

IMAGE IN CARDIOLOGY

Out-of-hospital cardiac arrest secondary to isolated right ventricular infarction[☆]

Paragem cardíaca extrahospitalar após enfarte isolado do ventrículo direito

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A 77-year-old man suffered out-of-hospital cardiac arrest (CA) secondary to ventricular fibrillation (Figure 1A). The electrocardiogram (ECG) following resuscitation showed ST-segment elevation in V1-V3 (Figure 1B), and he was transferred to our center for urgent coronary angiography. Acute thrombotic occlusion of a non-dominant and poorly developed right coronary artery was observed (Figure 1C and D), which was treated by angioplasty and stenting; this vessel

had only two small acute marginal branches to the right ventricle (Figure 1E).

Isolated right ventricular infarction is uncommon, and its first manifestation as CA due to ventricular fibrillation is even rarer in patients with a non-dominant right coronary artery. The electrocardiographic finding of ST-segment elevation in V1-V3 can be confused with anterior myocardial infarction; leads V2R-V4R can help in diagnosis (Figure 1F).

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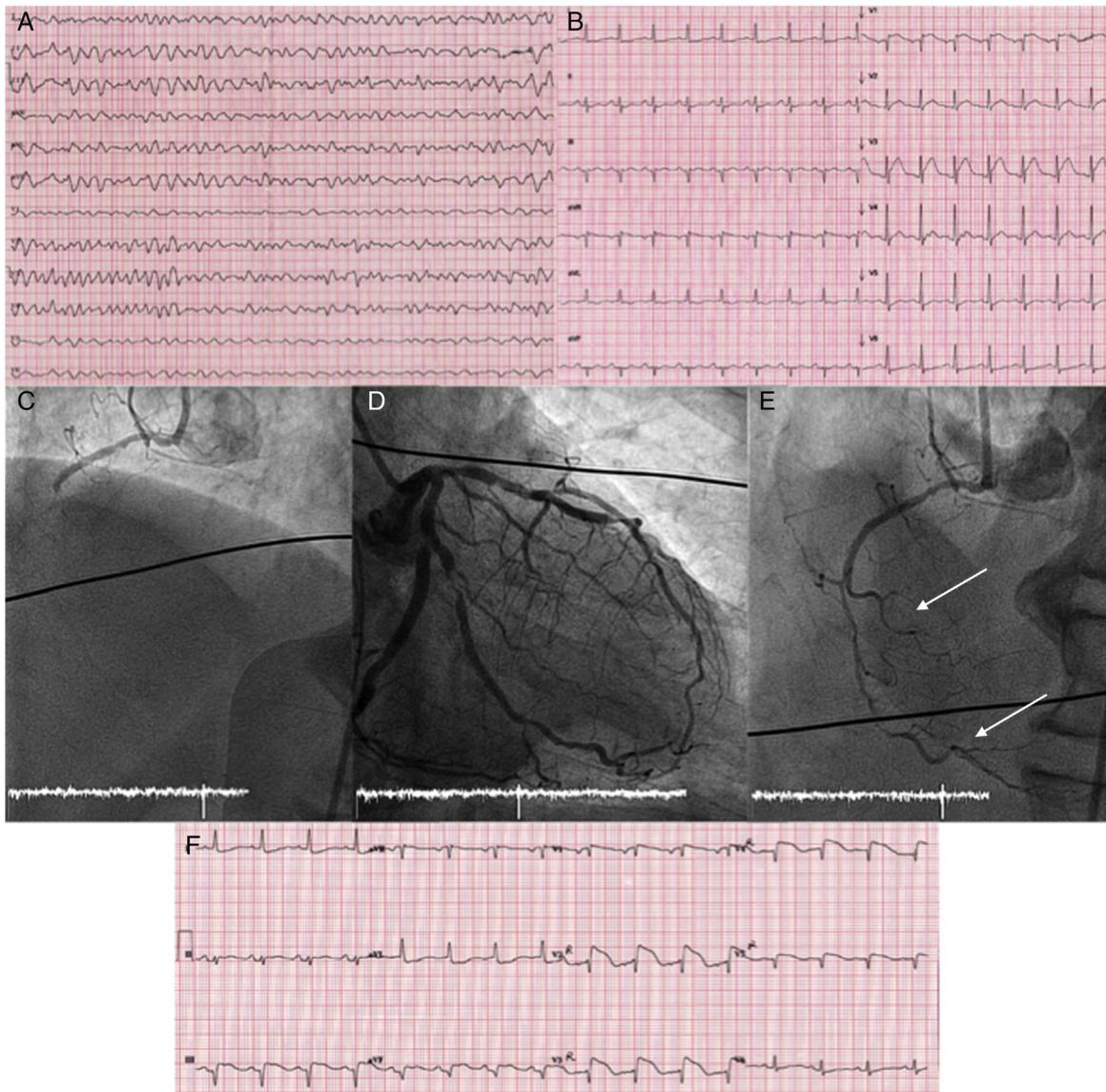


Figure 1 (A) Ventricular fibrillation responsible for out-of-hospital cardiac arrest; (B) electrocardiogram following advanced cardiopulmonary resuscitation maneuvers; (C) angiograms showing acute thrombotic occlusion of the right coronary artery; (D) dominant left circumflex artery; and (E) final result of primary angioplasty of the non-dominant right coronary artery with recovery of flow in the two acute marginal branches to the right ventricle (arrows); (F) electrocardiogram with ST-segment elevation in leads V2R-V4R, confirming right ventricular ischemic injury.

Conflicts of interest

The authors have no conflicts of interest to declare.