

## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

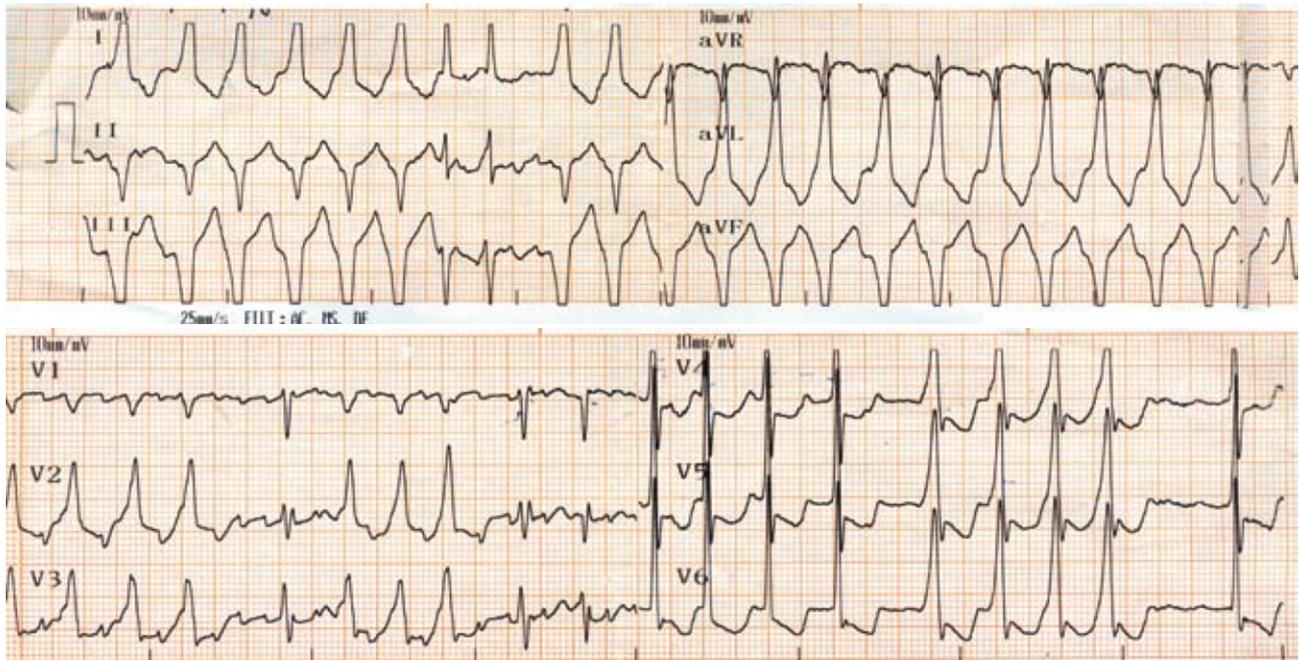
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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2007, 24(6):635

### Electrocardiogram Quiz - Case 1

A 76-year-old patient with hypertension treated with atenolol and diuretic, came to the emergency clinic with palpitations and presyncope lasting two hours, without having lost consciousness. Electrocardiogram is done in the figure.

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1. Which is the basic rhythm?
2. Which medicines aren't advisable for the treatment of this patient?

#### Comment

This rhythm represents tachycardia with a delta ( $\delta$ ) wave in I, aVL, V2-V6 leads. Normal conduction through the atrioventricular node is recognized in the 7<sup>th</sup> and 8<sup>th</sup> systole in I, II, III leads, 5<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> systole in V1-V3 leads and 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 9<sup>th</sup> systole in V4-V6 leads.

If there is an accessory conduction pathway, the use of drugs that delay the normal conduction through the A-V node is contraindicated, unless the additional conduction pathway is suppressed. The last one has shorter delay time than the A-V node and therefore

does not suppress the rate of the rapid conduction of atrial flutter, which may be up to >400/min and may lead to hemodynamic instability due to reduced filling of the left ventricle.

Drugs that are contraindicated are digoxin,  $\beta$ -blockers, verapamil and tildiazem that act through the A-V node.

The patient was treated with intravenous amiodarone, leading to suppression of the function of the additional conduction pathway.

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Diagnosis: Atrial fibrillation