
Authors’ response

I appreciate the interest of Dr Ahmad et al in the article by Jiménez et al and the accompanying editorial in which it has been pointed out that the use of echocardiography, laboratory findings and venous ultrasonography should be encouraged in patients with suspected high-risk pulmonary embolism (PE), and management decisions should be taken on all collected data on a case-by-case basis. Due to the high hospital mortality in patients with PE, it is important to select those at the highest risk, who cannot be treated in an outpatient setting and require close monitoring or even more aggressive therapy.

Dr Ahmad et al suggest using their protocol, where individual components are based on published evidence, in order to attempt to identify patients who can be appropriately managed in a semi-outpatient ambulatory manner and, at the other extreme, patients for active thrombolysis. I agree that the use of initial troponin as a sensitive but not specific triage tool addressing right heart strain would add to the value of prognostic assessment of PE. I also agree that a further validated use of highly sensitive cardiac troponin (hsTnT) would be desirable in the future. Of course a right ventricle (RV)-sensitive troponin would be preferable.

However, I would like to clarify the term ‘overuse’ of echo. ‘Reduce the overuse’ does not mean ‘no use’ but a ‘better use’ of echocardiography. Although the assessment of RV function can be challenging even with good acoustic echo windows as well as other alternative techniques such as CT scan, RV dysfunction and dilatation have been reported as robust prognostic factors in acute PE with normal or abnormal troponins. The particular approach (echo or CT) may depend on the available hospital resources. Moreover, while CT provides information on RV dilatation only, echocardiography gives some information on contractility also. To date, we don’t have a uniformly accepted definition of the criteria for echocardiographically detected RV dysfunction to give a conclusive answer on the prognostic significance of decreased RV performance in haemodynamically stable patients with PE. Nonetheless, available echocardiographic parameters of RV dysfunction can be carefully assessed and interpreted to judge a possible RV involvement. Furthermore, with recent advances in Doppler and tissue Doppler echocardiography, new methods for measuring regional and global RV function or contractility have been suggested and may enter the clinical routine in the future.

We realise that a combination of imaging modalities with cardiac biomarkers may optimise risk stratification by a two-test or three-test approach. More sophisticated biochemical assays of troponin hopefully will come, but in pulmonary heart disease we certainly cannot neglect a detailed and reliable morphofunctional RV assessment.

Antonio Vitarelli
Cardio-Respiratory Department, Sapienza University, Rome, Italy
Correspondence to Professor Antonio Vitarelli, Sapienza University, via Lima 35, Rome, 00198, Italy; vitar@tiscali.it

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 2 February 2011
Published Online First 23 February 2011
doi:10.1136/thx.2011.160770

REFERENCES
5. Stein PD, Matta F, Janjua M, et al. Outcome in stable patients with acute pulmonary embolism who had right ventricular enlargement and/or elevated levels of troponin I. Am J Cardiol 2010;106:558–63.
Authors' response

Antonio Vitarelli

Thorax 2011 66: 1100 originally published online February 23, 2011
doi: 10.1136/thx.2011.160770

Updated information and services can be found at:
http://thorax.bmj.com/content/66/12/1100

These include:

References
This article cites 6 articles, 4 of which you can access for free at:
http://thorax.bmj.com/content/66/12/1100#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/