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PICTURE QUIZ **Post-traumatic swelling**

A 49 year old woman presented to the emergency department with facial swelling (fig 1). She had fallen four days previously, striking her back on a large piece of concrete. After picking herself up she proceeded with her normal activities. The morning after the fall she awoke with swelling of the ankles. The swelling gradually spread throughout her body and four days later it began to compromise her vision. On admission to the emergency department she was generally fit and well, despite the swelling, although she was slightly short of breath on exertion.

On examination she had gross swelling of the chest wall and abdomen extending to the ankles and wrists in the periphery. Breath sounds could be auscultated with a small amount of continuous pressure to the chest wall with the stethoscope. There was a hyper-resonant percussion note and reduced breath sounds on the left side of the thorax, with mild tenderness to percussion on the left posterior thorax over the eighth, ninth, and tenth ribs. Her vision was reduced owing to restricted eye opening, but when her eyelids were opened manually her pupils were equal and reactive to light and accommodation bilaterally. Visual acuity and eye movements were normal in both eyes. All other systems examinations were normal and oxygen saturations on room air were 96%. She underwent computed tomography of the thorax (fig 2).

1 What is the differential diagnosis for widespread soft tissue swelling?
2 What does the computed tomogram show about the type of swelling and its causes?
3 What is the underlying pathophysiology of this condition and what are the presenting symptoms and life threatening complications?
4 What treatments should be implemented?

Fig 1

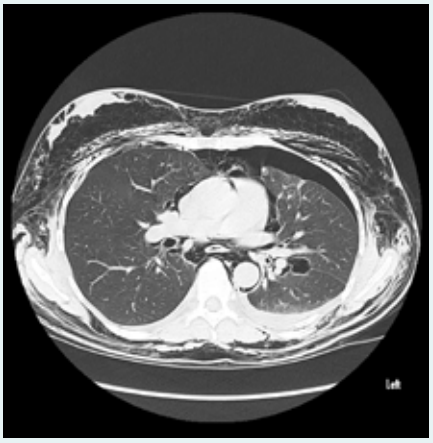

Fig 2

Submitted by Andrew O'Keeffe and Jane Terris
Cite this as: *BMJ* 2012;345:e6363

ANATOMY QUIZ

Magnetic resonance imaging of the axial structures of the brain

Name the structures labelled A-F on this axial T2 weighted magnetic resonance image of brain.

Submitted by Raymond Chung
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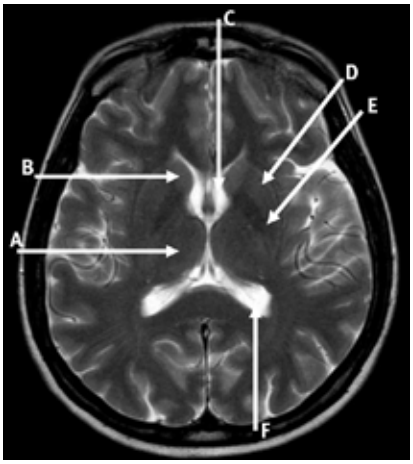

STATISTICAL QUESTION

The normal distribution

Researchers investigated whether antidepressant drug prescribing and referrals to specialist services for depression by general practitioners were associated with patients' scores on depression severity questionnaires measured at the start of treatment. Anonymised data from the medical records of 38 general practices were investigated. The nine item patient health questionnaire (PHQ-9) was used in 1658 patients and the depression subscale of the hospital anxiety and depression scale (HADS) was used in 548 patients.

The distribution of HADS questionnaire scores for the sample was approximately normal, whereas the PHQ-9 scores were negatively skewed. The mean PHQ-9 score was 15.5 (standard deviation 6.0) and the mean HADS score was 11.1 (4.6). It was reported that patients with higher depression severity scores were more likely to receive prescriptions for antidepressants and be referred to specialist services. However, other factors were independently associated with treatment and referral, including patient age and concurrent physical illness and geographical area.

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

a) The normal distribution approximated by the HADS scores can be uniquely described by the sample mean and standard deviation
b) The normal distribution approximated by the HADS scores is symmetrical about the sample mean value
c) For the distribution of PHQ-9 scores, the tail on the right was longer than the tail on the left
d) The sample mean PHQ-9 score was smaller than the median PHQ-9 score

Submitted by Philip Sedgwick
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