

Letters to the Editor

Chest pain unit: do not forget the clinical indexes



Unidad de dolor torácico: no olvidar los índices clínicos

To the Editor,

We have read with considerable interest the article by Piñeiro-Portela et al.,¹ which compares 2 diagnostic imaging tests in the chest pain unit: stress echocardiography and multidetector computed tomography. Given that the included patients had a low-to-intermediate probability of having acute coronary syndrome (ACS), a normal or nondiagnostic electrocardiogram, and normal troponin levels, we believe that some of the participants did not require diagnostic imaging tests. The authors did not provide results on any of the clinical indexes typically applied to patients with ACS (eg, GRACE, TIMI, and HEART) or used in chest pain units.^{2–4} It would have been useful to report the results of the CPU-65 risk index (use of aspirin, diabetes, typical pain, age ≥ 65 years) and the index described by Sanchis et al.⁵ (male sex₁, effort-related pain₁, recurrent pain₂, and prior ischemic heart disease²). Specifically, it would be valuable to know how many patients had index scores ≤ 1 and their outcomes. In addition, the authors should have indicated if high-sensitivity troponin was used, as well as one of the troponin algorithms with proven high sensitivity and negative predictive value for ACS diagnosis. Some evidence indicates that ischemic diagnostic tests might be overused in patients with low or intermediate risk,⁶ which is why some very low clinical index scores (0 or even 1) might be sufficient to discharge patients with normal electrocardiogram and troponin results from the emergency department. The overuse of ischemic diagnostic tests in low-risk patients prolongs their stay in emergency departments (and even compels their admission), increases the economic cost, and may even result in invasive procedures with no clear impact on patient prognosis.

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Response



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Respuesta

To the Editor,

We appreciate the interest in our article, comparing stress echocardiography and multidetector computed tomography in a chest pain unit. Although they were not our objectives, we agree that clinical indexes¹ and high-sensitivity troponin determination²

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REFERENCES

1. Piñeiro-Portela M, Peteiro-Vázquez J, Bouzas-Mosquera A, et al. Comparison of two strategies in a chest pain unit: stress echocardiography and multidetector computed tomography. *Rev Esp Cardiol.* 2021;74: 59–64.
2. Martínez-Selles M, Bueno H, Estevez A, De Miguel J, Muñoz J, Fernández-Aviles F. Positive non-invasive tests in the chest pain unit: importance of the clinical profile for estimating the probability of coronary artery disease. *Acute Card Care.* 2008;10: 205–208.
3. Martínez-Sellés M, Bueno H, Sacristán A, et al. Chest pain in the emergency department: incidence, clinical characteristics and risk stratification. *Rev Esp Cardiol.* 2008;61:953–959.
4. Sanchis J, Valero E, García Blas S, et al. Undetectable high-sensitivity troponin in combination with clinical assessment for risk stratification of patients with chest pain and normal troponin at hospital arrival. *Eur Heart J Acute Cardiovasc Care.* 2020. doi: 10.1177/2048872620907539.
5. Sanchis J, García-Blas S, Carratalá A, et al. Clinical evaluation versus undetectable high-sensitivity troponin for assessment of patients with acute chest pain. *Am J Cardiol.* 2016;118:1631–1635.
6. Roifman I, Han L, Koh M, et al. Clinical effectiveness of cardiac noninvasive diagnostic testing in patients discharged from the emergency department for chest pain. *J Am Heart Assoc.* 2019;8:e013824.

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are useful to reduce the need for techniques to detect ischemia and coronary disease.

Our article reports one of the indexes mentioned in your letter, the TIMI risk score (68% of patients in TIMI I and 32% in TIMI II). We calculated the percentage of patients with a CPU-65 index of 0 to 1 and found it to be 45%, with no significant differences between the 2 strategies. Irrespective of this finding, the high prevalence of the definite diagnosis of acute coronary syndrome (26%) indicates that the techniques to detect ischemia and coronary disease were not overused.

One of the limitations mentioned was the use of conventional troponin determination. The absence of high-sensitivity troponin determination at inclusion may have contributed to a higher pretest probability of acute coronary syndrome and a greater yield of the diagnostic imaging techniques, which might not apply to a more current population.³