

ENDGAMES

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ANATOMY QUIZ Hysterosalpingogram

Identify the structures labelled A, B, C, D, E, and F in this hysterosalpingogram (figure).

Submitted by Sundip D Udani and Rebecca Udani

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CASE REPORT

A man with acute venous thromboembolism and thrombocytopenia

A 64 year old man presented to the emergency department with shortness of breath and pleuritic chest pain of 12 hours' duration. Eight days earlier he had undergone radical prostatectomy for early stage prostatic cancer. He had been given tramadol for analgesia and unfractionated heparin (5000 units subcutaneously) twice a day for four days for postoperative thromboprophylaxis.

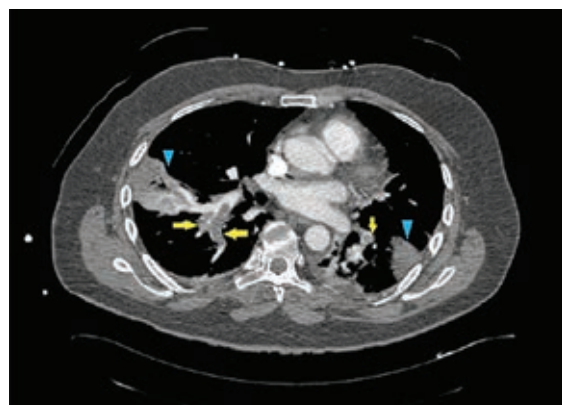
His full blood counts and biochemical parameters were within normal limits and he was discharged home on the fourth day after surgery with no complications.

His medical history and family history were unremarkable. On examination his respiratory rate was 25 breaths/min, heart rate was 100 beats/min, blood pressure was 130/88 mm Hg, and oxygen saturation in room air was low (90%). Cardiac, respiratory, abdominal, and neurological examinations were normal. His left leg and thigh were swollen but non-tender. There were no bleeding manifestations or evidence of active infection at that time. Chest radiography and electrocardiography were unremarkable.

However, axial computed tomography pulmonary angiography showed extensive thromboemboli in the right and left main pulmonary arteries extending more distally and associated with bilateral wedge shaped pulmonary infarcts (figure). Doppler ultrasound showed thrombosis in the left popliteal vein extending up to the common femoral vein. Full blood counts showed low platelets ($34 \times 10^9/L$), normal haemoglobin, and normal numbers of white cells. Blood film examination was unremarkable. His coagulation assays, renal parameters, and liver function tests were within normal limits.

- 1 What is the most likely diagnosis in this patient?
- 2 What are the differential diagnoses?
- 3 How can this condition be diagnosed?
- 4 How would you manage this condition?

Submitted by Muhajir Mohamed, Robert Hayes, and Tefo Moseithi
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STATISTICAL QUESTION

Relative risks versus odds ratios

Researchers investigated the effectiveness of a probiotic drink containing *Lactobacillus* for the prevention of any diarrhoea associated with antibiotic use in hospital. A randomised double blind placebo controlled trial study design was used. The intervention consisted of the probiotic drink twice a day during a course of antibiotics and for one week afterwards. The control group received a placebo drink consisting of a longlife sterile milkshake. The primary outcome was the occurrence of antibiotic associated diarrhoea during follow-up.

Participants were hospital patients aged over 50 years. In total, 135 patients were recruited to the trial and randomised to the intervention (n=69) or placebo (n=66). Twelve patients receiving the intervention and 10 in the placebo group did not complete their treatment protocol or were lost to follow-up. A smaller proportion of the probiotic group developed diarrhoea associated with antibiotic use compared with the placebo group (7 (12%) v 19 (34%); relative risk 0.36, 95% confidence interval 0.17 to 0.79). When adjusted using logistic regression to control for other factors, the effects of the probiotic drink in reducing antibiotic associated diarrhoea remained (odds ratio 0.25, 95% CI 0.07 to 0.85). The researchers concluded that consumption of the probiotic drink reduced the incidence of antibiotic associated diarrhoea.

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

- a) It was possible to estimate the population at risk
- b) It was not possible to derive an adjusted relative risk
- c) The odds ratio is an estimate of the population relative risk
- d) The odds ratio is a measure of the strength of the association between the intervention and antibiotic associated diarrhoea compared with placebo

Submitted by Philip Sedgwick
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