

# ENDGAMES

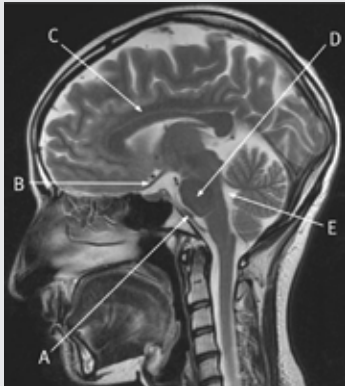
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## ANATOMY QUIZ

### Magnetic resonance imaging of the sagittal structures in the brain



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

Submitted by Raymond Chung

Cite this as: *BMJ* 2012;345:e5269

## STATISTICAL QUESTION

### Confounding in clinical trials

Researchers investigated whether a low glycaemic index diet in pregnancy reduced the incidence of macrosomia—babies large for their gestational age—in an at-risk group. A randomised controlled trial study design was used. The intervention was a low glycaemic index diet from early pregnancy. The control group received no dietary intervention. Participants were women without diabetes, aged 18 or over, all in their second pregnancy between January 2007 and January 2011, and who had previously delivered an infant weighing more than 4 kg. In total, 800 women were recruited, of whom 396 were randomised to intervention and 404 to control.

The primary outcome was birth weight. Of the 396 women allocated to intervention, 372 (93.9%) provided data at follow-up, compared with 387 (95.8%) of the 404 women allocated to control. A per protocol analysis was performed. No significant difference existed between treatments in absolute birth weight, birthweight centile, or ponderal index.

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

- The random allocation of women to treatment minimised confounding at baseline.
- For a variable to confound the association between treatment (intervention or control) and outcome, it must be associated with birth weight.
- For a variable to confound the association between treatment (intervention or control) and birth weight, it must be unequally distributed between treatment groups.
- The association between treatment and birth weight may have been confounded by women being lost to follow-up.

Submitted by Philip Sedgwick

Cite this as: *BMJ* 2012;345:e7951

## CASE REPORT Multiple enlarging nodules on the lower limb

A 99 year old white woman presented with a 12 month history of nodules and plaques on her left shin. They had been slowly increasing in size and bled intermittently. She denied any history of trauma to her leg and had been systemically well. She reported having high blood pressure and that she had previously had “skin problems” affecting her lower left leg that required surgery. Her only regular drug was bendroflumethiazide, and she had no known drug allergies. She was a non-smoker and drank minimal alcohol. She lived in a ground floor flat and used a walking stick. On review of her medical notes, it was discovered that two areas of squamous cell carcinoma were excised from her left shin 10 years earlier.

On examination, she was fair skinned (Fitzpatrick skin type II). There were several distinct, shiny, well circumscribed nodules on her left shin with surrounding hyperkeratotic plaques. These lesions were tender on palpation.

- What is the most likely diagnosis?
- What other examination is necessary at this consultation?
- What investigations should be considered?
- How might this condition be managed?

Submitted by Jack Andrews and Isabel Teo

Cite this as: *BMJ* 2012;345:e7409

## PICTURE QUIZ The management of open tibial shaft fractures

A 28 year old cyclist was hit by a car in a road traffic incident. It was a side-on collision, and his left leg was caught between a bollard and the bumper of the car. The saloon car had been travelling at 30 miles per hour (48 km/h). The cyclist's left leg had been trapped for 10 minutes before being freed. He had no medical history, was taking no drugs, and had no allergies.

On arrival at the emergency department, he was managed according to the advanced trauma life support protocol with a primary survey. His cervical spine was immobilised, his airway was clear, breathing was normal with saturations of 100%, and he was haemodynamically stable, with a Glasgow coma scale of 15 out of 15. He had an 11 cm wound over the anterior part of the left lower leg with an open tibia fracture (fig 1). He was neurovascularly intact with a capillary refill of less than 2 seconds. A trauma series was ordered with additional radiographs for the affected limb.

- How would you classify this injury?
- How would you manage this patient initially?
- How should this patient be managed definitively?
- When should definitive management be carried out?
- What specific complications would you expect with this injury?

Submitted by Nada Al-Hadithy and Anna Panagiotidou

Cite this as: *BMJ* 2012;345:e6348



Fig 1 | Left leg with open tibial shaft fracture held in a gutter splint