

## FOR SHORT ANSWERS

See p 1078

## FOR LONG ANSWERS

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# ENDGAMES

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## PICTURE QUIZ

### A rare cause of abdominal pain

A 28 year old injecting drug user presented to the hospital with non-specific symptoms of abdominal pain and fever. Clinical examination showed diffuse abdominal tenderness, most prominent in the left upper quadrant, with localised guarding and rigidity. One month earlier he had presented with a septic iliofemoral vein thrombosis and was started on warfarin.

A portable chest radiograph was limited but unremarkable and did not show subphrenic air. Blood tests showed anaemia, consistent with his previous admission, and raised inflammatory markers of white blood cell count  $19.88 \times 10^9/l$  and C reactive protein 77 mg/l. The patient underwent computed tomography of the abdomen.

- 1 What abnormality can be seen on computed tomography and what are the possible causes?
- 2 What aetiological factors can predispose patients to this condition?
- 3 What treatment options are available?

Submitted by Clare Anderson and Hugh Colvin  
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## STATISTICAL QUESTION

### One sided and two sided hypothesis tests

Researchers investigated whether vaccination against human papillomavirus (HPV) increased the risk of miscarriage in young women. The results of two double blind, multicentre, phase three randomised controlled trials were pooled. Participants had been randomly assigned to receive three doses of bivalent HPV 16/18 VLP vaccine with AS04 adjuvant or hepatitis A vaccine (as control) over six months. The primary outcome was rate of miscarriage after vaccination. Given that a lower miscarriage rate with the HPV vaccine was not a safety concern, a one sided test of statistical significance was performed ( $P=0.16$ ).

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

- a) Null hypothesis: In the total population, the rate of miscarriage for HPV vaccine is equal to that for control
- b) Null hypothesis: In the total population, the rate of miscarriage for HPV vaccine is equal to, or less than, that for control
- c) Alternative hypothesis: In the total population, the rate of miscarriage for HPV vaccine is less, or greater than, that for control
- d) Alternative hypothesis: In the total population, the rate of miscarriage for HPV vaccine is greater than that for control

Submitted by Philip Sedgwick  
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## CASE REPORT

### Clinical examination for developmental dysplasia of the hip in neonates: how to stay out of trouble

A 2 week old baby girl was referred to the orthopaedic department by her local consultant in neonatology because of concerns regarding her left hip.

The patient was born at 39 weeks by spontaneous vertex delivery and had a birth weight of 2.82 kg. Although the fetus had laid abnormally during pregnancy, it had been in a cephalic presentation for most of the last trimester. No family history of hip problems was noted.

On examination of the lower limbs, the infant's legs were of equal length and the skin creases were symmetrical. Both hips abducted less than  $60^\circ$  and a "click"/"clunk" was felt on movement of the left hip. Neurological examination was normal and the neonate had no clinical signs of spinal dysraphism.

- 1 What is the likely diagnosis?
- 2 How would you confirm the diagnosis?
- 3 What treatment should be considered?

Submitted by D M Eastwood and A de Gheldere  
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## ON EXAMINATION QUIZ

### Intravenous fluids

The answers to this question, and more questions on this topic, are available from [www.onexamination.com/endgames](http://www.onexamination.com/endgames) until midnight on Wednesday.

This week's quiz is on intravenous fluids and is taken from the OnExamination revision questions for the FRCA primary exam.

Which of the following statements regarding intravenous solutions are correct?

- A Normal saline contains 180 mmol/l of sodium
- B Ringer's lactate solution is designed for extracellular fluid replacement
- C Sodium bicarbonate 8.4% is a hyperosmolar solution
- D 0.18 saline in 4.0% dextrose is appropriate for the initial management of an infant with signs of peripheral circulatory failure
- E Normal saline with added potassium is appropriate therapy to correct a non-respiratory alkalosis