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A case of overlooking ST segment elevation in lead V7-9.

A 84-year old male presented with chest pain on exertion with a history of hypertension, diabetes mellitus, chronic kidney disease, and current smoker. He was transferred to emergency department (ED) due to exacerbated chest pain on exertion. Laboratory data showed slightly elevated Troponin I (0.512pg/mL) and electrocardiography (ECG) didn't show any change of ST segment. After 1 hour, laboratory data such as Troponin I and CK-MB were not increased and ECG didn't show any change. Thus, semi-emergency angiography was performed next morning because we considered as non ST elevated myocardial infarction, showing that the middle part of left circumflex was totally occluded. Although percutaneous coronary intervention (PCI) was successfully performed without any complications, peak CK and CK-MB were 2265 IU/L and 391 IU/L, respectively.On our weekly conference, we carefully re-checked ECG on ED again, we found ST segment elevation on synthesized posterolateral leads (syn V7-9).Acute coronary syndrome (ACS) guideline of The Japanese Circulation Society 2018 recommended that we had better check posterolateral leads for the patient who had chest pain suspected ACS. We should have diagnosed STEMI, and underwent PCI as soon as possible. As we found several series whose synthesized posterolateral leads were effective to make a diagnosis for STEMI in our institute, we reported those case series.