

Is Acute Coronary Syndrome Secondary to Coronary Vasculitis Underestimated in Daily Cardiology Practice?

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ABSTRACT

Acute coronary syndrome (ACS) is an increasing clinical diagnosis in daily practice. ACS is a life-threatening condition with high mortality rate if left untreated. The better-known risk factors for ACS are dyslipidemia, diabetes mellitus, hypertension² and coronary vasospasm. Coronary vasculitis is the least appreciated cause of ACS that is subject to neglect among clinicians. Coronary vasculitis (CV) may occur as a single organ vasculitis (SOV) or in the context of specific systemic vasculitides. CV may be the initial presentation of specific systemic vasculitis. Current concept indicates the “worse prognosis” in myocardial infarction associated with elevated acute phase reactants, while these could be the critical point in missed-diagnosis of occult coronary vasculitis as classic cases with atherosclerosis of coronary vessels as the culprit mechanism. We suppose that if elevated CRP/ ESR be due to inflammatory process within the vessel wall, then a classic approach of anticoagulants, thrombolytic therapy or primary coronary angioplasty paradoxically could be dangerous¹³ and, vice versa, different look with using glucocorticoids could be lifesaving, the medication that later on proved that can improve prognosis in ACS and MI. So, with increasing prevalence of acute coronary syndromes in younger people, the possibility of underestimating coronary vasculitis is potentiated and emphasizing only on classic and common risk factors of ACS is not prudent.

PERSPECTIVE

Acute coronary syndrome (ACS) is an increasing clinical diagnosis in daily practice. ACS is a life threatening condition with high mortality rate if left untreated. The better-known risk factors for ACS are dyslipidemia, diabetes mellitus^[1], hypertension^[2] and coronary vasospasm. Among less appreciated risk factors, hypercoagulable states such as hyperhomocysteinemia and antiphospholipid syndrome and extreme emotional response to chronic occupational stress (Burnout Syndrome)^[3] are noted. Coronary vasculitis is the least appreciated cause of ACS that is subject to neglect among clinicians^[4].

Coronary vasculitis (CV) may occur as a single organ vasculitis (SOV)^[5] or in the context of specific systemic vasculitides. CV may be the initial presentation of specific systemic vasculitis such as eosinophilic granulomatosis with polyangiitis (EGPA, Churg-Strauss Syndrome)^[6], temporal arteritis, Behcet's disease or systemic lupus erythematosus (SLE)^[7] in rather younger people. Coronary aneurysm and ACS may be the dreads complication of Kawasaki disease during childhood.

Specific vasculitic syndromes like EGPA and PAN has some characteristic features that may be a useful clue pointing to the diagnosis, however, there are atypical features of vasculitis in any organ that never fulfill classification criteria for mentioned vasculitides. The gold standard to confirm a vasculitis as the mechanism of coronary occlusion is tissue diagnosis that almost always would only be possible after an autopsy examination. There are some evidence showing that the prevalence of “occult vasculitis” is higher than this previously was estimated. Alternative surrogates are rather non-specific markers of inflammation such as acute phase reactants (CRP), elevated ESR or some non-specific

changes suggestive of chronic inflammation in vessel walls. This is especially true in respect to large vessel vasculitis that the only abnormality could be persistent ESR elevation or positive FDG-PET imaging (so-called silent or occult temporal arteritis)^[8-10]. On the other hand, increased CRP titers or ESR elevation are routinely considered as prognostic factor and a parallel finding in acute myocardial infarction (MI) and unfortunately these very important clues are easily overlooked by clinicians in routine practice^[11,12]. Current concept indicates the “worse prognosis” in myocardial infarction associated with elevated acute phase reactants, while these could be the critical point in missed-diagnosis of occult coronary vasculitis as classic cases with atherosclerosis of coronary vessels as the culprit mechanism. Because the treatment modalities are quite different in approach to MI based on the underlying mechanism. We suppose that if elevated CRP/ ESR be due to inflammatory process within the vessel wall, then a classic approach of anticoagulants, thrombolytic therapy or primary coronary angioplasty paradoxically could be dangerous^[13] and, vice versa, different look with using glucocorticoids could be lifesaving, the medication that later on proved that can improve prognosis in ACS and MI^[14,15].

CONCLUSION

With increasing prevalence of acute coronary syndromes in younger people, the possibility of underestimating coronary vasculitis is potentiated and emphasizing on classic and common risk factors of ACS is not the case^[16].

CONFLICT OF INTERESTS

There are no conflicts of interest with regard to the present study.

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