FOR SHORT ANSWERS
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FOR LONG ANSWERS
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Fig 1 | Axial computed tomogram of the abdomen

PICTURE QUIZ

Chronic diarrhoea in an elderly woman

An 89 year old woman was admitted with a six week history of severe watery brown diarrhoea. She had not travelled recently or changed her diet, but she had lost half a stone (3 kg) in weight. She had a history of diverticulosis, recurrent urinary tract infections, and hypertension but no family history of cancer. She was a non-smoker who lived alone and was independently mobile with a frame, requiring no package of care.

On examination she was afebrile, her pulse was 95 beats/min, and her blood pressure was 150/88 mm Hg. Her abdomen was soft and non-tender. Per rectal examination and a plain abdominal film were unremarkable. Bloods on admission showed raised inflammatory markers, and within days of admission her electrolytes became deranged, with hypernatraemia (sodium 158 mmol/L) and hypokalaemia (potassium 2.5 mmol/L). Blood gas results showed a metabolic alkalosis (pH 7.52, PCO_2 37 mm Hg, bicarbonate 31 mmol/L) and hyperchloraemia (chloride 116 mmol/L). Cloudy urine, which was positive for *Escherichia coli*, was collected after insertion of a urinary catheter. Stool culture and *Clostridium difficile* toxin were negative. Flexible sigmoidoscopy showed sigmoid diverticulosis, and a random biopsy showed a mild increase in chronic inflammatory cells.

Figure 1 shows an axial computed tomogram of the abdomen.

1 What abnormality is seen on the computed tomogram of the abdomen?
2 What are the differential diagnoses and the most likely diagnosis in this case?
3 Can you explain the electrolyte derangement?
4 What other investigations might help make the diagnosis?
5 How should she be treated?

Submitted by Jacqueline K Simpson, Anna L Timmis, and Shahab Siddiqi
Cite this as: *BMJ* 2011;342:c7339

STATISTICAL QUIZ

Observational study design II

Researchers investigated whether the use of oral or transdermal hormone replacement therapy was a risk factor for stroke. Data were taken from the General Practice Research Database, a computerised database of anonymised longitudinal medical records collected prospectively in primary care. A cohort of women was identified, aged 50-79 years with records between 1 January 1987 and 31 October 2006, and without a diagnosis of stroke on the date of registration with their general practice. A woman was identified as a case if she experienced a stroke during follow-up, and up to four controls were randomly selected from the cohort. Controls were matched to cases on age (within one year) at the date of diagnosis of the stroke, general practice where registered, and the year of joining the practice. The risk of stroke was increased with oral hormone replacement therapy of any dose but only with transdermal patches containing high doses of oestrogen.

Which of the following best describes the study design used above?

a) Case-control study
b) Cohort study
c) Nested case-control study
d) Cross sectional study

Submitted by Philip Sedgwick
Cite this as: *BMJ* 2011;342:d1903

ON EXAMINATION QUIZ

Visual disturbance

This week's question is on visual disturbance and is taken from the onExamination revision questions for the MRCP Part 1 exam.

A 71 year old man with a history of hypertension, type 2 diabetes, and erectile dysfunction reports that he has blue vision when he comes to the clinic for review.

He takes amlodipine and ramipril for hypertension, digoxin for atrial fibrillation, sitagliptin and metformin for diabetes, and sildenafil for erectile dysfunction.

Which one of the following is most likely to be responsible for his blue vision?

A Amlodipine
B Digoxin
C Metformin
D Sildenafil
E Sitagliptin