

## STEMI due to Persistent Coronary Artery Spasm

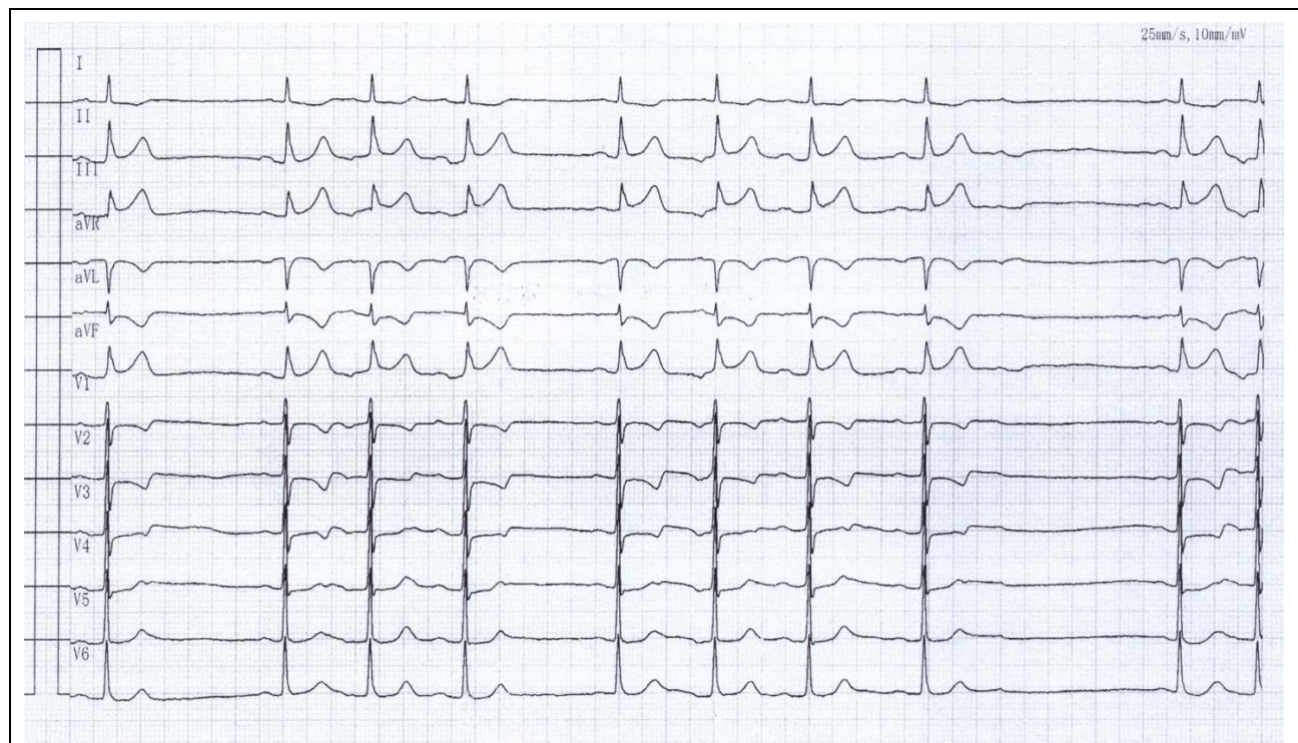
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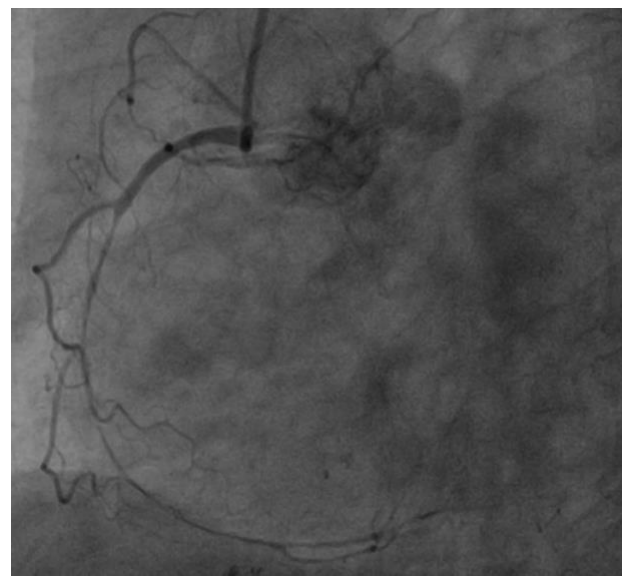
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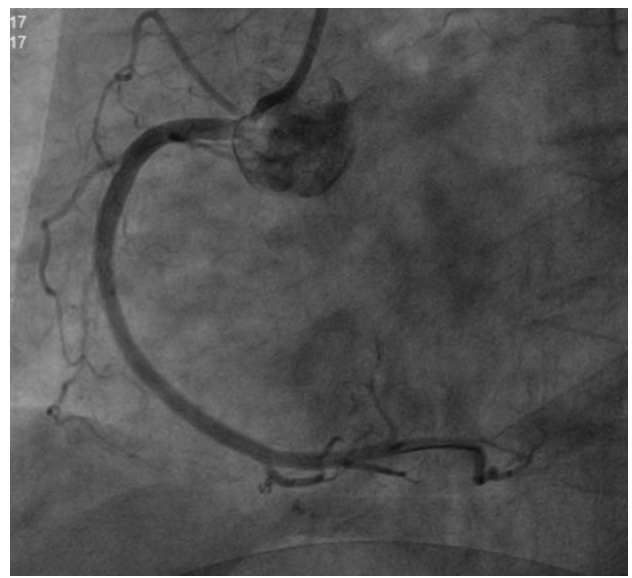
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**Figure 1:** Sinus bradycardia with atrial premature beats and ST-segment elevation in leads II, III, and aVF.



**Figure 2:** A small right coronary artery, with more obvious in the middle section, and severe stenosis locally.



**Figure 3:** Significant dilation in the RCA without stenosis, dissection, or thrombotic lesions, and TIMI blood flow was normal.

### Clinical Image

A 74-year-old female with a history of hypertension and diabetes presented to emergency department with chest pain and moderate sweating for 3 hours. On admission, she appeared to be moderate chest pain with an irregular heart rate of 56bpm. Blood pressure was 118/67 mmHg, respiratory rate was 16 breaths/min and oxygen saturation were 99% on room air. No rales audible were heard in and both lungs. Electrocardiogram showed sinus bradycardia with atrial premature beats with ST-segment elevation was seen in leads II, III, and aVF (Figure 1). Her troponin was lower than 0.05ng/ml. After chewing both aspirin 300mg and ticagrelor 180mg, the patient received coronary angiography (CAG), which showed no significant stenosis in the left coronary artery but a very small right coronary artery, with severe stenosis locally (Figure 2). During RCA revascularization, the patient experienced supraventricular tachycardia and her systolic blood pressure sharply dropped to 65 mmHg. Adrenaline 0.1ml was administered, then amiodarone 150mg was given. The patient quickly recovered sinus rhythm. Intra-coronary 600ug of nitroglycerin was given, then RCA revealed significant dilation and normal TIMI blood flow (Figure 3), without stenosis or thrombotic lesions. The patient was alleviated quickly and she was discharged several days later with diltiazem and isosorbide dinitrate tablets. She feels well with in the 3 months' follow-ups.