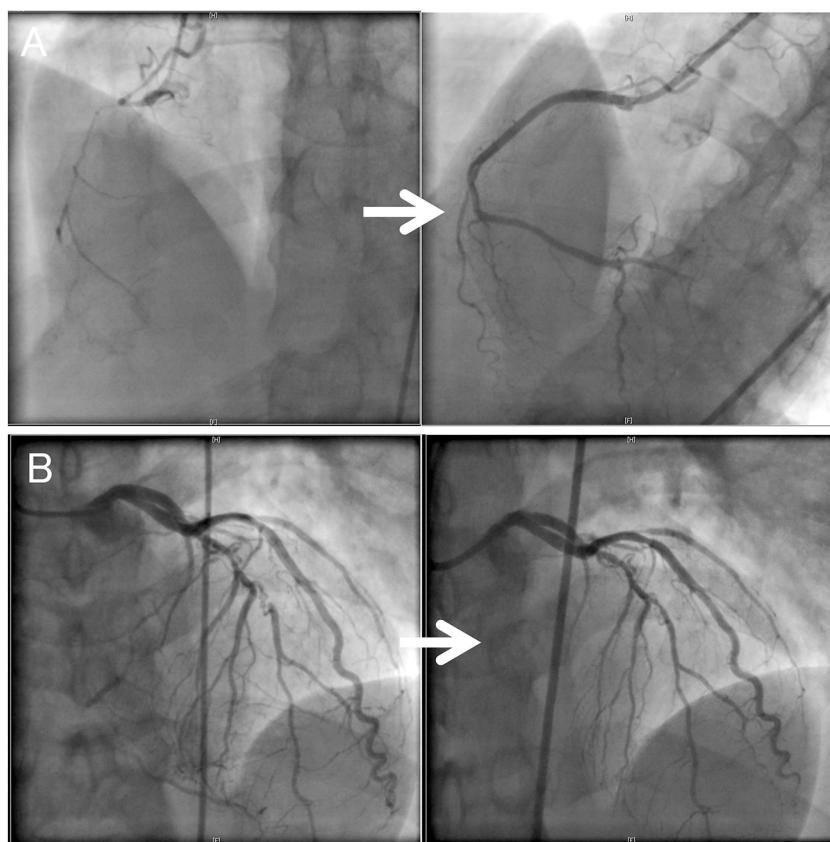


Fig. 2. Percutaneous coronary intervention. (A) Two Pt/Cr everolimus-eluting stents were deployed in the 99% stenosis of the right coronary artery (#1). (B) Plain old balloon angioplasty was performed to chronic total occlusion in the left anterior descending coronary artery (#7).

Download English Version:

<https://daneshyari.com/en/article/5614695>

Download Persian Version:

<https://daneshyari.com/article/5614695>

[Daneshyari.com](https://daneshyari.com)