

## FOR SHORT ANSWERS

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## FOR LONG ANSWERS

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# ENDGAMES

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## STATISTICAL QUESTION Confounding in case-control studies II

Researchers conducted a nested case-control study to investigate whether breast feeding protected infants against pneumonia. All children born in urban areas of southern Brazil in 1993 were included in the cohort. Cases were a total of 152 infants who had been born in 1993, admitted to hospital when aged 28-364 days and diagnosed with pneumonia. Controls were a total of 2391 infants selected from the cohort. Cases and controls were not matched.

The mothers of all cases and controls were interviewed about the infant's past diet, with information collected on type of milk consumed, use of fluid supplements, plus use of solid and semisolid supplements. Each food type was investigated as a possible risk factor for the development of pneumonia. The results are presented in the table (see [bmj.com](http://bmj.com)), which shows the odds ratios of pneumonia according to type of food given.

Which of the following, if any, are true?

- a) The effects of age and sex as potential confounders could be removed if cases and controls were matched for these variables
- b) For each risk factor, the size of the difference between the unadjusted and adjusted odds ratios permits the extent of confounding to be determined
- c) Adjusted odds ratios are also known as multivariate odds ratios
- d) The adjusted odds ratios provide estimates of the true effects of each risk factor for the development of pneumonia

Submitted by Philip Sedgwick

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## CASE REPORT A case of airway compromise

A 75 year old white man presented to the accident and emergency department because of sudden onset neck swelling of one hour's duration, with difficulty in speaking and swallowing. He had no history of recent fever or antibiotic use.

His medical history included ischaemic heart disease with impaired left ventricular function. His drugs had remained unchanged for the past year and included atorvastatin, bisoprolol, bendroflumethiazide, lisinopril, and aspirin. He had no known allergies and was an ex-smoker.

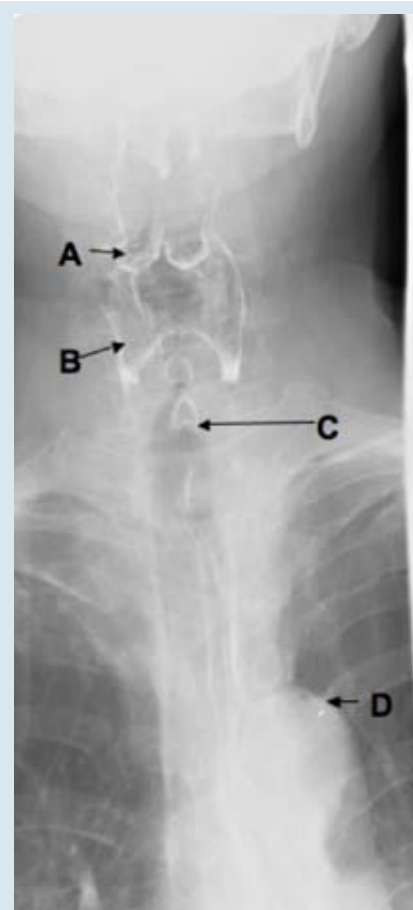
On examination he was haemodynamically stable with a respiratory rate of 25 breaths/min and saturations of 100% on high flow oxygen. Initially he had no urticaria or wheeze, but direct observation of the throat showed

a swollen uvula and soft palate. Fibreoptic nasolaryngoscopy by the ear, nose, and throat surgeons showed oedema of the vallecula and arytenoid, partially covering the airway. Later his eyes and lips became swollen.

We started emergency management and admitted him to hospital. Concentrations of mast cell tryptase, total IgE, and C1 esterase were normal.

- 1 What was the cause of our patient's presentation?
- 2 What should the initial management be?
- 3 What should be done to prevent this from happening again?

Submitted by Nehal Hussain, Noweed Ahmed, and Sheila Ramjug  
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## ANATOMY QUIZ

### Barium swallow (anterior posterior view)

Identify the structures labelled A, B, C, and D in this anterior posterior view of a barium swallow.

Submitted by A Nair

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## ON EXAMINATION QUIZ Abnormal calcium

This week's question is on endocrinology and is taken from the onExamination revision questions for the MRCS part 1 exam.

A 63 year old man with chronic renal failure and type 2 diabetes presented to the surgery with generalised aching. He was taking twice daily mixed insulin for his diabetes and ramipril for vascular risk modification.

On examination his blood pressure was 155/92 mm Hg; his pulse was 75 beats/min and regular. Physical examination was otherwise unremarkable.

The following laboratory results were obtained:

Haemoglobin 109 g/l (normal range 135-180)

White cell count  $6.1 \times 10^9/l$  (4-10)

Platelets  $191 \times 10^9/l$  (150-400)

Sodium 140 mmol/l (134-143)

Potassium 5.3 mmol/l (3.5-5)

Creatinine 320  $\mu\text{mol/l}$  (60-120)

Calcium 2.05 mmol/l (2.2-2.67)

Urine protein +

Which one of the following is the most likely underlying diagnosis?

- A Hypoparathyroidism
- B Primary hyperparathyroidism
- C Secondary hyperparathyroidism
- D Tertiary hyperparathyroidism
- E Vitamin D intoxication