

What is your diagnosis?

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Answer: C

For the patient, 24-hour Holter monitoring and treadmill tests were ordered. The 24-hour Holter electrocardiogram monitoring disclosed an abrupt transition between the wide QRS rhythm and narrow QRS sinus rhythm without an alteration in the heart rate (Fig. 2a). Subtle delta waves were hardly identified in some QRS complexes on transition strips (Fig. 2b). A sinus rhythm was observed at the beginning of treadmill test (Fig. 3a). She completed 3 stages of the Bruce protocol test with 10.1 METs and a heart

rate of 115. The sinus rhythm persisted during 3 stages of the test. Subtle delta waves occurred at the first minute of recovery with a heart rate of 86 (Fig. 3b). At the third minute of recovery, QRS complexes turned into wide complexes without preceding p waves, similar to the complexes on presentation. At the fifth minute of recovery, the wide QRS complexes turned into narrow QRS complexes with subtle delta waves. The patient did not have any complaint of tachycardia, and Holter monitoring did not show supraventricular tachycardia episodes. The patient was followed up uneventfully.

Although the QRS morphology seems to be indicative of a left bundle branch block, a regular RR interval without preceding P waves excludes the sinus rhythm blocked below the AV node. The sole diagnostic option without P waves, regular RR interval, and wide QRS is an AV complete block with atrial fibrillation, in which the rate of ventricular escape rhythm is between 20 and 40. A heart rate of 95 and the patient's clinical status make this diagnosis very unlikely. An accelerated idioventricular rhythm is an automatic ventricular rhythm that is associated with the reperfusion of acute coronary syndromes. However, positive QRS complexes in I and AVL make any ventricular-origin rhythm un-

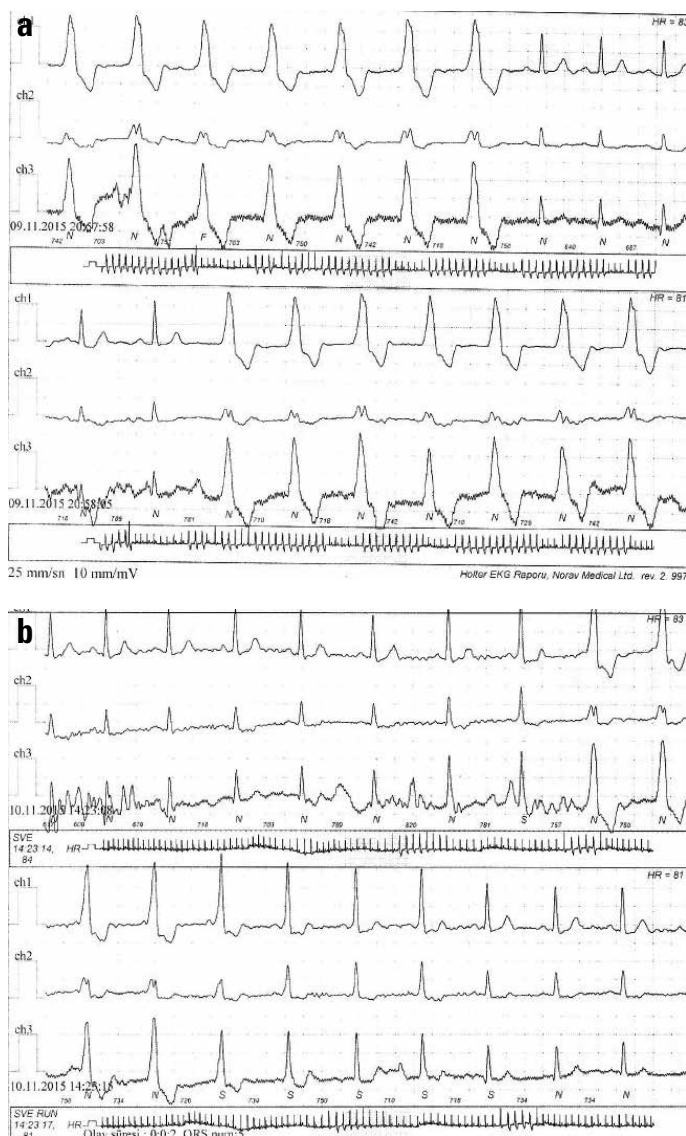


Figure 2. (a) Abrupt transition of wide and narrow QRS complexes without delta waves on Holter monitor. (b) Transition of wide and narrow QRS complexes with delta waves on Holter monitor

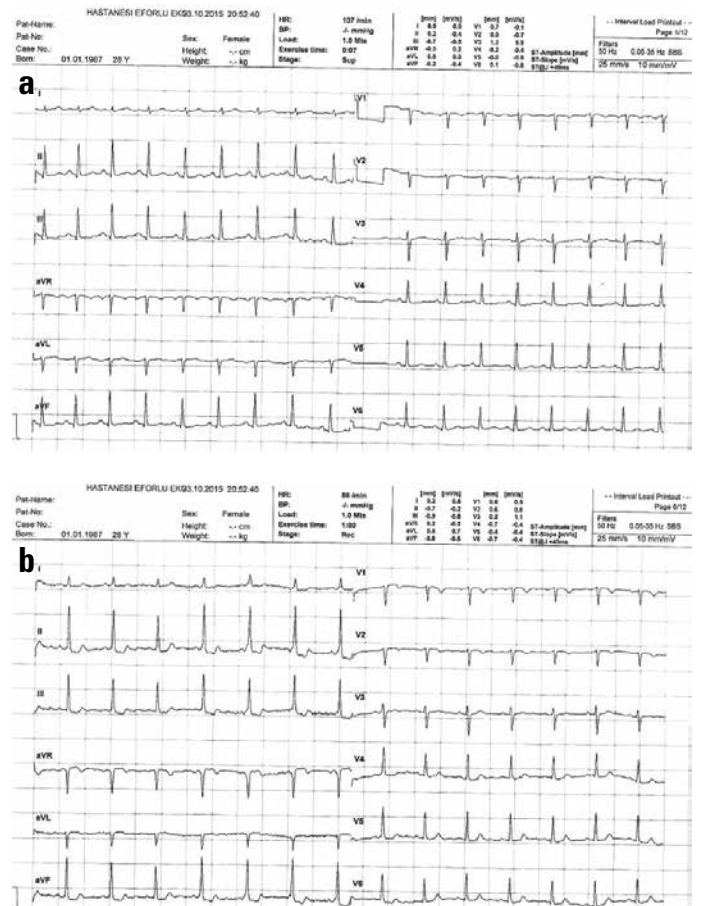


Figure 3. (a) Sinus rhythm at the beginning of treadmill test. (b) Intermittent delta waves occurred on first minute of recovery

likely. Nonspecific intraventricular conduction delay is a rhythm that can be classified as neither a right bundle branch block nor a left bundle branch block. This rhythm is encountered in patients with heart failure, whereas our patient had normal echocardiographic results.

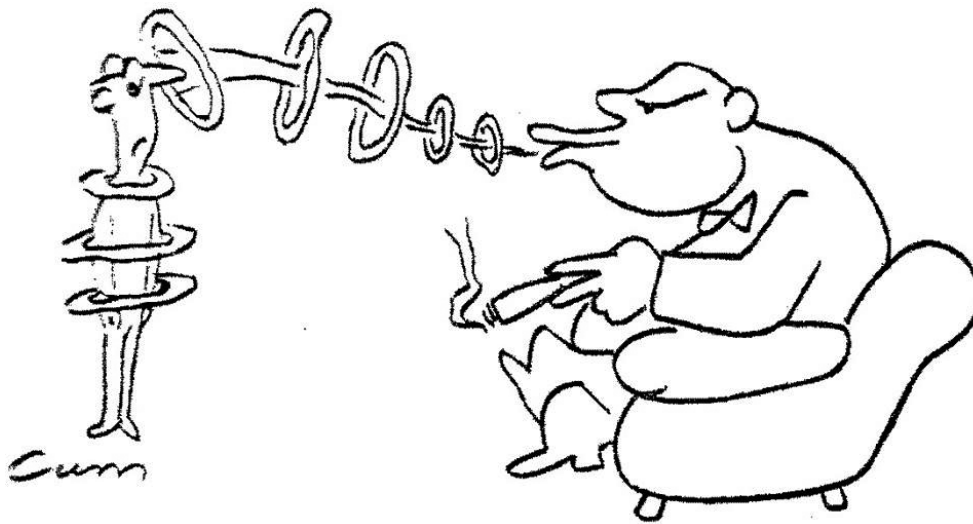
Preexcitation can mimic bundle branch blocks, myocardial infarctions, and ventricular hypertrophy (1, 2). Giorgi et al. (3) found a relationship between accessory pathway localizations and pseudomyocardial infarction and bundle branch block patterns using vector cardiograms. They observed the coexistence of a left bundle branch block pattern with anteroseptal preexcitation and an anterior myocardial infarction pattern with lateral right ventricle preexcitation. The location of the accessory pathway as well as the conduction properties of both AP and the atrioventricular node are responsible for atypical ECG presentations. The presence of intermittent accessory conduction may make preexcitation diagnosis more challenging, as in our case. Because the patient did not accept the procedure, we

did not perform an electrophysiological study. Clinicians should take preexcitation syndrome into account while evaluating wide QRS rhythms.

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