ENDGAMES

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ANATOMY QUIZ

Lateral radiograph of the knee

Identify the structures labelled A, B, C, D and E on this lateral radiograph of the knee.

Submitted by Lorna Mary Gibson

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PICTURE QUIZ

A man with a palpable abdominal mass and night sweats

A 78 year old man presented with an eight week history of left sided abdominal pain and back pain, associated with anorexia, 3 kg weight loss, and night sweats. He was previously well, had no medical history of note, was taking no regular drugs, and was an ex-smoker.

On physical examination, he was afebrile, baseline observations were normal, and peripheral pulses were present. Cardiorespiratory assessment was unremarkable. His abdomen was soft, but there was a tender non-pulsatile palpable central mass at the level of the umbilicus. Blood results showed a normochromic, normocytic anaemia with haemoglobin 92 g/L (reference range 130-180), erythrocyte sedimentation rate 75 mm in the first hour (0-22), and C reactive protein 15 mg/L (<3; 1 mg/L=9.52 nmol/L).

Initial chest and abdominal radiographs showed no abnormalities so a computed tomogram of the abdomen and pelvis was performed (figure).

1. What does the computed tomogram show?
2. What is the diagnosis?
3. How should this patient be managed?

Submitted by Amanda Catherine Jewison, Vicky Tilliridou, Emily Skelton, David C Howlett, and George Evans

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STATISTICAL QUESTION

Non-parametric statistical tests for two independent groups: numerical data

Researchers described the outcomes at one year for a national cohort of infants with gastroschisis. A prospective cohort study design was used. Participants were 301 liveborn infants with gastroschisis between October 2006 and March 2008 from all 28 paediatric surgical centres in the United Kingdom and Ireland. The aim of the study was to describe outcomes at one year, comparing infants with simple gastroschisis (intact, uncompromised, and continuous bowel) with those with complex gastroschisis (bowel perforation, necrosis, or atresia). The main outcome measures included duration of parenteral nutrition and length of stay in hospital.

The duration of parenteral nutrition and length of stay in hospital did not follow a normal distribution. Therefore, the groups of infants were compared using non-parametric statistical tests. Infants with complex gastroschisis had a significantly longer duration of parenteral nutrition than those with simple gastroschisis (median 51 days (interquartile range 29-92) *v* 23 days (16-38); P<0.001). Those with complex gastroschisis also needed a significantly longer stay in hospital (median 84 days (47-197) *v* 36 days (23-57); P<0.001).

The researchers concluded that the national cohort provided a benchmark against which individual centres could measure outcome and performance. The stratification of neonates with gastroschisis into simple and complex groups reliably predicted outcome at one year.

Which of the following statistical tests could have been used to compare the groups of infants with simple and complex gastroschisis in the duration of parenteral nutrition?

a) Kruskal-Wallis test
b) Mann-Whitney U test
c) Wilcoxon rank sum test
d) Wilcoxon signed ranks test

Submitted by Philip Sedgwick

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CONTRIBUTIONS TO ENDGAMES

We welcome all contributions to the Endgames section.
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