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Letters

Persistently Elevated Troponin Level Caused by Heterophile Antibodies

Challenge in Everyday Clinical Practice

We read with great interest the case report by Santos et al. (1), published in a recent issue of *JACC: Case Reports,* that showed how the presence of heterophile antibodies is a rare possible cause of false positive troponin levels.

Moreover, according to our experience, an additional challenge in determining the optimal course of treatment in such patients is borderline stenosis of 1 or more coronary arteries. In the context of elevated troponin levels, accompanied by a clinical presentation understood and treated as acute coronary syndrome without ST-segment elevation, borderline 70% stenosis of the circumflex coronary artery found on a coronary angiogram of our patient was considered a "culprit" lesion, and percutaneous coronary intervention with stent implantation was performed. Repeated chest pain and elevated troponin led to another coronary angiogram, which showed no in-stent stenosis or thrombosis. Persistently elevated troponin was then suspected to be false positive resulting from the existence of heterophile antibodies in the patient's serum; and this was proven by measuring both concentration of troponin I (false positive) and troponin T (normal). The patient did not have acute coronary syndrome without ST-segment elevation, and the borderline stenosis of the circumflex artery found in the coronary angiogram was only a coincidence within her moderate cardiovascular risk profile, rather than a culprit lesion.

In this context of chronic basal elevation of troponin inconsistent with other performed diagnostic methods (repeatedly normal echocardiography and electrocardiography findings), even when borderline coronary artery stenosis is found on a coronary angiogram, it is important for clinicians to consider the possibility of heterophile antibody presence as a cause of persistently elevated troponin and avoid misdiagnosis and overtreatment. Furthermore, additional functional tests such as instantaneous wave-free ratio or fractional flow reserve should be performed to estimate the significance of a borderline coronary artery lesion, and imaging methods (single-photon emission computed tomography, cardiac magnetic resonance) should be used for detection of ischemia (2,3). Visually based conclusions regarding the hemodynamic severity of borderline coronary artery stenosis are subjective and possibly inaccurate, and they alter treatment decisions that can be of prognostic significance and cause overtreatment, especially in patients with heterophile antibodies.

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the *JACC: Case Reports* author instructions page.

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REPLY: Persistently Elevated Troponin Level Caused by Heterophile Antibodies

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