



A 60-year-old woman with a history of a mitral valve replacement in 2001, was referred with recurrent episodes of tachycardia. The first episode was associated with palpitations and dizziness. Soon after the ECG was recorded, the tachycardia terminated spontaneously. Atenolol was started but the arrhythmia recurred. As she was now apparently haemodynamically unstable, she was electrically cardioverted to her baseline sinus rhythm.

QUESTION 1: Which ONE of the following is the best and most likely ECG diagnosis?

- (a) Sinus tachycardia with evidence of myocardial ischaemia.
- (b) Atrioventricular re-entry tachycardia (AVRT) with a single accessory pathway.
- (c) AV nodal re-entry tachycardia (AVNRT).
- (d) Atrial tachycardia due to a focal origin.
- (e) Macro re-entry atrial tachycardia.
- (f) Typical atrial flutter.
- (g) Atrial fibrillation with rate related “pseudo” regularisation.

QUESTION 2: You may have already noticed that there is a perturbation of the rhythm on the ECG. What is the most likely cause of this?

- (a) Irregularity associated with atrial fibrillation.
- (b) Artefact in ECG recording.
- (c) Termination of the tachycardia and immediate restarting of the tachycardia.
- (d) Sinus nodal pause.
- (e) AV block due to variable AV conduction.
- (f) Transient 2:1 AV conduction.

Please analyse the ECG carefully and commit yourself to an answer before checking the explanation.

ANSWER on page 136

ERRATUM ECG QUIZ NO. 21

A printing error occurred in ECG Quiz No. 21, published in 2010, volume 7, issue 4, page 289.

In Table 3 the responses to carotid sinus massage to distinguish the site of second degree AV block were inverted. The following table replaces Table 3. The corrected responses are highlighted.

TABLE 3: Determining Site of 2:1 AV-block

QRS width	Wide QRS = site of block anywhere Normal QRS = block in AV node or His bundle
PR of conducted P-wave	>300 milliseconds = block in AV node <160ms = block in HPS or His bundle
Atropine or exercise	Improved conduction = block in AV node Worsened conduction = block in HPS or His bundle
Carotid Sinus massage	Worsened conduction = block in AV node Improved conduction = block in HPS or His bundle

HPS: His Purkinje System.

Adapted from M Josephson. *Clinical Cardiac Electrophysiology*. 2008.