A 72-year-old woman presents to the emergency department with a 24-hour history of intermittent retrosternal chest pressure, worsening shortness of breath, nausea and diaphoresis. She describes more than 4 months of 4-pillow orthopnea and paroxysmal nocturnal dyspnea in the presence of long-standing pedal edema. Her cardiac history is significant for congestive heart failure and a remote myocardial infarction, for which she underwent primary percutaneous coronary intervention. The patient is receiving appropriate therapy to manage her cardiovascular risk factors, which include hypertension, type 2 diabetes mellitus and dyslipidemia. The patient is obese and has a positive family history of ischemic heart disease.

The patient’s physical examination is significant for a fourth heart sound, elevated jugular venous pressure, mild pedal edema and crackles at the lung base. Laboratory investigations reveal an elevated N-terminal pro-B-type natriuretic peptide. Results of the patient’s first troponin test are negative, but a repeat test is positive. The patient is placed on bilevel positive airway pressure and given diuretics in the emergency department. She is subsequently admitted to the coronary care unit.

The patient’s electrocardiogram (ECG) is shown in Figure 1. What is the ECG diagnosis? Is there anything about the ECG that might change acute management in this patient?

For the answer, see page 67.

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