We read with interest the article by Shah et al and have some concerns. 1

The use of regional, as opposed to national, registry data could underestimate total myocardial infarction (MI) events. Even 3 additional MIs out-with South-East Scotland would reduce negative predictive value (NPV) to <99.5%. Furthermore the reliance on cause of death coding and preceding death certification is a potential methodological weakness. It has been proven that a significant proportion of death certificates are inaccurate. 2 True “cardiac deaths” may have been miscounted and all-cause mortality may be the more apposite outcome measure.

A 12-lead ECG is invaluable in determining risk for patients with suspected Acute Coronary Syndrome. 3,4 9% of patients with troponin <5ng/L in this cohort had “ischaemia” on ECG. The absence of available ECGs to the investigators in 13% of patients may have affected the accuracy of index MI adjudication, as ECG changes are a key component of the 3rd universal definition. 5

It is noteworthy that the NPV of troponin I<5ng/L dropped to 97.6% if performed within 2 hours of pain onset with wide confidence intervals suggesting early presenters cannot be discharged at presentation.

Finally there is no assessment made in this prospective cohort of the typicality of chest pain. Despite the impressive NPV it would seem injudicious to discharge a patient with symptoms consistent with unstable angina, particularly in the presence of an ischaemic ECG, regardless of troponin.

We believe these limitations contribute to the overestimation of potential discharges at presentation with acute chest pain. The true figure for early safe discharge is likely to be significantly lower even with novel highly sensitive Troponin assays.

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