Pitfalls and problems of relying on serum troponin

Sir,
In the differential diagnosis of the co-existence of retrosternal pain and troponinosis, it is also worth highlighting acute pericarditis unrelated to myocardial infarction (MI). In a study of 69 patients with acute idiopathic pericarditis, 15 (22%) exceeded the threshold value for MI (1.5 ng/ml), with a mean value of 17 ng/ml. According to other studies, electrocardiographic (ECG) stigmata of acute pericarditis may simulate those of uncomplicated MI, increasing the risk of exposure of the patient to inappropriate thrombolysis, and its attendant adverse effects.

For example, instead of the expected diffuse ST segment elevation, patients in whom acute pericarditis is unrelated to myocardial infarction may manifest localized ST segment elevation simulating anteroseptal MI, and the ST segment elevation detected in the anterior leads may itself sometimes assume a ‘tombstone’ configuration simulating MI. Neither does absence of the expected reciprocal ST segment depression necessarily differentiate between pericarditis and MI, given the fact that absence of reciprocal ST segment depression may occur in up to 30% of inferior, and 70% of anterior, MIs.

Accordingly, frontline medical staff need to be re-educated, not only about the pitfalls and problems of relying on serum troponin, but also about the suboptimal specificity of ECG stigmata, which are supposed to differentiate between the two prime candidates for the association of retrosternal pain, troponinosis, and ST segment elevation: namely, MI and pericarditis.

O.M.P. Jolobe
Retired geriatrician

References

doi:10.1093/qjmed/hci104

Safety of beta-blockers in COPD: the jury must still be out

Sir,
Egred and colleagues encourage the use of beta-blockers in patients with acute coronary syndrome (ACS) and concomitant chronic obstructive pulmonary disease (COPD). Their retrospective analysis highlights the discordance in practice that exists between cardiologist and pulmonologist. Indeed, the former is keen to commence beta-blockers in patients with ACS for cardioprotection, while the latter is cautious in protecting patients with obstructive airway disease from bronchoconstriction.

There are currently no prospective long-term data on the safety of beta-blockers in COPD, and moreover, beta-blockers are contraindicated in asthma. As shown by the authors, it is not always easy to differentiate between asthma and COPD, especially when inhaled therapy for both conditions is very similar. It is also vital to stress that reversibility testing has been largely abandoned in the diagnosis of COPD, unless diagnostic difficulty is encountered.

Recent data suggest that non-selective beta-blockers are detrimental to patients with COPD. For instance, propranolol has been shown to worsen lung function and desensitize the airway to the bronchodilating effects of long-acting beta2-agonists, while metoprolol, which has been advocated by the authors to be safe in COPD due to its cardioselectivity, significantly increased the extent of bronchial hyper-responsiveness.

Until data from long-term studies that specifically address these safety issues are available, the jury must still be out in deciding whether any beta-blockers are safe in COPD.

D.K.C. Lee
P.S. Borade
Department of Respiratory Medicine
Ipswich Hospital
Ipswich

G.P. Currie
Department of Respiratory Medicine
Aberdeen Royal Infirmary
Aberdeen
email: dkclee@doctors.org.uk

References


doi:10.1093/qjmed/hci106