CLINICAL SNAPSHOT

STEMI Equivalent in Ventricular Pacemaker Rhythm

A 90-year-old female patient was brought to our emergency department complaining of chest pain. Ventricular paced rhythm was detected on 12-lead ECG. The widespread opinion that this constellation does not permit a diagnosis of ischemia on 12-lead ECG is not accurate, as this example shows. In lead V2 the patient showed concordant (on the same side of the QRS main vector) ST elevations >1 mm. Discordant (on the opposite side of the QRS main vector) ST elevations and depressions are not pathological in ventricular paced rhythm. However, the discordant ST elevations in lead V3 were too pronounced (ratio of ST elevation at the J-point to the S-wave approximately 1:1 and thus clearly $\geq 25\%$). Thus, according to Sgarbossa and Smith-modified Sgarbossa criteria, the ECG findings corresponded to STEMI equivalent of the anterior wall. As expected, an occlusion of the middle segment of the left anterior descending artery was diagnosed and successfully recanalized on emergent coronary angiography. Both in ventricular paced rhythm and in left bundle branch block, chest pain should prompt 12-lead ECG to scrutinize for signs of ischemia according to the above-mentioned criteria or, if applicable, other criteria.

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