Letters to the Editor

Results from the ACI-SEC Infarction Code registry. The ECG also exists

Resultados del registro de Código Infarto de la ACI-SEC. El ECG también existe

To the Editor,

We read with interest the article analyzing the results of the Spanish ACI-SEC1 Infarction Code registry,[1] which included information on electrocardiogram (ECG) findings and false-positive and -negative activation rates.

A number of aspects caught our attention. We were surprised to see that 265 of the 5401 code activations were missing information on ECG changes (and had to be omitted from the analysis). We were also surprised at the false-positive rates: 13.9% for activations classified as appropriate and 12% following clinical assessment. Finally, we would like to have seen times from first medical contact to diagnosis and times from ECG to diagnosis included in table 1.

In a recent review article, Birnbaum et al.[2] addressed numerous ECG interpretation concepts they believed should be revisited and included in future updates of the Universal Definition of Myocardial Infarction. The fourth version of this document primarily addresses the differences between nonischemic myocardial injury and myocardial infarction and the use of cardiovascular magnetic resonance to define the etiology of myocardial injury.[3] Less attention is given to updating the criteria for ECG changes related to myocardial infarction. As pointed out by Birnbaum et al., evidence of myocardial ischemia is necessary to diagnose myocardial infarction, and ECG is the main tool for acute ischemia detection, triage, and risk stratification at presentation.

However, what really matters are diagnostic delay and false negatives, as diagnostic errors are common in patients with acute coronary syndrome requiring urgent or emergent percutaneous coronary intervention.[4] Potential sources of error include inferobasal infarction with a predominant mirror image, the hyperacute phase of acute myocardial infarction with ST-segment elevation with an isoelectric ST and a peaked T wave (anterior descending artery occlusion), negative high-voltage T wave in V_1-V_3 (unstable spontaneous postreperfusion pattern in anterior descending artery), slight ST elevation in I and aVL (first diagonal artery occlusion), minimal ST elevation in a small number of leads not meeting strict reperfusion criteria, and unfamiliarity with the Sgarbossa criteria.

We commend the authors for including ECG changes and the vast majority of clinical timelines in their analysis of the ACI-SEC1 Infarction Code registry results. We hope that this information will also be taken into account in future analyses.

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CONFLICTS OF INTEREST

None.

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