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PICTURE QUIZ
Loss of consciousness on turning the patient

An 82 year old man underwent elective removal of a common bile duct stent by endoscopic retrograde cholangiopancreatography (ERCP). He had been fit and well before the procedure. His medical history was unremarkable apart from longstanding intermittent right upper quadrant pain. He took omeprazole tablets 20 mg once daily. The procedure was successful and lasted about 20 minutes, during which time he was given no intravenous fluid. At the end of the procedure he was turned from the prone to the supine position in the ERCP suite. At once his oxygen saturation, as measured by pulse oxymetry, dropped to 70% and he became profoundly hypotensive, with a pulse of 50 beats/min. He was unresponsive, with a Glasgow coma scale of 3/15.

Immediate resuscitation with oxygen and fluid restored his oxygen saturation and blood pressure, but he remained unresponsive. A 12 lead electrocardiogram showed massive anterior ST segment elevation with reciprocal changes. He was urgently moved to the cardiology catheterisation laboratory for primary percutaneous coronary intervention because myocardial infarction was suspected, but on arrival his electrocardiogram was normal. Generalised hypertonicity with brisk reflexes and upgoing planters were noted at this stage. Because he was haemodynamically stable, computed tomography of the head was performed without delay to rule out an acute intracranial bleed (figs 1 and 2).

1. What do the computed tomograms show?
2. What is the probable cause of this phenomenon?
3. What caused the ST segment changes on the electrocardiogram?
4. What is the immediate treatment?
5. What are the other, more common, causes for this phenomenon?

Submitted by G I van Boxel, A J Goodman, J Green, and R M Orme
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STATISTICAL QUESTION
Relative risks and statistical significance

Previous questions described the interpretation of a relative risk and associated 95% confidence interval. One of the examples used was a prospective cohort study, which assessed the effects of β-lactam antibiotics prescribed in the community for acute respiratory tract infection on the prevalence of antibiotic resistant bacteria in children. Antibiotic resistance was assessed by the presence of the ICEHin1056 resistance element in up to four isolates of Haemophilus species recovered from throat swabs at recruitment and follow-up. At two weeks, Haemophilus possessing homologues of ICEHin1056 was isolated from 67% of children prescribed antibiotics compared with 36% of those not prescribed antibiotics (relative risk 1.9, 95% confidence interval 1.2 to 2.9). Tests of statistical significance were two sided.

Which of the following, if any, are true?

a) Null hypothesis: in the population of children with acute respiratory tract infection, the relative risk of antibiotic resistance at two weeks in children prescribed antibiotics relative to those not prescribed antibiotics is zero
b) Alternative hypothesis: in the population of children with acute respiratory tract infection, the risk of antibiotic resistance at two weeks in children prescribed antibiotics does not equal that of children prescribed antibiotics
c) The result is statistically significant at the 5% level of significance
d) A 95% confidence interval implies the critical level of significance for the statistical test was 0.95.

Submitted by Philip Sedgwick and Louise Marston
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ON EXAMINATION QUIZ
Anatomy

This week’s question is on anatomy and is taken from the OnExamination revision questions for the MRCP Part 1.
You are examining a child with a neck lump that is located within the anterior triangle of the neck.

Which one of the following structures forms a boundary of the anterior triangle?

A  The anterior border of trapezius
B  The clavicle
C  The lower border of the mandible
D  The posterior belly of digastric
E  The posterior border of sternocleidomastoid

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