Aortic dissection or coronary artery perforation?

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We present case of coronary artery perforation during percutaneous coronary intervention (PCI) which was misunderstood as aortic dissection.

A 73-year-old woman, diabetic, presented with effort angina of Canadian Cardiological Society (CCS) scale III for the last two months. Coronary angiogram revealed multiple significant stenosis of the left anterior descending artery (LAD) and the right coronary artery (RCA). After she was presented to heart team and refused surgical revascularization we proceeded with PCI. LAD was successfully treated with one drug eluting stent. After that we proceeded with RCA intervention. After first balloon inflation huge contrast extravasation (4x4cm) was noticed in projection of aortic wall. Patient was stable, procedure was temporary interrupted and because of suspicion on aortic dissection urgent echocardiography and CT scan of aorta was performed. Echocardiography did not show fluid accumulation in pericardium while CT scan excluded aortic dissection and showed perforation of ostial RCA with cranial intrapericardial contrast extravasation. After that procedure was continued with implantation of three DE stents in RCA. Final angiogram showed successful sealing of ruptured ostial RCA without any contrast leak. During the following days there was no evidence of fluid in the pericardium, also MSCT coronarography confirmed normal flow in RCA and LAD. After five days patient was safely discharged from hospital.

This case shows well known complication of PCI, coronary artery perforation visualized as direct extravasation of contrast from coronary artery defined by the Ellis criteria from grade I to III.[1] Grade I and II in most cases have less dramatically course while grade III often results in cardiac tamponade. Perforations can be successfully treated by covered or noncovered stents, prolonged balloon inflation, microcoil embolization or surgically. This was perforation grade II but because of direction of contrast leak looked like dissection of ascending aorta. Fortunately, this patient was stable enough to perform CT scan to exclude aortic dissection and finally we were able to successfully treat this complication with stent implantation.

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LITERATURE

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