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IMAGES IN CARDIOLOGY

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Type A aortic dissection: a hidden and lethal cause for failed thrombolytic treatment in acute myocardial infarction

A 61-year-old woman with a history of hypertension presented at our institution owing to severe chest pain for 1 hour; she denied back pain. A 12-lead electrocardiogram showed a marked ST-segment elevation in leads II, III and aVF, compatible with acute inferior myocardial infarction. Bilateral radial pulses were equal and auscultation did not disclose any heart murmur. Chest x ray examination did not show widening of the mediastinum. In view of the early presentation, intravenous streptokinase was administered. However, both the chest pain and ST-segment elevation

failed to resolve after 90 minutes. The patient was sent for rescue angioplasty.

Urgent coronary angiography showed a discrete stenosis at the ostial right coronary artery (panel A). The left coronary arteries were normal. After crossing the lesion with a 0.014" guidewire, a 3.5×12 mm coronary stent was directly deployed over the ostial right coronary artery lesion. However, during positioning of the stent, contrast staining (thick arrow) of the aortic root, and backflow of contrast into the left ventricle suggestive of aortic regurgitation (thin arrow) were noticed (panel B). These findings are compatible with an underlying

type A aortic dissection. Immediately after stent deployment, the patient developed hypotension followed by cardiac and respiratory arrest. Cardiac tamponade was suspected and pericardiocentesis was performed promptly. Contrast injection in the pericardial space showed a significant amount of effusion (panel C). Cardiopulmonary resuscitation was unsuccessful. A postmortem examination confirmed the diagnosis of type A aortic dissection with cardiac tamponade.

Chi-Hang Lee, Jimmy Lim
leerch@hotmail.com