ST-segment elevation myocardial infarction and fortuitous finding of a single coronary artery

Infarctus du myocarde et découverte fortuite d’une coronaire unique

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We report the case of a 55-year-old man who presented with ST-segment elevation myocardial infarction, and revealed authentic atherosclerosis associated with a rare congenital coronary anomaly.

Cardiovascular risk factors were smoking and dyslipidaemia. The patient’s medical history was otherwise unremarkable. He reported chest pain and diaphoresis of two hours’ duration. Physical examination was normal. An electrocardiogram showed inferior ST-segment elevation with ST-segment depression in the lateral leads. The patients received conventional therapy, comprising aspirin, clopidogrel and heparin, and was referred for urgent coronary angiography. The procedure was performed via a transradial approach. The first injection (Fig. 1A) in the right coronary artery (RCA) showed an occlusion of the mid segment (TIMI 0 flow) but also a left main coronary artery with a left anterior descending and circumflex artery originating from the right coronary sinus. Disobliteration of the RCA was performed with implantation of a bare-metal stent, with a good result (Fig. 1B). The procedure was completed by an aortography (Fig. 1C), which showed no artery originating from the left coronary sinus. There was no evidence of compression. The patient made a good recovery, without complication, and was discharged two days later on conventional therapy.

Anomalies of the coronary artery occur in approximately 1% of the population, without other congenital cardiac malformations. A few anatomical forms are implicated in sudden cardiac death in young people, especially when there is compression of one coronary artery. In most cases, patients are asymptomatic but can develop atherosclerosis in the same manner as ‘normal’ arteries.
Figure 1. Coronary angiogram by transradial approach. A. First injection (left anterior oblique) in the RCA showing an occlusion of the mid-segment (TIMI 0 flow) and left main coronary originating from the right sinus coronary. B. Same incidence after implantation of a bare-metal stent in the mid-segment of the RCA. Aortography showing absence of artery originating from the left sinus coronary. LAD: left anterior descending; LCX: circumflex artery; LMCA: left main coronary artery; RCA: right coronary artery.

Conflict of interest

None.