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STATISTICAL QUESTION

Crossover trials

Researchers investigated the efficacy and side effects of the synthetic cannabinoid nabilone in comparison with those of the weak opioid dihydrocodeine for treating chronic neuropathic pain. A randomised, double blind, crossover trial was used. In total 96 participants with chronic neuropathic pain aged 23-84 years were recruited. Treatments were delivered in an escalating manner so that by the end of a six week treatment period the participants were receiving a maximum daily dose of 240 mg dihydrocodeine or 2 mg nabilone. The trial lasted for 14 weeks, comprising two treatment periods each of six weeks' duration, separated by a two week washout period.

The main outcome measure was pain as measured on a visual analogue scale over the final two weeks of each treatment period. The researchers reported that dihydrocodeine provided better pain relief than nabilone and had slightly fewer side effects.

Which one of the following statements best describes how trial participants were allocated to treatment group?

a) Participants were randomised to nabilone or dihydrocodeine and received the same drug for both treatment periods.

b) Participants received both drugs—nabilone and dihydrocodeine—with treatment order for each participant decided at random.

c) All participants received both drugs in the same order, with the treatment order determined at random (either they all received nabilone in the first treatment period and dihydrocodeine in the second or vice versa).

Submitted by Philip Sedgwick

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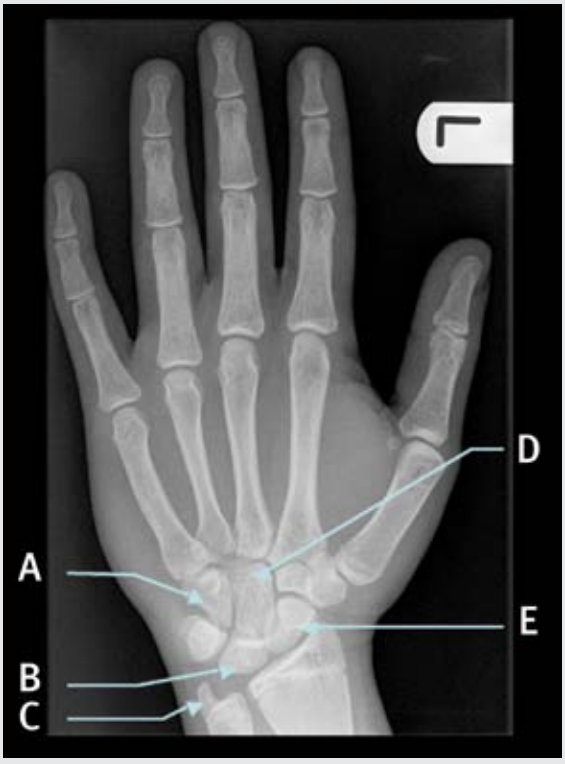

ANATOMY QUIZ

Bones of the hand II

Identify the structures labelled A to E in this plain radiograph (dorsopalmar projection) of the left hand.

Submitted by Joyce Cheung and Iain T H Au-Yong

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CASE REPORT

Anaemia and unexplained abdominal pain: looking for a lead

A 37 year old man, originally from India, presented with a five month history of worsening colicky abdominal pain, associated with nausea and vomiting. He had also been experiencing irritability, mood swings, and sleep disturbance over the past three months and erectile dysfunction for two months. Clinical examination showed mildly reduced power in both legs, with absence of the left knee jerk, while the right one could be elicited only after reinforcement. He had a normochromic normocytic anaemia with a haemoglobin of 96 g/L (reference range 130-170). The rest of his full blood count was normal. Iron studies, vitamin B_{12}, and folate were all within normal ranges, and there was no evidence of haemolysis. His peripheral blood morphology showed mild basophilic stippling but was otherwise unremarkable. He had been diagnosed as having type 2 diabetes six months previously, for which he was taking traditional (ayuverdic) remedies that had been sent from India. He underwent extensive investigations, including computed tomography of his abdomen and pelvis as well as upper and lower gastrointestinal endoscopy, all of which failed to identify a cause for his abdominal symptoms. A porphyria screen showed a urine 5-aminolevulinic acid (5-ALA) of 24.2 µmol/mmol (‹3.8) with normal urine porphobilinogen. Urine coproporphyrin III and erythrocyte zinc protoporphyrin were subsequently found to be markedly raised.

1 How would you interpret the porphyria screen results?

2 What is the diagnosis?

3 What is the underlying cause?

4 What is the treatment?

Submitted by Dimitris A Tsitsikas, Michelle Emery, Suzanne Pomfret, Jasmeen Kaur Mehta, Shaista Mufti, Alireza Rezaeinia, and Roger J Amos

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