**FOR SHORT ANSWERS**
See p 972

**FOR LONG ANSWERS**
Go to the Education channel on bmj.com

# ENDGAMES

**We welcome contributions that would help doctors with postgraduate examinations**
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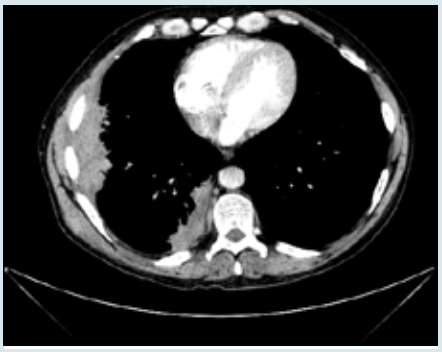

Fig 1 Computed tomogram of the chest

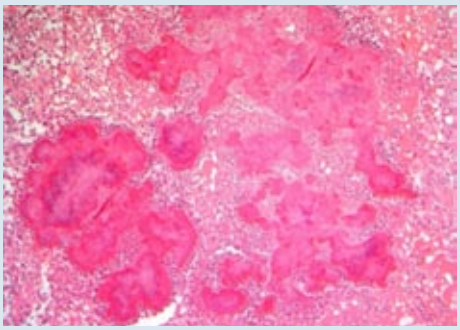

Fig 2 Haematoxylin and eosin staining of an excision biopsy of the chest wall lesion

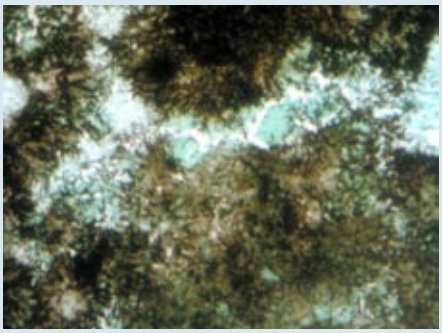

Fig 3 Grocott's silver methenamine staining of an excision biopsy of the chest wall lesion

## PICTURE QUIZ

### Haemoptysis, weight loss, and pulmonary shadowing in a smoker

A 53 year old white man was referred with a four week history of productive cough and right sided chest pain. He had chronic obstructive pulmonary disease and was a retired upholsterer who smoked 30 cigarettes a day and consumed 140 units of alcohol a week. Clinical examination was normal. Sputum culture yielded *Haemophilus influenzae*, but despite several courses of antibiotics he failed to improve, developing weight loss, exertional dyspnoea, and haemoptysis.

Blood investigations showed normocytic anaemia, with mild neutrophilia and an erythrocyte sedimentation rate of 86 mm in the first hour. Serum electrolytes, calcium, and liver profile were normal. Computed tomography showed opacities in the right middle and lower lobes involving the chest wall but with no bony destruction, with right hilar and axillary lymphadenopathy (fig 1). A fibreoptic bronchoscopy was unremarkable, but bronchial washings confirmed the presence of *H influenzae*.

The patient then developed smooth firm non-fluctuant but warm tender swellings on both sides of his chest. Core biopsies and aspirations of the lung lesion, chest wall masses, and axillary lymph node showed inflammatory changes with no evidence of malignancy or infection. Culture for tuberculosis was negative. Excision biopsy of the chest wall lesion was sent for haematoxylin and eosin staining (fig 2) and later Grocott's silver methenamine staining (fig 3).

1 What is the likely diagnosis?
2 How would you confirm the diagnosis?
3 How would you treat this patient?

Submitted by Toni Jordan, Martin J Ledson, and Kamlesh Mohan
Cite this as: *BMJ* 2010;340:c1001

## STATISTICAL QUESTION

### P values

A randomised controlled trial evaluated the cost and efficacy of community leg ulcer clinics that used four layer compression bandaging. The control treatment was provision of usual care by district nurses. Over the 12 months of follow-up, ulcers healed more quickly among patients randomly assigned to clinic treatment than in those assigned to the control treatment (P=0.03). On the other hand, there was no difference between treatment groups in mean total NHS costs per patient (P=0.89). All statistical tests were two sided, and the critical level of significance was set at 0.05 (5%).

**Which of the following statements, if any, can be concluded?**

a) The P value represents the strength of the evidence in support of the null hypothesis
b) There was a statistically significant difference between treatments in healing times at the 0.05 level of significance
c) There is no difference in mean total NHS costs between treatments in the total population
d) The null hypothesis for the statistical test of mean total NHS costs between treatments is true.

Submitted by Philip Sedgwick
Cite this as: *BMJ* 2010;340:c2203

## ON EXAMINATION QUIZ

### Rheumatology

The answers to this question, and more questions on this topic, are available from www.onexamination.com/endgames until midnight on Wednesday.

This week's quiz is on rheumatology and is taken from the OnExamination revision questions for the MRCP exam part 1.

**Arthropathy is a feature of which of the following diseases?**

A Syringomyelia
B Primary amyloidosis
C Diffuse osteoporosis
D Paget's disease
E Wilson's disease