

An avoidable outcome? (answers on page 51)

Part one

This quiz is a little different as it is taken from an actual case that was sadly dealt with inadequately. Mr Mehta, a successful businessman working in a large East African city, had been taking an angiotensin-converting enzyme (ACE) inhibitor for more than a decade for his essential hypertension. On a few occasions in the last week or so he had bouts of tightness in the chest and a feeling that he 'couldn't breathe properly'. He had no pain or nausea, nor did he have pins and needles in these attacks, which subsided 'fairly quickly'. Between the attacks he felt well: there were no symptoms and he could go about his business normally. He volunteered that these attacks might be panic attacks because his business was going badly and he was having to make staff redundant. He had been spending long hours, often after midnight, at his desk trying to sort out his financial problems.

His doctor found that his blood pressure was higher than usual, and that he had tachycardia. As the ECG showed a normal rhythm and rate (apart from a mild tachycardia) and no obvious ischaemia his doctor agreed that these were probably bouts of panic and sent Mr Mehta home with reassurance.

Q1 Which of the following is correct practice in Mr Mehta's case?

- (a) On these findings it is reasonable to assume that this was not heart disease.
- (b) His history of hypertension should have alerted the doctor that there was real risk here of a silent myocardial infarction despite the ECG appearance.
- (c) There are other causes of dyspnoea apart from heart disease that should have been taken into account.
- (d) The symptoms are probably due to his elevated blood pressure associated with anxiety, and the first step is probably to increase his antihypertensive medication.
- (e) Although the ECG looked normal, a cursory look is not enough to rule out serious heart or lung disease – he should have been referred immediately to specialist care.
- (f) The fact that he was well between attacks ruled out serious disease and was a prime reason for his doctor allowing him to go home.

Mr Mehta went home after being reassured and with a higher dose of antihypertensive agent, but returned 3 days later to his doctor with severe chest pain, extreme shortness of breath, and nausea. He was admitted directly to hospital, where sadly he died an hour later.

Part two

Q2 It is clear that Mr Mehta's doctor was tragically mistaken at that first visit. Which of the following are the best decisions for a patient presenting like Mr Mehta?

- (a) His age, high blood pressure, and respiratory symptoms should have alerted the doctor to the possibility of serious cardiopulmonary disease: this should have led to immediate referral to specialist assessment.
- (b) The normal ECG ruled out a cardiac cause, so that it was not unreasonable to put the symptoms down to anxiety, especially with the history of pressure at work.
- (c) Regardless of the normal ECG appearance the respiratory symptoms mandate immediate hospital referral – not all episodes of chest tightness are cardiac in origin.
- (d) When a patient presents with acute cardiorespiratory symptoms, a complete physical examination should exclude non-thoracic primary causes.
- (e) A detailed history not limited to the cardiorespiratory system is essential.

Q3 The ECG taken on the first visit was re-examined by the hospital doctor. The first doctor had not recognised that it showed right bundle branch block (RBBB) and right axis deviation. What was the significance of this finding?

- (a) It was probably not relevant to the death, and may have been present for months, related to his hypertension.
- (b) It was evidence that he had been taking an ACE inhibitor: RBBB has been recorded as a side-effect of antihypertensive treatment.
- (c) RBBB can be a consequence of anxiety, but it still should have been recognised as such and an urgent cardiological appointment should have been made at the time.
- (d) RBBB and right axis deviation are compatible with pulmonary embolism. Mr Mehta should have been admitted as an emergency at that first visit.
- (e) RBBB can be a sign of proximal aortic aneurysm or valvular incompetence or stenosis leading possibly to sudden cardiac death.

Q4 From what you have read so far, what do you think the post mortem showed as the probable cause of death?

- (a) Ruptured aortic aneurysm. (b) Acute heart failure due to longstanding hypertension.
- (c) Acute myocardial infarction. (d) Sudden valve failure. (e) Cardiac rupture from a previous undiagnosed infarction. (f) Massive pulmonary embolism.

Q5 Which of the following clues to the diagnosis might possibly have prevented Mr Mehta's death?

- (a) His recent intense work schedule. (b) His lack of paraesthesia during the 'attacks'.
- (c) The dyspnoea without chest pain. (d) His longstanding history of hypertension.
- (e) His apparent wellbeing between attacks.

Part three

Part four

Part five