Hyponatraemia

Hyponatraemia in a woman with a pelvic mass

K M Chow, C C Szeto*Answers on p 63.*

A 57 year old Chinese woman was admitted with a bulky, right lower abdominal mass. She was known to have end stage renal disease and had received a cadaveric renal transplant eight years previously. Further investigation with imaging confirmed an irregular, soft tissue mass in the right iliac and pelvic region with mass effect compressing on the ureter of the graft kidney. There was significant hypercalcaemia with a serum calcium level of 3.02 mmol/l (normal range 2.20–2.62 mmol/l). The serum sodium and creatinine levels were 135 mmol/l (normal range 134–145 mmol/l) and 141 µmol/l (normal range 44–107 µmol/l), respectively. A biopsy of the pelvic mass showed a post-transplant lymphoproliferative disorder.

Chemotherapy was started in view of the extensive disease involvement. Treatment consisted of doxorubicin, cyclophosphamide, vincristine, and prednisolone (CHOP) after saline fluid administration. The patient tolerated the chemotherapy well without development of acute tumour lysis. Clinical response was achieved, as indicated by regression of the lymphadenopathy and resolution of the hypercalcaemia.

Twelve days after the CHOP chemotherapy, her serum sodium concentration had fallen to 129 mmol/l (normal range 134–145 mmol/l). The patient remained euvoelaemic and asymptomatic and no nausea or vomiting had been reported after the chemotherapy. The hospital chart documented that the daily

urinary output ranged from 1.5 to 2 litres. The urinary osmolality was 268 to 302 mOsm/kg as compared to her serum osmolality of 255 mOsm/kg. Other laboratory studies revealed a serum potassium level of 4.1 mmol/l (normal range 3.8–5.4 mmol/l), random glucose 8.3 mmol/l, serum creatinine 99 µmol/l, and a urinary sodium concentration of 40 mmol/l. Both thyroid function and adrenal assessment were normal and there were no pulmonary or mediastinal lesions seen on a chest radiograph.

QUESTIONS

- (1) What is the best explanation for her biochemical picture?
- (2) List the possible causes.
- (3) What is the management?

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Pulmonary nodules

Multiple pulmonary nodules: diagnosis in an young afebrile patient

K S Sodhi, M Kang, M Gulati, S Suri

Answers on p 64.

A 22 year old woman presented with complaints of vague pain in the chest for three months and cough with expectoration for six days before admission. On examination, she was afebrile and non-dyspnoeic. Her pulse rate, respiration rate, and blood pressure were within normal limits. Her white cell count was only mildly raised. She had a normal haemoglobin concentration and erythrocyte sedimentation rate. Mantoux test was negative.

Chest radiography (fig 1) and computed tomography (fig 2) showed bilateral, multiple, well defined lung parenchymal nodules, randomly distributed throughout both lung fields. An air crescent was also seen in one of the nodules in the right lower lobe (fig 2B). Casoni's test was done later, which was positive. No mediastinal or hilar lymphadenopathy and no pleural or pericardial effusion was seen.

QUESTIONS

- (1) What is the diagnosis?
- (2) What is the differential diagnosis?

- (3) How does this condition present?
- (4) What other tests should be performed?
- (5) What is the pathogenesis of the crescent sign?
- (6) What are other causes of the crescent sign?

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Figure 1 Chest radiograph of patient.

Figure 2 (A) Computed tomogram showing multiple pulmonary nodules. (B) Crescent sign is seen in the right lower lobe nodule.

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