Aortic root aneurysm with a persistent left superior vena cava and an absence of the origin of the right coronary artery

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A 30-year-old man was admitted with a 2-week history of chest pain. Computed tomographic scan showed a 15-cm aortic root aneurysm with a persistent left superior vena cava. A Bentall operation was performed, and the origin of the right coronary artery was not found (Figs 1 and 2).

Figure 1: Preoperative chest computed tomography showed an idiopathic aortic root aneurysm with a maximal size of 15 cm, greatly compressing the left ventricular outflow tract, ascending aorta, right atrium and right ventricle. There was a persistent left superior vena cava. There were no clinical findings of Marfan syndrome or Ehlers-Danlos syndrome.

Figure 2: A cardiopulmonary bypass was made between the ascending aorta and pulmonary artery trunk. The aneurysm originated from right coronary sinus and non-coronary sinus. No right coronary artery origin was found (no preoperative coronary angiography was conducted). This patient was discharged home 10 days after surgery. P: pulmonary artery trunk; A: aortic root aneurysm.