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Silent coronary rupture treated with coronary embolization two years after total arch replacement

We experienced a case of asymptomatic coronary artery rupture two years after type A acute aortic dissection which was successfully treated with coronary embolization. A 51-year-old man underwent total arch replacement for type A acute aortic dissection two years ago. Although he had been followed uneventfully, follow-up computed tomography scan two years after the operation incidentally identified the hemopericardium compressing the posterolateral wall of the left ventricle. Echocardiography showed significant compression of the left ventricle due to the hemopericardium, but did not show any deterioration of cardiac function. ECG-gated 320-sliced multi-detector computed tomography (MDCT) revealed extravasation from the left circumflex artery. He was hemodynamically stable and asymptomatic despite this potentially life threatening condition. After the admission, coronary angiography was performed which revealed coronary artery rupture from the distal part of the second obtuse marginal artery (OM2). The artery was successfully treated with coil embolization. However, four-dimensional computed tomography (4D-CT) three days after the embolization still showed persistent extravasation from the first obtuse marginal artery (OM1). As the artery dominated large areas, OM1 was treated with absorbable gelatin sponge particles. 6 months after the procedures, additional coil embolization was performed for recurrence bleeding from these arteries. After these coil embolization, cardiac enzymes were slightly elevated, but no deterioration of cardiac function was noted and successful hemostasis were achieved. Although considerably rare, asymptomatic coronary artery rupture could happen after the thoracic surgery. 4D-CT is efficient for identifying ruptured sites and coronary embolization is reasonable treatment to achieve hemostasis.