Wellens' Syndrome in an Elderly Patient with Dementia

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A 90-year-old woman with a history of dementia experienced acute-onset chest pain, dyspnea, and nausea at rest. In the emergency department, she was asymptomatic, with stable vitals, negative troponin T, and ECG non-indicative of myocardial infarction (MI) (Fig. 1). The next

morning, she developed severe chest pain, and ECG revealed ST elevation in V1–V4 (Fig. 2). Her troponin T level peaked at 3.56 ng/ml. An echocardiogram showed an ejection fraction of 35% with akinesis of the antero-septum, apex, and distal anterior wall, consistent with left anterior descending (LAD) artery infarction. Her family declined percutaneous coronary intervention after learning of the associated risks, including contrast-induced nephropathy.¹ Reconsideration of her initial ECG revealed a less common variant of Wellens' Syndrome: biphasic T waves in leads V1–V3.^{2,3} The more common pattern is deep, symmetrically inverted T waves in leads V2 and V3 (or other precordial leads), often during a chest pain-

Fig. 1 Initial ECG with biphasic T waves in leads V1–V3, a less common variant of Wellens' Syndrome

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Fig. 2 ECG 12 hours later showing ST segment elevation in leads V1–V4

free interval.^{2,4,5} Wellens' syndrome has been found in up to 14% of patients with unstable angina whose angiograms showed a mean LAD stenosis of 85%.⁶ Recognition of Wellens' syndrome is important, because these subtle ECG patterns are associated with impending extensive anterior wall MI in up to 75% of patients.^{2,4}

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