

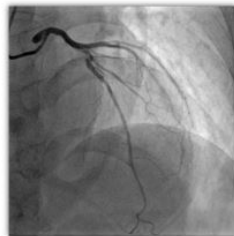
## A case of perforation during ballooning of proximal left descending coronary artery calcified lesion

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Coronary artery perforation is a rare and serious complication during coronary balloon angioplasty. Because of the rarity of coronary fistula, there is no clear general agreement about the management of this condition and depends on the patient's hemodynamic status. Here we report on a case in which the coronary perforation spontaneous resolved without stent graft or embolization. A 68-year-old female patient visited our hospital, because of resting onset chest pain. She had hypertension as cardiovascular risk factor. ECG showed right bundle branch block. Our first impression was unstable angina. Scheduled coronary angiography was performed and showed significantly heavy calcified lesion on proximal left anterior descending coronary artery (LAD) (Fig.1). We initially passed two wires into LAD artery and diagonal branch to protect diagonal branch and take back up force. Then ballooning (2.5\*20mm, 9atm) was done on proximal LAD artery lesion. Next, LAD artery and visible coronary sinus were found simultaneously after dye injection for post-ballooning angiography (Fig.2). The patient, however, was very calm and vital sign stable. We performed additional ballooning and put the stent. Post stent intravascular ultrasound presented well apposed stent. Because there was felt to be no risk of cardiac tamponade. The intervention was finished up with no additional procedure, despite of remnant fistula from proximal LAD lesion to great cardiac vein (Fig.3). There was no evidence of increased pericardial effusion at follow up echocardiography. The patient was discharged without any symptom. 9-month follow up CAG showed no more fistula (Fig.4A/B). In this case, balloon angioplasty induced coronary artery perforation of the proximal LAD artery with iatrogenic fistula formation to the great cardiac vein. But there was no massive bleeding into pericardial space, because of few pressure-difference between LAD artery and great cardiac vein. And patient was stable without evidence of pericardial effusion by echocardiography. If the patient's condition is not hemodynamically unstable, aggressive treatment like graft stent or embolization may be avoided.

Fig 1. AP view



LAO cranial view



Fig 2.



Fig 3.



Fig 4(A)



Fig 4(B)

