A 48-year-old man was referred to our hospital for the evaluation of chest pain. The patient had type 2 diabetes and dyslipidaemia and was receiving lifestyle modification therapy. His electrocardiogram and cardiac function assessed by transthoracic echocardiography were normal with no congenital cardiac malformations. However, coronary computed tomography angiography (CCTA) revealed isolated single coronary artery without stenosis. In this case, the right coronary artery (RCA) originated from the distal left circumflex artery (LCX) (Panel A, arrowheads, Supplementary material online, Movie). To diagnose myocardial ischaemia, adenosine triphosphate (ATP) stress TI-201 myocardial perfusion scintigraphy was performed and single-photon emission computed tomography (SPECT)/CCTA cardiac fusion images (Panel B: stress and Panel C: rest) were obtained. Myocardial perfusion defect with redistribution was observed at the territory of the RCA, indicating myocardial ischaemia. He was treated with the beta-blocker, bisoprolol that relieved the chest pain. A single coronary artery is rare, especially that accompanying the present type of anomaly (the RCA arising from the distal LCX). This case illustrates an unusual type of isolated single coronary artery with evidence of myocardial ischaemia.

Supplementary material is available at European Heart Journal online.