

## FOR SHORT ANSWERS

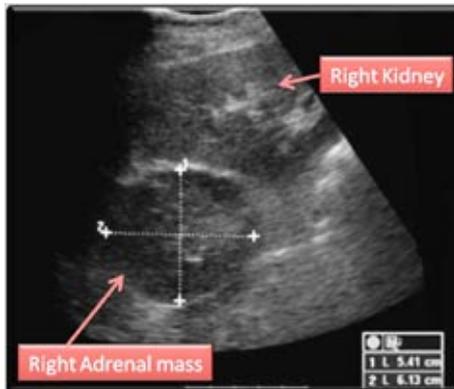
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## FOR LONG ANSWERS

Go to the Education channel on [bmj.com](http://bmj.com)

### PICTURE QUIZ

#### An unusual cause of myocardial infarction



Abdominal ultrasound showing a mass adjacent to the upper pole of the right kidney

A 47 year old woman presented to a local hospital with chest pain, palpitations, sweating, nausea, and vomiting after a hot shower. Her electrocardiogram on admission showed intermittent broad complex ventricular tachycardia, and serial electrocardiograms showed ST elevation in the inferior limb leads. After being given thrombolytic treatment with tenecteplase, she was started on an amiodarone infusion. She was subsequently transferred to our tertiary cardiac centre for further management because of continuing chest pain and hypotension.

On arrival she was found to be in cardiogenic shock, with severe lactic acidosis and pulmonary oedema requiring intubation, assisted ventilation, and inotropic support. She had extensive lower body and limb livedo reticularis.

An emergency coronary angiogram was performed and this showed widely patent coronary arteries. A left ventricular angiogram showed severe left ventricular systolic dysfunction with generalised hypokinesia, which was relatively worse in the mid-segments than in the apical and basal left ventricular

segments. She also had severe mitral valve regurgitation and high left ventricular diastolic filling pressure. An intra-aortic balloon pump was inserted for haemodynamic stabilisation.

The patient had experienced a similar but less severe event three years before, when she presented with an inferior ST elevation myocardial infarction, which was treated with thrombolysis, and she was subsequently discharged after a normal coronary angiogram.

The next day she was extubated and transferred from the cardiac intensive care unit to the coronary care unit. An abdominal ultrasound was requested because she had developed deranged liver function tests, with a predominantly hepatic picture. The ultrasound showed a right adrenal mass.

- 1 What is the most likely cause of this patient's presentation?
- 2 How would you confirm this diagnosis?
- 3 How would you treat this condition?

Submitted by Elham Rashidghamat, Stephen M Gregory, and Pitt Lim  
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### CASE REPORT

#### Evaluation of breast masses in a male patient

An 81 year old man presented to a breast clinic after being referred by his general practitioner. He had swelling of the breast, which was becoming increasingly tender. He first noticed swelling on the right side about three months before presentation, but both sides were now affected. The breast changes had been slowly progressive over this time. His medical history included hypertension (treated over a long period with an angiotensin converting enzyme inhibitor) and a diagnosis of atrial flutter four to five months before presentation. He was taking digoxin for the atrial flutter. There was no history of breast or ovarian cancer on the maternal or paternal side of the family. The patient was mobile and of average build. On inspection, he had bilateral fairly symmetrical breast enlargement. On supine examination, palpation revealed bilateral rubbery subareolar masses. The palpable change was centrally located and about 35 mm in diameter. The overlying skin and underlying structures were not fixed to the mass. We detected no axillary lymph adenopathy or changes to the skin or nipples. No nipple discharge was present. An examination of the abdomen, testes, and scrotal contents was normal.

- 1 How should a male patient with breast swelling be assessed?
- 2 What are the indications for further investigations?
- 3 If further investigations are indicated what would they be?
- 4 What is the most likely diagnosis in this patient?
- 5 How should this patient be managed?

Submitted by Debra Meerkotter and Andrew Patrick  
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### STATISTICAL QUESTION

#### Primary and secondary outcome measures

A randomised placebo controlled trial assessed the efficacy, acceptability, and safety of an alkane vapocoolant spray in decreasing pain during intravenous cannulation. Adult patients in an emergency department were randomly assigned to vapocoolant spray or control. The primary outcome measure was pain with cannulation. Secondary outcome measures included discomfort with spray on administration, success rate of cannulation, and unexpected side effects of treatment.

Which of the following statements, if any, are true?

- a) The primary outcome is also known as the primary end point
- b) The primary outcome represents the measure of greatest therapeutic benefit
- c) Secondary outcome measures never include measures of therapeutic benefit
- d) Differences between treatment groups in the primary outcome are believed to be to the result of treatment

Submitted by Philip Sedgwick  
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### ON EXAMINATION QUIZ HIV

The answers to this question, and more questions on this topic, are available from [www.onexamination.com/endgames](http://www.onexamination.com/endgames) until midnight on Wednesday. This week's quiz is on HIV and is taken from the OnExamination revision questions for the MRCP Part 1 exam. An otherwise asymptomatic 22 year old HIV positive male presents to the infectious diseases clinic. Investigations show that he has a viral load of 250 000 copies/ml and a CD4 count of  $200 \times 10^6$ /ml (normal range  $500-1600 \times 10^6$ /ml).

What is the most appropriate treatment strategy for this patient?

- A Start antiretroviral therapy immediately
- B Start antiretroviral therapy when the patient's CD4 count is 150
- C Start antiretroviral therapy when the patient's CD4 count is 100
- D Start antiretroviral therapy together with prophylactic antibiotic therapy
- E Start prophylactic antibiotic therapy