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Clinical Features of Acute Aortic Dissection Patients Initially Diagnosed with ST-Segment Elevation Myocardial Infarction

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Abstract : Background: Acute myocardial infarction (AMI) concomitant with acute aortic syndrome (AAS) is rare but prompt recognition of concomitant AAS is crucial, especially in patients with ST-segment elevation myocardial infarction (STEMI) because misdiagnosis with early thrombolytic or anticoagulant treatment may result in catastrophic consequences. Objectives: This study investigated the clinical features of patients of STEMI concomitant with AAS that may lead to the diagnostic clue. Method: Between 1 January 2010 and 31 December 2014, 22 patients who were the initial diagnosis of acute coronary syndrome (AMI and unstable angina) and AAS (aortic dissection, intramural hematoma and ruptured thoracic aneurysm) in our emergency department were reviewed. Among these, we excluded 10 patients who were transferred from other hospital and 4 patients with non-STEMI, leaving a total of 8 patients of STEMI concomitant with AAS for analysis. Result: The mean age of study patients was 57.5±16.31 years and five patients were Standford type A and three patients were type B aortic dissection. Six patients had ST-segment elevation in anterior leads and two patients had in inferior leads. Most of the patients had acute onset, severe chest pain but no patients had dissecting nature chest pain. Serum troponin I was elevated in three patients but all patients had D-dimer elevation. Aortic regurgitation or regional wall motion abnormality was founded in four patients. However, widened mediastinum was seen in all study patients. Conclusion: When patients with STEMI have elevated D-dimer and widened mediastinum, concomitant AAS may have to be suspected.

Keywords : aortic dissection, myocardial infarction, ST-segment, d-dimer
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