Factor V Leiden Mutation: A case of Myocardial Infarction Misdiagnosed as Myocarditis

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Background:

FVL mutation is the most common inherited thrombophilia, predisposing individuals to (VTE). While its role in MI remains controversial.

Case Presentation:

A 41-year-old female is on hormonal oral contraception. She had acute chest pain and was transferred to (ER), where (ECG) revealed anterior STEMI. Patient received (DAPT) + Enoxaparin 8000 IU SC. Chest pain improved. CA showed normal coronaries. Bedside Echo showed LVEF 35 % and anterior hypokinesia. She was told to have acute myocarditis, not MI and discharged on anti-failure treatment.

Management:

We examined all investigations of the patient during her hospital stay and requested a thrombophilia profile, including: FVL mutation. Tests showed a heterozygous mutation for FVL. We replaced Clopidogrel 75 mg with (Rivaroxaban 20 mg OD) with no changes in her other medications, including ASA 75 mg OD. We advised the patient to stop oral contraception because it is considered the triggering factor and adjuvant cause for coronary arterial thrombosis with subsequent Ant. STEMI.

Discussion:

FVL mutation should be suspected in patients with MI and no atherosclerotic risk factors. Misdiagnosis of myocardial infarction as myocarditis is not a uncommon medical challenge, especially in MINOCA (MI in the absence of Obstructive CAD). Myocarditis may mimic MI.

Conclusion:

FVL should be requested in patients presenting with MI and no conventional risk factors or atherosclerotic occlusion (MINOCA). Although thromboembolic complications associated with hormonal contraception are relatively uncommon, screening for thrombophilic disorders prior to use is important to help in the prevention of cardiovascular morbidity and potentially fatal events.

Keywords:

MI, FVL mutation, thrombophilia, myocarditis, hormonal contraception