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New-Onset Atrial Fibrillation During Acute Coronary Syndromes

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We read with interest the recent article entitled "Early Versus Late New-Onset Atrial Fibrillation in Acute Myocardial Infarction: Differences in Clinical Characteristics and Predictors" by Shiyovich et al.[1] These authors concluded that patients with new-onset atrial fibrillation (NOAF) were more likely to be women and have a cardiovascular risk factor burden, severe left ventricular dysfunction, pulmonary hypertension, valvular disorders, and left atrial enlargement compared with patients without NOAF. Non-ST-elevation myocardial infarction and inferior ST-elevation myocardial infarction (STEMI) were significantly more prevalent among the early atrial fibrillation (AF) group, while anterior STEMI was more prevalent in late AF.[1] Their study is a valuable addition to the literature. However, some issues have not been addressed by the authors.

Atrial fibrillation can occur secondary to the complications after acute myocardial infarction, but it has a poor prognosis when it appears independently.[2] Therefore, it is crucial to assess the burden of this exacerbating complication as a manifestation of acute coronary syndrome (ACS). Previous studies showed that, in the early period of ACS, several factors have been associated with the occurrence of AF, such as atrial ischemia or infarction, right ventricular infarction, advanced age, heart failure, left ventricular dysfunction, diastolic dysfunction, mitral regurgitation, excessive sympathetic parasympathetic nerve stimulation, pericardial inflammation, acute hypoxia, and hypokalemia.[3-5] Recent studies have also spotlighted an independent association between increased C-reactive protein levels and AF, suggesting an acute-phase inflammatory response, causing an increased predisposition to AF in post-myocardial infarction patients.[6] However, in this study,[1] the authors did not investigate potential risk factors described in the literature, such as electrolyte abnormalities, C-reactive protein levels, pericardial inflammation, and possible diastolic dysfunction.[1] In addition, they did not specify whether thrombolytic therapy was used and also the timing and success rate of the percutaneous coronary intervention was not clear in the STEMI group. These factors may influence the study results.

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