

Myocardial bridging mimicking Wellens' syndrome

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Abstract: A myocardial bridging (MB) is a segment of an epicardial coronary that develops a transient intramyocardial course. Generally without repercussion, it may cause angina, arrhythmias, myocardial ischemia and even sudden cardiac death. We report herein an interesting case of a 60-year-old man presenting with type A Wellens' syndrome due to a notorious mid left anterior descending MB.

Keywords: Myocardial bridging (MB); Wellens' syndrome

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A 60-year-old man presented to the emergency department complaining of recent onset angina at moderate efforts. The resting electrocardiogram (ECG) showed biphasic plus-minus T waves in the precordial leads, compatible with type A Wellens' syndrome (*Figure 1*). The cardiac troponins sets were all negatives and resting cardiac echocardiogram was unremarkable. A recent coronary angiography revealed a mid-left anterior descending (LAD) myocardial bridging (MB) with massive systolic

compression (*Figure 2*), without any significant lesions. After optimization of medical treatment (beta-blocker and calcium channel antagonist) the ECG pattern surprisingly changed (*Figure 1*).

A MB is described as a segment of an epicardial coronary artery that develops a transient intramyocardial course. Generally without repercussion, it may cause angina, arrhythmias, myocardial ischemia and even sudden cardiac death. The burden of ischemia correlates directly with the

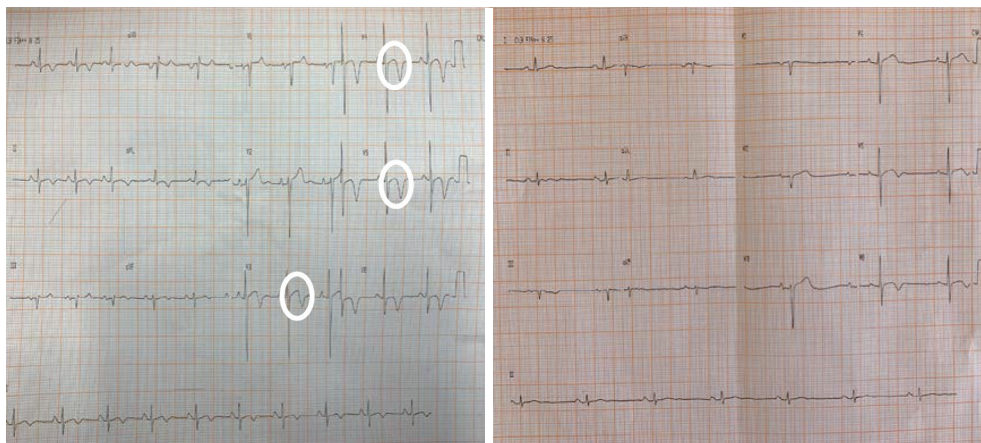


Figure 1 Left panel: initial ECG showing type A Wellens' sign in the precordial leads (white circles). Right panel: ECG showing resolution of the plus-minus T-waves pattern after optimal medical treatment. ECG, electrocardiogram.

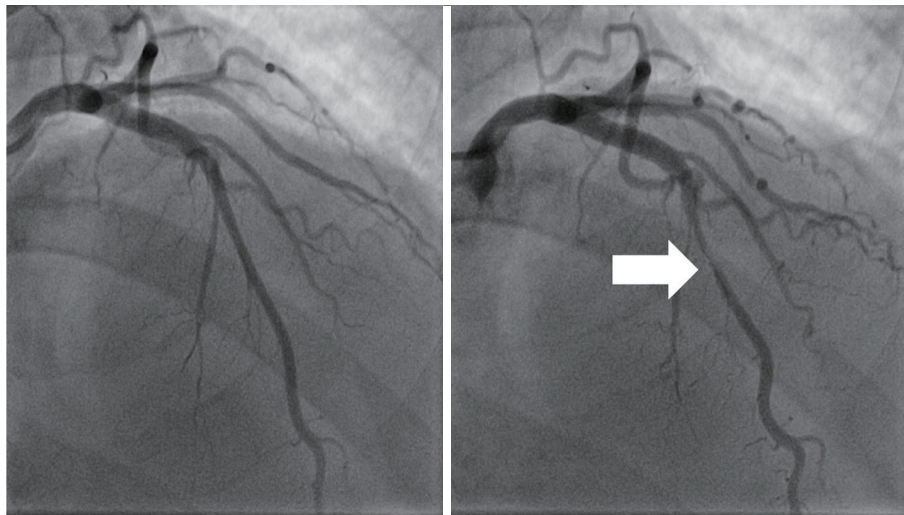


Figure 2 Left anterior descending artery (cranial view). Left panel: diastolic phase. Right panel: significant systolic compression due to myocardial bridging (white arrow).

degree of systolic compression. As in the present case, most MB is found in the mid LAD (1). First-line management for MB is optimal medical treatment with beta-blockers and calcium channel blockers, causing diastolic prolongation. Nitrates cause reflex tachycardia and are therefore contraindicated. In exceptional refractory cases, surgical or percutaneous strategies can be pursued (1,2).

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/jxym.2020.01.01>). The authors have no conflicts of interest to declare.

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was obtained from the patient for publication of this manuscript and any accompanying images.

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