FOR SHORT ANSWERS
See p 1239

FOR LONG ANSWERS
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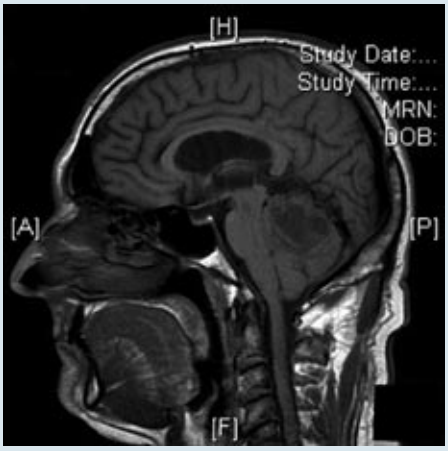
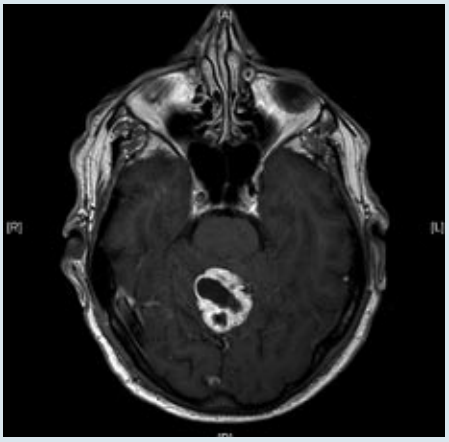
ENDGAMES

We welcome contributions that would help doctors with postgraduate examinations
See bmj.com/endgames for details





PICTURE QUIZ The dizzy patient

A 62 year old man was referred by his general practitioner with a one month history of intermittent dizziness and unsteadiness. He described the dizziness as "light headedness," occasionally with the sensation of the room spinning. His dizziness had some postural element and the episodes were self limiting, usually lasting a few seconds only. He also admitted to feeling unsteady on his feet, with a tendency to veer to the left.

The patient had no history of headache; nausea or vomiting; tinnitus; hearing loss; syncope; limb weakness; altered sensation; speech or visual disturbance. His medical history included chronic obstructive pulmonary disease, dyspepsia, and depression. He used to smoke (10 a day for 30 years) and denied drinking alcohol to excess.

On examination, the patient's blood pressure was 133/76 (with no postural drop elicited) and his pulse was 60 beats/min regular. Oxygen saturations were 96% in room air. Cardiovascular, respiratory, and gastrointestinal examinations were within normal limits. Examination of the limbs revealed symmetrical brisk reflexes without weakness. Tests showed coordination to be intact, but the patient had mild gait ataxia manifest on "heel to toe" walking. Sensation, including proprioception, was intact, with no rombergism. Cranial nerve examination was normal and fundoscopy was unremarkable. Baseline blood tests were normal, except for an isolated polycythaemia: haemoglobin 184 g/l (normal range 133-167); haematocrit 0.53 (0.39-0.50); normal white cell and platelet count. Electrocardiogram was normal.

The patient was discharged and an outpatient computed tomography brain scan was arranged. His general practitioner was advised to repeat the full blood count and refer the patient to a haematologist if his haematocrit remained elevated. The scheduled computed tomography was subsequently substituted with magnetic resonance imaging by the radiologist because it provides better images of the posterior fossa.

1 What are the causes of polycythaemia?
2 What are the common causes of dizziness?
3 What do the magnetic resonance imaging scans show?
4 What is the unifying diagnosis?
5 What is the standard treatment for this condition?

Submitted by Bryan Joseph Renton
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STATISTICAL QUESTION
Independent samples *t* test

A new programme of goal oriented visits from a rheumatologist was devised for patients in primary care with osteoarthritis of the knee. The new programme was assessed using a randomised controlled trial to ascertain whether it provided benefits in terms of weight management and physical activity. The control treatment was usual care. A total of 154 patients were randomised to the new programme (three goal oriented standardised consultations) and 182 to usual care.

At four months, the mean weight loss for patients who received standardised consultations was on average greater than for those receiving usual care (mean 1.11 (SD 2.49) kg v 0.37 (SD 2.39) kg; P=0.007). The two groups were statistically compared using a two sided, independent samples t test with a 0.05 (5%) critical level of significance (t=2.77, degrees of freedom=334).

Which of the following statements, if any, are true?

a) Alternative hypothesis: in the total population of patients with knee osteoarthritis, standardised consultations will result in greater weight loss than will usual care
b) The value of t is dependent on the magnitude of the difference between sample means
c) The degrees of freedom are dependent on the sample size
d) The P value is derived from the value of t and the degrees of freedom

Submitted by Philip Sedgwick
Cite this as: *BMJ* 2010;340:c2673

ON EXAMINATION QUIZ
Epilepsy in children

This week's quiz is on epilepsy in children and is taken from the OnExamination revision questions for the MRCPCH parts 1 and 2 exams.

Regarding petit mal epilepsy, which of the following statement(s) is (are) true?

A Carries a poor prognosis
B Commonly occurs in infants
C Is characterised by burst suppression on an electroencephalogram
D May be precipitated by hyperventilation
E Rarely has a family history

More questions on this topic are available from www.onexamination.com/endgames until midnight on Wednesday.