

**Q7** A 58-year-old man is admitted with an acute abdomen and a history of heavy alcohol abuse. A diagnosis of acute pancreatitis is made and he is admitted to a surgical ward. Initial observations shows heart rate 110 beats/min, blood pressure 100/60 mmHg, and arterial blood gas analysis demonstrates a PaO<sub>2</sub> of 10 kPa and a PaCO<sub>2</sub> of 3.3 kPa on air. Six hours after admission the surgical SHO is called because he has developed respiratory distress. Repeat blood gas analysis shows a PaO<sub>2</sub> of 8 kPa on 100% oxygen. He is transferred to the intensive care unit for further management.

- a) The PaO<sub>2</sub>/FiO<sub>2</sub> ratio of 8 suggests a diagnosis of acute respiratory distress syndrome (ARDS)
- b) ARDS characteristically causes bilateral infiltrates on chest x-ray
- c) A pulmonary artery catheter is essential to confirm the diagnosis of ARDS
- d) Pancreatitis is a known precipitant of ARDS
- e) The prognosis is not affected by the precipitating cause

**Q8** The management principles of invasive ventilation of a patient with ARDS include:

- a) Adjusting the mechanical ventilation to maintain a normal PaCO<sub>2</sub>
- b) Aiming to achieve tidal volumes of 12–15 ml/kg
- c) The use of bicarbonate to correct severe acidosis is contraindicated
- d) Positive end expiratory pressure has been shown to be of no benefit
- e) The ventilation rate should be kept below 30 breaths/min

**Q9** A 67-year-old man is admitted to the intensive care unit (ICU) having had a short witnessed cardiac arrest (ventricular fibrillation), which is terminated after the third delivered shock. He is intubated, ventilated and requires inotropic support. On

examination, he is cold at the peripheries, but the examination is otherwise unremarkable. He has 200 ml of urine in his catheter bag. Investigations: Na 130 mmol/l; K 6.8 mmol/l; U 20.8 mmol/l; Cr 234 µmol/l; AST 431 iu/l; ALP 76 iu/l; bilirubin 9 µmol/l; CK 2,400 mmol/l; pH 7.1; PaO<sub>2</sub> 12 kPa; PaCO<sub>2</sub> 7 kPa; HCO<sub>3</sub> 16; BXS -9 mmol/l; lactate 5.5 mmol/l; Hb 13.8 g/l; WCC 14.8; Plt 39; INR 1.5.

- a) The senior house officer should start a frusemide infusion to treat the hyperkalaemia and acute renal failure (ARF)
- b) On the evidence available, he should receive emergency haemodialysis
- c) Anticoagulation should be provided using heparin
- d) By day 3, it is still appropriate to withhold nutrition to avoid the risks of fluid overload
- e) By day 10, although the patient is otherwise well, he has still not recovered renal function. It is now probable that he will not recover renal function and will therefore need long-term renal support

**Q10** A 42-year-old playwright is admitted to the surgical ward with alcohol-induced pancreatitis. Over the next 72 hours the abdominal pain increases and his condition deteriorates. When reviewed by the house surgeon

he is found to be incoherent, confused, with marked tachycardia and tachypnoea. BP 95/65 mmHg; JVP 0 at sternal angle. His urine output is 61 ml for the last two hours. Initial investigations reveal a macrocytosis but an otherwise normal full blood count and a mildly elevated INR of 1.5. Electrolytes: Na 121 mmol/l; K 3.1 mmol/l; urea 3.9 mmol/l; Cr 120 µmol/l; AST 145 iu/l; Alb 24 g/l. Arterial blood gases: pH 7.1; PaO<sub>2</sub> 7 kPa; PaCO<sub>2</sub> 2.4 kPa; HCO<sub>3</sub> 14 mmol/l; BXS -10; lactate 3.5 mmol/l.

- a) This patient requires admission to the ICU
- b) To prevent ARF, a dopamine infusion should be commenced immediately
- c) Urine biochemistry reveals a urinary Na of 8 mmol/l and a urinary creatinine to plasma ratio of above 50. These results support pre-renal ARF
- d) His urine output deteriorates in the three hours after arrival in the ICU (21, 30, 14 ml/hour). Early continuous veno-venous haemofiltration is warranted
- e) The patient's clinical state deteriorates requiring intubation and ventilation. A chest x-ray reveals pulmonary oedema. The patient should be changed to haemodialysis enabling removal of extravascular fluid

## CME Dermatology SAQs

### Answers to the CME SAQs published in *Clinical Medicine* January/February 2002

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
a) T	a) T	a) T	a) F	a) T	a) F	a) T	a) F	a) F	a) F
b) F	b) T	b) T	b) T	b) T	b) F	b) T	b) F	b) T	b) F
c) F	c) T	c) F	c) T	c) F	c) T	c) T	c) F	c) F	c) F
d) T	d) F	d) T	d) T	d) F	d) T				
e) F	e) F	e) T	e) F	e) T	e) T	e) F	e) T	e) T	e) T