

## Getting breathless (answers on page 35)

### Part one

Peter, at 49 years old, had not visited his doctor for many years. A large man, but a little overweight rather than obese, he enjoyed a good social life and the occasional game of football with friends and work colleagues. At an evening out with friends he was laughing uproariously at a joke when he suddenly fainted. He seemed to be choking for a few seconds before he came round. As this had never happened before, his friends took him to the hospital emergency department, where he was seen by the duty doctor. By this time, around twenty minutes after the syncope, he was conscious, feeling well, his physical examination was normal, as were his ECG, blood pressure lying and standing, and routine blood test results. The only medical history of note, and only elicited on direct questioning, was that he had noticed a slight cough and breathlessness on exertion for the last two months or so.

**Q1 Which of the following are relevant to his further investigations?**

- (a) Smoking history
- (b) Did he own pets?
- (c) Had he been exposed to dusts at work or in the home?
- (d) Did he have night sweats?
- (e) Had he ever coughed up blood?
- (f) Had he fainted before?
- (g) Were there any indications that this might have been a convulsion?

### Part two

**Q2 The combination of a faint with a minor degree of dyspnoea and cough struck a chord in the doctor's memory banks, and she ordered a chest X-ray. It showed that the trachea was deviated well to the right by a mass in the upper mediastinum. The lung fields were clear and the heart size and position were normal. What is the likeliest cause of this appearance?**

- (a) Metastatic cancer
- (b) Thymoma
- (c) Lymphoma
- (d) Goitre
- (e) Teratoma

### Part three

**Q3 Peter has a regular heart rate of 72 per minute, has no swelling in his neck, no eye symptoms, and no jugular vein congestion. He has neither gained or lost weight recently, and apart from the cough and dyspnoea has felt reasonably well. Do these facts mean that:**

- (a) This is unlikely to be a thyroid mass
- (b) If it is a thyroid mass it will be a simple goitre and carry a low risk of malignancy
- (c) Medical, rather than surgical, treatment is the first choice
- (d) Thymoma or lymphoma are the likeliest causes
- (e) Computer tomography (CT) to determine the origin of the mass is essential

### Part four

**Q4 The CT scan showed that the mass, much larger than was expected from the chest X-ray, was arising from the thyroid gland. Peter was sent as an urgent patient to the cardiothoracic department. Which of the following statements are now relevant to retrosternal tumours like Peter's?**

- (a) He needs urgent surgery to remove the tumour
- (b) At Peter's age and with minimal obstructive symptoms a trial of thyroid-reducing medication might be considered first
- (c) Left in situ there is a relatively high risk that further enlargement will involve the larynx with disastrous consequences
- (d) A small proportion of such goitres may become toxic, the only symptoms of which may be atrial fibrillation and heart failure
- (e) The fact that the tumour is in the thyroid does not yet rule out lymphoma or thymoma. He needs extensive further investigations before making the final diagnosis