



A 77-year-old man with no past medical history was referred with a one year history of episodes of prolonged palpitations for further management. The palpitations, which are not particularly fast, are associated with uncomfortable pulsations in the neck. Two ECGs were recorded, one before seeing the doctor and the second after the consultation. No drugs had been given and no manoeuvres had been performed. Any changes were spontaneous.

**QUESTION:** Which ONE of the following is the best ECG diagnosis or explanation?

- (a) First degree heart block is evident in both ECGs with a longer PR in ECG 1 compared with ECG 2.
- (b) The ECG computer analysis of both ECGs is correct except for the heart rate.
- (c) Accelerated idioventricular rhythm in ECG 1 is a possible cause of palpitations in this patient.
- (d) Based on the two ECGs, the likely diagnosis and explanation of the palpitations is increasing degrees of AV block, i.e. second degree and possibly third degree block.
- (e) The ECGs display evidence of slow antegrade AV conduction and intermittent fast retrograde conduction, which may account for symptoms of neck palpitations, akin to “pacemaker syndrome”.
- (f) Sinus node dysfunction with ECG 2 showing 2:1 sinus node exit block.

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

**ANSWER** on page 62