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The symptomatology of myocardial infarction, including both pain and non-pain symptoms, may be affected by traditional risk factors, such as smoking, hypertension, diabetes, and hypercholesterolaemia. The extent of infarcted myocardium, probably through a number of stimulated nerve afferents, may also influence the symptom presentation. This may be related to a lower frequency of chest pain among those evolving non-Q than among those evolving Q-wave infarction. Finally, isolated infarctions of inferior or lateral site more often have atypical presentation compared with anterior infarctions. Unfortunately, de Torbal et al. did not report on ECG characteristics (type and site) of unrecognized myocardial infarctions. In further investigations dealing with the incidence of unrecognized myocardial infarction, information on mental and neurological disorders, psychotropic drugs, alcohol consumption, and religiosity should also be considered because they could change the perception of pain and other symptoms.

References

Atypical presentation and unrecognized myocardial infarction

de Torbal et al. reported on the incidence of recognized and unrecognized myocardial infarction in patients aged 55 and older. I would like to draw attention to the previous work of our group that may help explaining several findings of this study. A high incidence of unrecognized myocardial infarction relative to other investigations may be due to an independent tendency towards 'atypical' clinical presentation of the infarction onset with increasing age. Such an atypical presentation includes the absence of chest pain and the presence of non-chest pain, particularly localized in the neck, back, jaw, or head, followed by non-pain symptoms such as weakness, sweating, nausea, dyspnoea, or cough. Women seem to be another subgroup with a greater likelihood of atypical presentation pattern which agrees with a greater presence of unrecognized infarctions among them compared with men reported by de Torbal et al.

We read with great interest the study of Rigo et al. entitled ‘The prognostic impact of coronary flow reserve with aortic distensibility indices’. This intriguing echocardiographic study found that Doppler echocardiographic-derived reduced coronary flow reserve (CFR) during vasodilator stress is an independent prognostic marker of bad prognosis in dilated cardiomyopathy (DCM). However, we feel that a few additional comments are necessary.

In recent studies, it has been demonstrated that higher NYHA functional class, lower ejection fraction, and increased left ventricular volumes are associated with a reduced CFR. Increased aortic stiffness has also been described in clinical patients with heart failure in ischaemic cardiomyopathy and DCM. The prognostic roles of CFR (as a characteristic of left anterior descending coronary artery vasoreactivity) and aortic distensibility alone have been widely investigated and confirmed.

In recent echocardiographic studies, we simultaneously investigated CFR and aortic distensibility indices [elastic modulus E(p) and Young’s circumferential static elastic modulus E(s)] in patients with suspected or known coronary artery disease (CAD) during transoesophageal echocardiography. Alterations were found in CFR, E(p), and E(s) in CAD and in patients with normal epicardial coronary arteries with significant aortic valve stenosis, diabetes mellitus, hypercholesterolaemia, and hypertension. These simultaneously evaluated functional parameters [CFR, E(p), E(s)] showed correlations to the grade of aortic atherosclerosis, as well. Theoretically, it could be hypothesized that combined use of two strong prognostic predictors (CFR and aortic distensibility) of cardiovascular mortality can more reliably predict future events. Our preliminary follow-up data suggest that combination of CFR and aortic elastic properties [E(p) or E(s)] have a more detailed prognostic role on cardiovascular mortality than CFR alone. However, further investigations are warranted, especially with stress transthoracic echocardiography, in selected group of patients with DCM.

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Prognostic role of combination of coronary flow reserve with aortic distensibility indices

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