

FOR SHORT ANSWERS

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FOR LONG ANSWERS

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PICTURE QUIZ An unusual cause of stroke and hypoxia

A 70 year old retired farmer was referred by his general practitioner to the medical assessment unit for a sudden onset of "dizziness." Since the episode that morning, he had been unable to walk steadily, had a tendency to veer to the left side, and had a mild feeling of rotation. He had no history of headache, deafness, or tinnitus; his symptoms did not vary with posture; and he had not noticed any visual disturbances. He had no cardiorespiratory symptoms.

His medical history included a right sided frontoparietal cerebral infarct the previous year, from which he had made a full recovery. At that time, he was prescribed aspirin, modified release dipyridamole, and simvastatin. A cerebral abscess had been diagnosed during his 40s, for which he had received a prolonged course of intramuscular antibiotics. He had also undergone multiple cauterisations since his teenage years for recurrent nosebleeds and surgical treatment for varicose veins.

His son died of a cerebral haemorrhage of unknown type at the age of 17. His only other child, a daughter aged 46, was fit and well. He was a lifelong non-smoker and drank alcohol within recommended limits.

Observations revealed a regular pulse of 70 beats/minute, blood pressure of 118/73 mm Hg, temperature of 36.0 °C, respiratory rate of 18 breaths/min, and oxygen saturation of 81% on room air. He was noted to have central and peripheral cyanosis, clubbing of the digits, and perioral telangiectasia. Heart and chest auscultation were normal. Neurological examination showed mild dysarthria with cerebellar ataxia, including a left sided intention tremor on finger-nose testing, left sided dysidiadochokinesis, and a positive heel-shin test.

Arterial blood gas on room air showed a PaO₂ of 7.5 kPa, PaCO₂ of 4.1 kPa, pH of 7.46, HCO₃ of 23.6, and base excess of -1.6. Haemoglobin concentration was 18.1 g/dL. Urea, creatinine, electrolytes, C reactive protein, and liver function tests were all within the normal ranges. A non-contrast enhanced computed tomography scan of the head showed established infarcts in multiple vascular territories and an acute infarct in the left hemisphericum. Given that the patient had hypoxia, chest radiography (fig 1) and computed tomography pulmonary angiography (fig 2) were performed.

- 1 What abnormality can be seen in fig 1 and fig 2?
- 2 How does this finding explain the clinical picture?
- 3 In view of the patient's history, what is the likely underlying condition?
- 4 What is the cause of this condition?
- 5 How is this condition diagnosed and managed?



Fig 1 | Chest radiograph



Fig 2 | Computed tomography pulmonary angiograph

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ON EXAMINATION QUIZ

Pseudoseizures

This week's question is on pseudoseizures and is taken from the onExamination revision questions for the MRCPsych Papers 1 and 2.

Which one of the following features suggests a diagnosis of dissociative non-epileptic attacks (pseudoseizures) as opposed to generalised tonic-clonic seizures?

- A Automatisms
- B Gradual onset of episode
- C Post episode sleepiness
- D Severe tongue biting
- E Urinary incontinence

STATISTICAL QUESTION Number needed to treat I

Researchers evaluated the effectiveness of a single application of topical chloramphenicol ointment in preventing wound infection after minor dermatological surgery. They conducted a placebo controlled double blind multicentre trial. Control treatment was a single application of paraffin ointment. In total, 448 minor surgery patients were allocated to chloramphenicol and 484 to placebo.

The primary outcome was incidence of infection within 30 days of the minor skin excision. The incidence of infection in the chloramphenicol group was 6.6% compared with 11.0% in the control group (P=0.010). The absolute reduction in infection rate was 4.4%, whereas the relative risk of wound infection in the control group compared with the intervention group was 1.7 (95% confidence interval 1.1 to 2.5). The number needed to treat for topical chloramphenicol ointment compared with control treatment was 23.

Which one of the following statements best describes number needed to treat for the comparison of topical chloramphenicol ointment with control treatment?

- a) Treatment of 23 patients with control will result in one less infection
- b) Treatment of 23 patients with chloramphenicol will result in one infection
- c) Treatment of 23 patients with chloramphenicol will result in one less infection
- d) Treatment of 23 patients with chloramphenicol will result in one less infection than if they had received the control treatment
- e) Patients in the control group were 23 times more likely to have an infection compared with those in the chloramphenicol group

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