A 69-year-old patient was presented at our cardiology unit with acute inferior infarction, for which she underwent primary PCI.

Cardiac catheterization revealed unique coronary artery anatomy, with an aberrant left main coronary artery (LMCA), and a septal branch both deriving from the right sinus Valsalva, but with separate ostia from the right coronary artery (Panels A and B; Supplementary material online, Videos S1 and S2). The LMCA passes the pulmonary artery anteriorly, after which it bifurcates into the left anterior descending artery and the ramus circumflex. A septal branch passes between the aorta and the right ventricular outflow tract. Cardiac CT confirmed this coronary arterial course (Panel C).

The origin of the LMCA from the right aortic sinus of Valsalva is the least common coronary anomaly (incidence: 0.15%), and is notorious for its malign course between the great vessels. A benign course (LMCA anterior to the pulmonary trunk), as was the case in our patient, remains even more rare. Indeed, the fact that three coronary arteries derive from a single sinus, but with three separate ostia seems unique.

The benign course of coronary anomaly explains the fact that our patient had remained without symptoms throughout her life, and presented with acquired ischaemic heart disease at the age of 69. There is no intention to correct her anomaly as no harm is expected from it in the future.

Supplementary material is available at European Heart Journal online.