

IMAGES IN EMERGENCY MEDICINE

Cardiovascular

Man with chest painSaba Choudhry MD¹ | Lena Carleton MD² | Wesley Eilbert MD²¹Department of Emergency Medicine, Jesse Brown Veterans Administration Medical Center, College of Medicine, University of Illinois, Chicago, Illinois, USA²Department of Emergency Medicine, College of Medicine, University of Illinois, Chicago, Illinois, USA**Correspondence**

Wesley Eilbert, MD, Department of Emergency Medicine, University of Illinois, College of Medicine, 1819 West Polk St., Chicago, IL 60612, USA.

Email: weilbert@uic.edu**1 | CASE PRESENTATION**

A 61-year-old man with a history of hypertension and hyperlipidemia presented to the emergency department complaining of a constant left-sided chest pain present for 1 hour. On examination, his vital signs were normal other than a blood pressure of 180/100 mmHg. He was diaphoretic with an unremarkable cardiopulmonary examination. An echocardiogram (ECG) was performed (Figure 1).

2 | DIAGNOSIS**2.1 | de Winter pattern**

First described in 2008, the de Winter pattern on ECG is present in 1.6%–3.4% of anterior wall myocardial infarctions (AWMI).^{1–4} It is characterized by upsloping ST-segment depression at the J point in the leads V1 to V6 with associated tall, symmetrical T waves. The majority

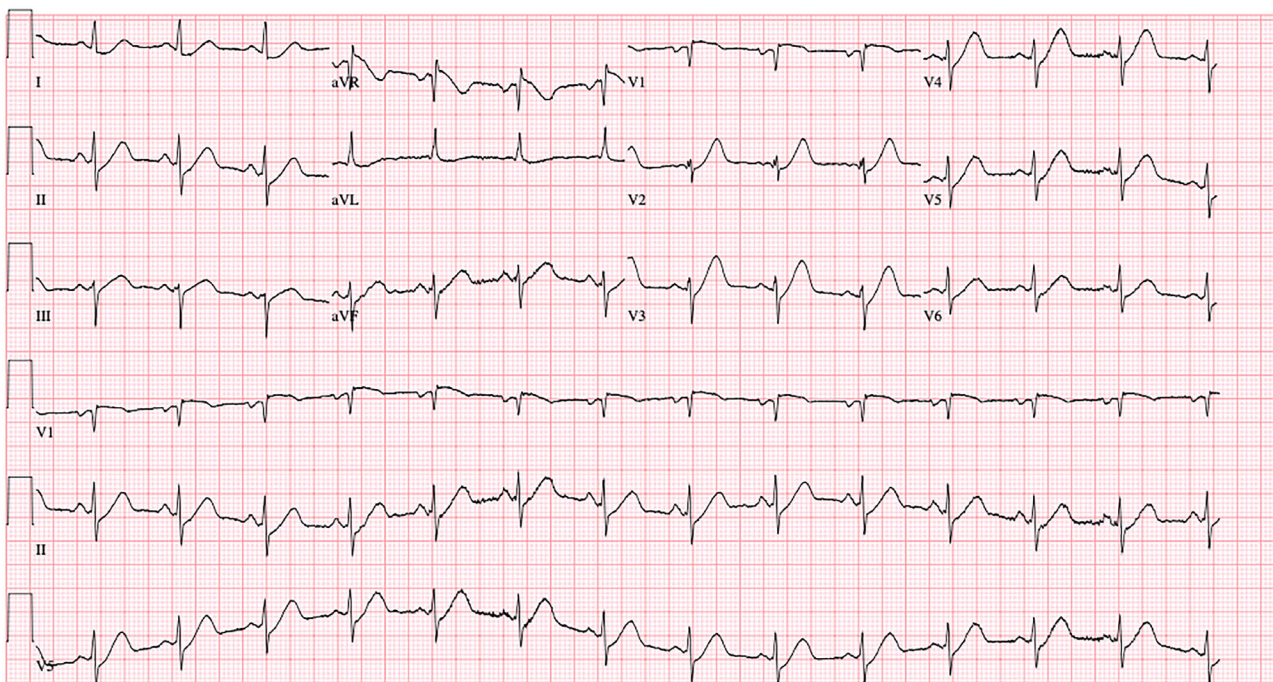


FIGURE 1 de Winter pattern characterized by upsloping ST-segment depression at the J point in leads V1 to V6 with associated tall and symmetrical T waves. Abbreviation: aVR, augmented vector right lead

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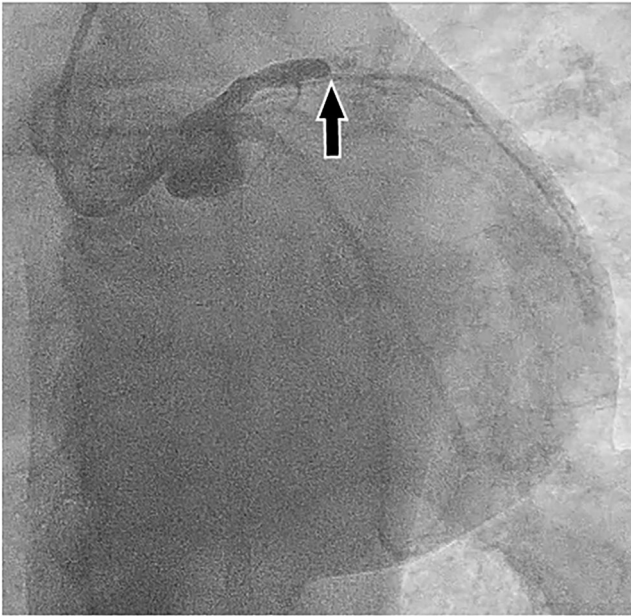


FIGURE 2 The patient's cardiac catheterization revealing a 100% occlusion of the proximal left anterior descending artery (arrow)

of patients also have ST-segment elevation in the augmented vector right lead and poor R-wave progression across the precordial leads, though these 2 features are not essential to make the diagnosis.⁵

The de Winter pattern is seen early in the course of AWMI, typically within the first 90 minutes of symptom onset.^{1,3} It has a positive predictive value of over 95% for AWMI.⁵ It is considered by many to be a ST-segment elevation myocardial infarction equivalent and an indication for emergent reperfusion therapy.⁶⁻⁸

The vast majority of patients with a de Winter pattern seen on ECG will have occlusion of the proximal left anterior descending coronary artery or one of its main branches^{1,2,4} (Figure 2). Patients with the de

Winter pattern as an electrocardiographic manifestation of AWMI are more likely to be male, younger, and with hyperlipidemia.³

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