

## FOR SHORT ANSWERS

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## FOR LONG ANSWERS

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# ENDGAMES

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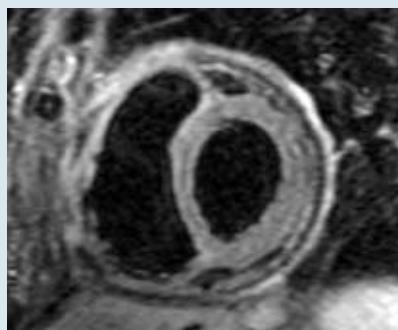


Figure 1

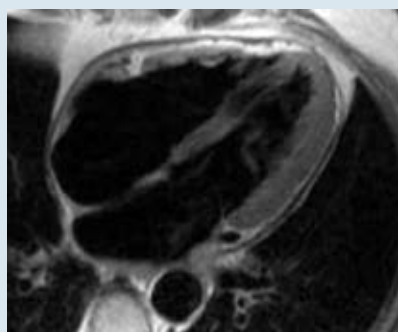


Figure 2

## PICTURE QUIZ A case of progressive breathlessness

A 57 year old white man was seen in the outpatient clinic with a four month history of breathlessness on exertion, particularly when climbing the stairs. The breathlessness had started after a protracted episode of fever, weight loss, and breathlessness. His only medical history was pleurisy as a child, which had resolved after a routine course of antibiotics. He had no long term sequelae from this disease. He was a lifetime resident of the United Kingdom.

On examination the patient did not have a fever or any palpable lymphadenopathy. His heart rate was 76 bpm in normal sinus rhythm, jugular venous pressure (venous pulse) raised at 11 cm above the right atrium, and blood pressure 122/76 mm Hg, and his heart sounds were normal. His chest was clear but examination of his abdomen showed hepatomegaly. He had no pedal oedema. Oxygen saturations were 99% on room air. He did not desaturate after exercising up and down stairs; however, he did become tachycardic with a heart rate of 140 bpm.

Computed tomography pulmonary angiogram showed no evidence of pulmonary emboli; however, pericardial thickening was noted. An echocardiogram showed inspiratory decrease of transmitral early

diastolic flow, dilated inferior vena cava without inspiratory collapse, and a bright pericardium.

Cardiac catheterisation showed minor coronary artery disease, with equal diastolic pressures in the left and right atria and ventricles. The patient underwent cardiac magnetic resonance imaging.

Bloods tests showed a bilirubin concentration of 54 µmol/l, alkaline phosphatase of 556 U/l, γ glutamyltransferase of 864 U/l, and alanine transaminase of 43 U/l. A tuberculin skin test was performed (2 tuberculin units in 0.1 ml solution for injection), and the palpable raised area measured 22 mm. An interferon gamma test was not performed because the test was not available at the time of presentation. The patient was HIV negative.

- 1 What abnormality can be seen on the cardiac magnetic resonance images and what is the likely diagnosis?
- 2 What is the most likely cause of this finding?
- 3 What is the cause of the patient's liver dysfunction?
- 4 How would you treat this patient?

Submitted by Emma Holden, Harpreet Ranu, and Brendan P Madden  
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## STATISTICAL QUESTION Confounding in case-control studies

Last week's question described a population based case-control study that investigated whether infants' sleeping environment was a risk factor for sudden infant death syndrome. Four controls matched for age, locality, and time of sleep were selected for each case. Infants' usual sleeping environment in relation to their parents was classified as usual room sleeper (shared room but not the same bed), usual solitary sleeper (slept in room separate from parents), or usual bed sharer (shared bed with parents for more than two nights per week).

The researchers also investigated whether parents' social class was associated with sudden infant death syndrome. The results are presented in the table, which shows the odds ratios of sudden unexpected death for the categories of the infants' usual sleeping environment for all cases and controls, stratified by socioeconomic class.

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

- a) Compared with usual room sharers, usual bed sharers were statistically significantly more likely to experience sudden infant death syndrome
- b) Socioeconomic class confounded the relation between sleeping environment and sudden infant death syndrome
- c) The presented odds ratios are unadjusted
- d) Matching ensured that age, locality, and time of sleep were not confounding variables.

Submitted by Philip Sedgwick

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Infants' sleeping environment in relation to parents' usual night time practice, by socioeconomic group

	Cases	Controls	Univariate odds ratio (95% CI)
<b>All socioeconomic classes</b>			
Number of babies	320	1299	—
Usual room sharer	189 (59.1%)	813 (62.6%)	1.00
Usual solitary sleeper	77 (24.1%)	410 (31.6%)	0.88 (0.62 to 1.25)
Usual bed sharer	54 (16.9%)	76 (5.9%)	2.99 (1.94 to 4.63)
<b>Socioeconomic classes I, II, and III (non-manual)</b>			
Number of babies	128	850	—
Usual room sharer	69 (53.9%)	497 (58.5%)	1.00
Usual solitary sleeper	42 (32.8%)	312 (36.7%)	1.33 (0.78 to 2.27)
Usual bed sharer	17 (13.3%)	41 (4.8%)	4.07 (1.75 to 9.46)
<b>Socioeconomic classes III (manual), IV, V, and unemployed</b>			
Number of babies	190	446	—
Usual room sharer	118 (62.1%)	315 (70.6%)	1.00
Usual solitary sleeper	35 (18.4%)	97 (21.7%)	0.67 (0.30 to 1.48)
Usual bed sharer	37 (19.5%)	34 (7.6%)	2.66 (1.19 to 5.98)

Figures are numbers of babies with percentage in parentheses. For five cases and one control there was insufficient information on sleeping environment. For two cases and three controls there was insufficient information on socioeconomic class.

## ON EXAMINATION QUIZZ

### Gastro-oesophageal reflux disease in children

This week's question is on gastro-oesophageal reflux disease in children and is taken from the onExamination revision questions for the MRCS part 1 exam.

Which of the following statements about gastro-oesophageal reflux disease in children is not true?

- A Can be treated with proton pump inhibitors when refractory to other treatment
- B Can lead to ulcers related to Barrett's oesophagus
- C Can present with croup
- D Can present with heartburn in younger children
- E Symptoms usually improve with age.

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