Questions

1. The following features are useful in distinguishing venous from arterial infarcts, true or false?
   (a) The dural sinus appears hyperdense postcontrast.
   (b) Central areas of haemorrhage are often seen.
   (c) The infarct becomes hypodense more slowly.
   (d) Opacified mastoids may be seen.
   (e) The infarct becomes swollen more slowly.

2. Please read the following passage.
   A 63 year old lady is referred to the neurology service following a transient period of apparent confusion. Her pulse was regular, although bradycardic. Cardiovascular examination was otherwise normal. This was her ECG (Fig. 1):

   Based on the ECG, the cause of the episode is most likely to have been:
   (a) A subarachnoid haemorrhage.
   (b) A myocardial infarction.
   (c) A tachyarrhythmia.
   (d) An embolus.
3. Please read the following passage.
A 45-year-old man, referred up to the epilepsy clinic with blackouts, collapsed in the waiting area. His ECG is shown in Fig. 2.

Is this ECG appearance:
(a) Ventricular tachycardia?
(b) Ventricular fibrillation?
(c) Torsades de pointes?
(d) Wolf–Parkinson–White syndrome with atrial fibrillation?

4. Are the following statements true or false?
(a) Prosopagnosia, the inability to recognise familiar faces, is associated with right sided brain lesions.
(b) Alexia without agraphia may result from a left occipital lesion with involvement of the splenium of the corpus callosum.
(c) Pelopsia refers to objects appearing small and distant.
(d) Balint’s syndrome includes simultanagnosia.
(e) Balint’s syndrome includes incoordination of eye movements.

Figure 2
How good at neurology

Answers

1. (a) F  
(b) T  
(c) F  
(d) T  
(e) F

The sinus may appear hyperdense precontrast and then show a filling defect postcontrast. Venous infarcts become swollen and hypodense more quickly than arterial infarcts. Opacified sinuses may be seen on imaging, providing a clue to a possible infective source. Venous infarcts are also much more commonly haemorrhagic and often have a bilateral posterior distribution. Note, tumours may look similar – the patient with an unexpected clinical course should be investigated with repeat imaging (Wardlaw 2001).

Figure 3 shows diffuse a hyperintense area on (a) the T1-weighted image, which is hyperintense on the proton density, and (b) the T2-weighted image, on the left parietal lobe. An area that is predominantly hypointense with a hyperintense rim on T1 is noted in this lesion, indicative of subacute blood. Figure 3 is printed with courtesy of http://www.mribhatia.com.
2. (d) An embolus. The ECG shows atrial fibrillation with complete heart block. (See: http://www.ecglibrary.com.)

3. (d) The ECG shows an irregularly irregular wide complex tachycardia. In the Wolf–Parkinson–White syndrome there is an accessory atroventricular conduction pathway. A delta wave (slur on the upstroke of the R wave) may be seen. Patients are at risk of ventricular fibrillation. (See http://www.ecglibrary.com).

4. (a) T  (b) T  (c) F  (d) T  (e) T

In metamorphopsia, objects are correctly recognised but are subjectively distorted. The distortion is said to be simple in occipital lobe lesions, complex in temporal lobe lesions, and of intermediate complexity in parietal lobe lesions.

- Teleopsia – objects appear small and distant
- Pelopsia – objects appear to loom up.

In Balint’s syndrome, despite normal visual acuity and fields, the patient perceives only one object in a scene, from which he can hardly move his eyes. A useful test involves asking the patient to draw around a shape such as a triangle, or write, with their eyes open and then closed. In Balint’s syndrome the writing improves with their eyes closed. Additional features include optic ataxia, manifested, for example, as difficulty in visually guiding a limb to a target. (See Caselli 2000.)

REFERENCES