Angioscopic observation of an atherosclerotic coronary aneurysm without yellow plaque

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DESCRIPTION

A-58-year-old man with diabetes mellitus was admitted to our hospital with angina following physical effort. Coronary CT angiography (CCTA) revealed a saccular coronary aneurysm at the left main trunk bifurcation and a significant stenosis at the middle portion of the calcified left anterior descending artery (LAD) (figure 1). Invasive coronary angiography showed a large coronary aneurysm (12.3×11.0 mm) arising from the ostial LAD and stenoses in the middle of the LAD and in the middle of the left circumflex artery (figure 2). Intravascular ultrasound showed a severely calcified LAD, as shown on CCTA; however, it failed to reveal the entire picture with regard to the aneurysm because of the limited echo depth. Non-obstructive

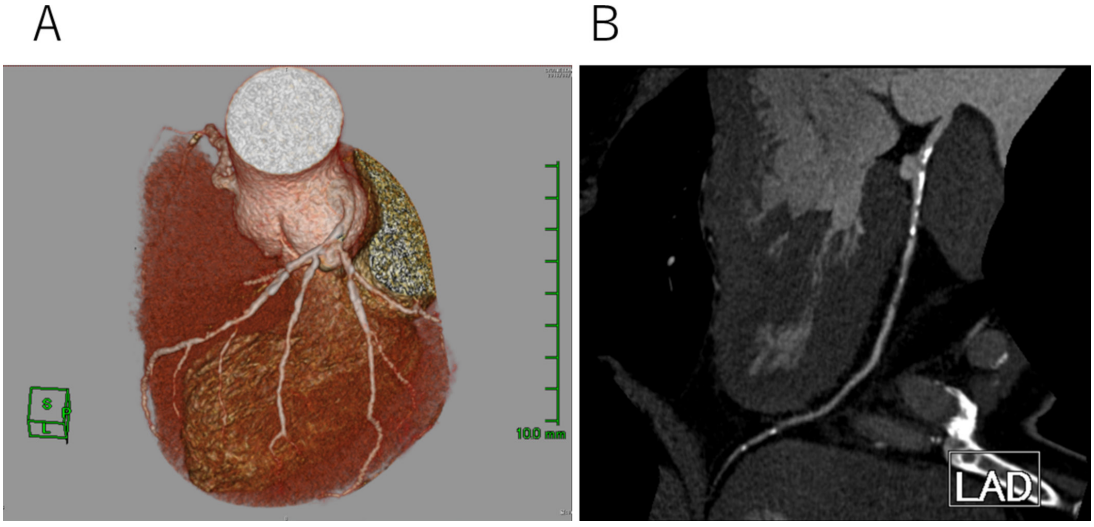

Figure 1 Coronary CT angiography images. (A) The volume rendering image shows a saccular coronary aneurysm at the left main trunk bifurcation. (B) The curved multiplanar reformation image of the left anterior descending coronary artery shows a significant stenosis at the middle portion.

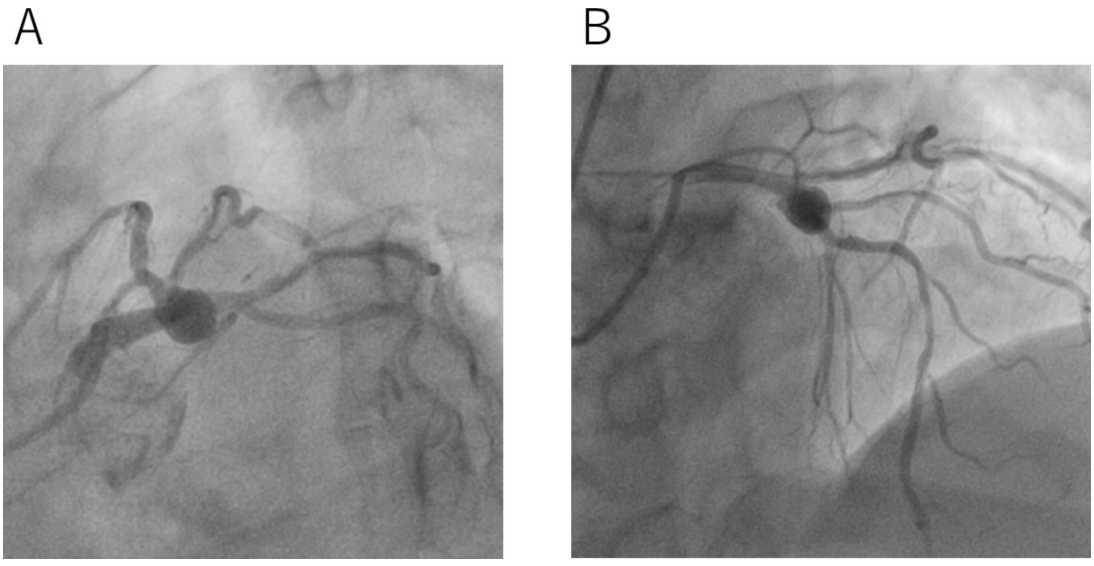

Figure 2 Invasive coronary angiographic images. (A) Coronary angiogram in the left anterior oblique caudal view shows an aneurysm with a diameter of 12.3×11.0 mm. (B) The cranial view shows a significant stenosis in the middle of the left anterior descending coronary artery and in the middle of the diagonal branch.

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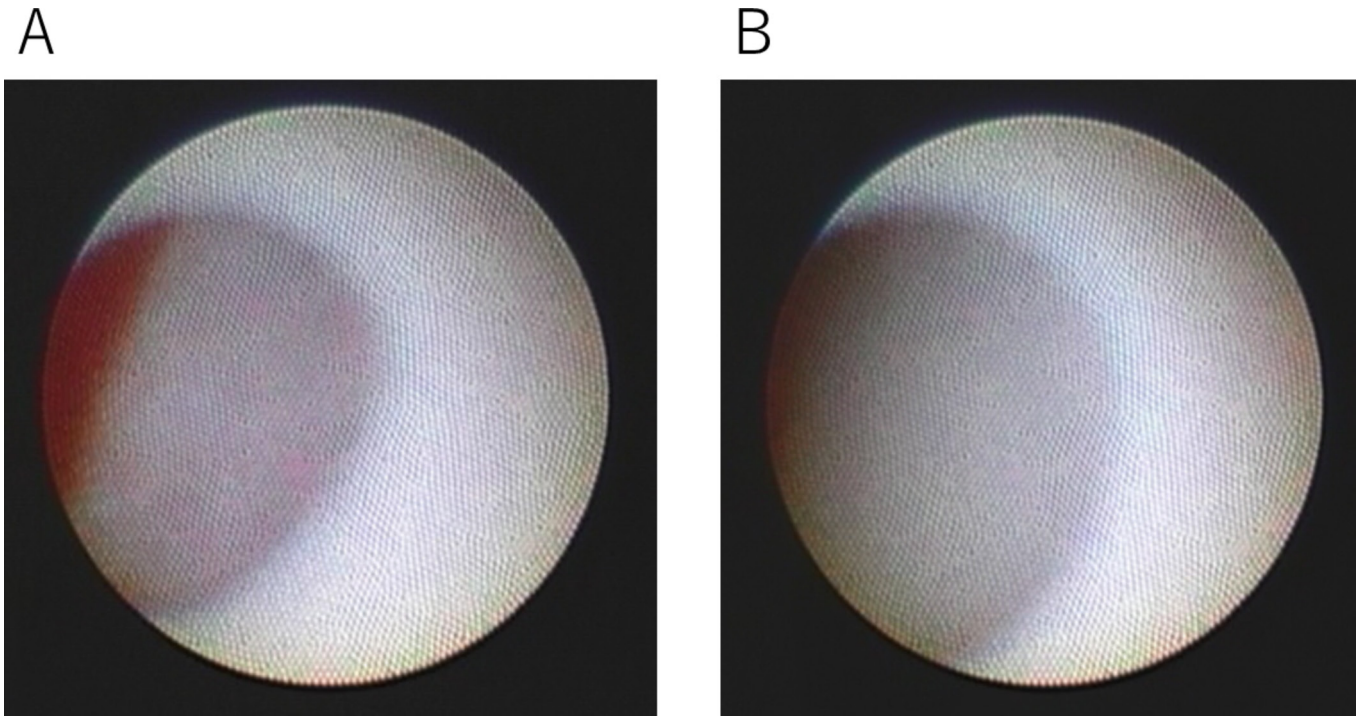

Figure 3 (A) The angioscopic image of the coronary aneurysm shows a rough, salmon-pink coloured surface without the presence of thrombus or atheromatous yellow plaque. (B) The angioscopic image shows a normal-sized coronary artery proximal to the aneurysm with a white surface.

Learning points

- Very few previous studies have reported coronary artery aneurysms in fine detail, despite the fact that there is a significant risk of thrombogenicity leading to ischaemia or infarction.
- Non-obstructive angioscopy allowed visibility of a rough, salmon-pink coloured surface inside the atherosclerotic coronary aneurysm.
- The patient's postoperative course has been uneventful after coronary artery bypass surgery and ongoing administration of aspirin.

angioscopy (NOA)[1] was performed to investigate the intimal injury of the aneurysm and demonstrated a rough, salmon-pink coloured surface without the presence of thrombus or atheromatous yellow plaque[2] (figure 3).

Thrombogenicity inside a coronary aneurysm is known to cause ischaemia or myocardial infarction.[3] Administration of antiplatelet therapy (aspirin 100 mg/day) was continued beyond the coronary artery bypass graft for LAD to avoid thrombosis. The patient's postoperative course was uneventful. Our case shows that NOA may play a role in estimating the preoperative thrombosis risk in patients with coronary artery aneurysm.

Contributors YT and MT planned and designed the study. YT and SK paticipated in the conduct. YT wrote the manuscript. YT, SK, MT and KK gave final approval of the version published. SK was responsible for the overall content as guarantor.

Competing interests KK is the president of Inter-tec Medicals and originally developed non-obstructive angioscopy. SK is a technical consultant for Nemoto Kyorindo. YT and MT declared no conflict of interests.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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