Letters to the Editor

doi:10.1093/eurheartj/ehl257

Online publish-ahead-of-print 6 October 2006

Guidelines on the management of stable angina pectoris

We read with great interest the recently published guidelines on the management of stable angina pectoris.1

Although we have to congratulate the authors on the superb work they have done, we were surprised to see patients with left bundle branch block classified under Class I indications for exercise stress imaging in the initial diagnostic assessment of angina (level of evidence B), as well as in risk stratification (level of evidence C).

This seems odd, considering the numerous published papers showing not only the limited diagnostic accuracy of exercise imaging,3 and the improved specificity of pharmacological stress,4–7 but also the possible underlying mechanisms in these patients.7

In view of the above, we suggest that these patients should be reclassified under Class IIa indications for pharmacological stress imaging, unless there are other relevant data that we have overlooked or are unaware of.

References


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doii:10.1093/eurheartj/ehl257

Online publish-ahead-of-print 6 October 2006

Guidelines on the management of stable angina pectoris: reply

We thank the authors for the opportunity to discuss in further detail the rationale behind the task force’s decision to give exercise perfusion imaging a Class I indication as the initial diagnostic test in assessment of patients with angina and left bundle branch block (LBBB).

As pointed out, there are data that suggest superior diagnostic accuracy of vasodilator stress (but not dobutamine stress)1 compared with exercise stress scintigraphy in predicting the presence of obstructive disease of the left anterior descending (LAD) artery. Methodological weaknesses of some of the individual studies apart, e.g. small size,2 lack of direct comparison between exercise and pharmacological stress,2 and work up bias, a major problem with the interpretation of the results is that they do not include the clinical and haemodynamic variables from exercise in predicting the presence or absence of coronary disease. The diagnostic accuracy of the test is determined solely by the correlation of perfusion abnormalities in response to stress to the presence of coronary obstruction. Earlier studies do not evaluate associated wall thickening, as is possible with modern gated SPECT and which may be useful in reducing artefactual perfusion abnormalities.3 In this context, without the benefit of including haemodynamic and clinical variables, reported sensitivity of 100% for the prediction of LAD stenoses and specificity as high as 56%, with no reduction in the sensitivity or specificity for the detection of coronary stenoses in other vessels, seems reasonable.4,5

Most importantly however, the task force opines that pharmacological stress does not offer the clinician the wealth of information afforded by exercise testing in terms of functional capacity, time to angina, and the associated diagnostic and prognostic information therein. Such small studies as have compared exercise and vasodilator stress in the diagnostic assessment of chest pain in the presence of LBBB have not compared the techniques in terms of predicting prognosis. However, multiple studies have demonstrated that the combination of exercise variables with perfusion data improves the diagnostic performance of the test, with both parts of the test (exercise and perfusion) adding independent incremental prognostic information to each.6

References


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doi:10.1093/eurheartj/ehl286

Online publish-ahead-of-print 4 October 2006

**Atypical presentation and unrecognized myocardial infarction**

De Torbal et al.1 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.2,3 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 pattern2 which agrees with a greater presence of unrecognized infarctions among them compared with men reported by de Torbal et al.1

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.2 The extent of infarcted myocardium, probably through a number of stimulated nerve afferents, may also influence the symptom presentation.2,4 This may be related to a lower frequency of chest pain among those evolving non-Q than among those evolving Q-wave infarction.2 Finally, isolated infarctions of inferior or lateral site more often have atypical presentation compared with anterior infarctions.3 Unfortunately, de Torbal et al.1 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 religiousness should also be considered because they could change the perception of pain and other symptoms.

**References**


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doi:10.1093/eurheartj/ehl289

Online publish-ahead-of-print 9 October 2006

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

We read with great interest the study of Rigo et al.,1 entitled ‘The prognostic impact of coronary flow reserve assessed by Doppler echocardiography in non-ischaemic dilated cardiomyopathy’. 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.6 These simultaneously evaluated functional parameters [CFR, *E*(p), *E*(s)] showed correlations to the grade of aortic atherosclerosis, as well.7 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.