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CASE REPORT

A case of severe hyponatraemia

A 32 year old woman was admitted with a two day history of extreme fatigue, severe headache, vomiting, postural dizziness, and blurring of peripheral vision on her left lateral gaze. Two days earlier she had had an emergency caesarean section for an anterior uterine rupture at 29 weeks' gestation. During the operation she lost 1.5 litres of blood and became hypotensive with a blood pressure of 87/54 mm Hg. She could not lactate post partum.

On examination, she was confused and slow to respond. Her blood pressure was 98/60 mm Hg, pulse rate 80 beats per minute, and respiratory rate 14 breaths per minute. Neurological examination showed a left V1th cranial nerve palsy. Her visual fields were full to confrontation, and dilated fundoscopy was unremarkable. Initial investigations showed a serum sodium of 116 mmol/l (138 mmol/l immediately postoperatively) and potassium of 3.7 mmol/l. Her serum osmolality was 240 mOsm/kg (normal 275-95) with a urine osmolality of 535 mOsm/kg and her urine sodium concentration was 91 mmol/l.

- 1 What is the likely diagnosis?
- 2 What confirmatory tests should be done?
- 3 What is the pathophysiological basis of her hyponatraemia?

Submitted by K Wynne, O Chaudhri, R Gorrigan, T Tan, K Meeran

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STATISTICAL QUESTION

Distributions

The average number of suicides reported each month in one county last year was 3.2. To compare numbers of suicides between months, calculating P values or confidence intervals, which probability distribution would be most appropriate to use?

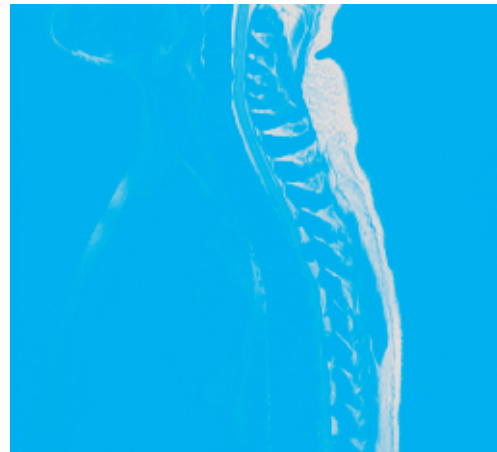
- a) Binomial
- b) Normal
- c) Poisson
- d) Weibull

Submitted by John Fletcher

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PICTURE QUIZ

A patient with β thalassaemia major and back pain



A 37 year old man with β thalassaemia major presented to the haematology day unit with a three week history of increasing back pain. The pain was aggravated by movement and the patient found it increasingly difficult to walk. He said he felt "wobbly" on his feet. He had no history to indicate sphincter dysfunction. He was regularly transfused and his haemoglobin at presentation was 11.3 g/dl.

On neurological examination, his tone was normal, and he had normal power (5/5) in all muscle groups of his lower limbs. He had brisk knee jerks and, to a lesser extent, ankle jerks bilaterally, with an upgoing plantar response on the right side and an equivocal reaction on the left. He had hypoaesthesia of his legs and torso with a sensory level at T5. He showed no signs of cerebellar dysfunction. His gait was not assessed. The rest of the examination was unremarkable. An urgent MRI scan of the whole spine was performed the same day.

- 1 What is the clinical diagnosis?
- 2 What does the magnetic resonance image show?
- 3 How would you manage this patient immediately and in the long term?

Submitted by Dimitris A Tsitsikas, Filipa A Barroso, Paul Telfer, Banu Kaya, Jane Evanson, Andrew Provan

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PRIZE QUIZ: The eye

Each week we offer a prize of a *BMJ* memory stick to the person who answers correctly, in the quickest time, a set of examination questions taken from OnExamination.

To enter the quiz, go to www.onexamination.com/endgames. The competition closes at midnight on Wednesday, and the winner will be announced in the print *BMJ*.

Answers to this question can be viewed at

www.onexamination.com/Endgames/LastEndgame.aspx.

The winner of the prize quiz on blood transfusion was Melvin Leong

Here's one question from this week's quiz on the eye from various examinations.

Which of the following describe the function of the rods in the eye? (True or false)

- Colour vision
- Vision in dim light
- Depth perception
- Accommodation for near vision
- Image discrimination