

**1. An 84 year old lady with advanced dementia is admitted with a fractured neck of femur. A Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) order is in place. After discussion with her family, it is agreed that the fracture should be fixed for pain relief. You proceed with a spinal anaesthetic and a single dose of 1mg midazolam. Just after positioning her for surgery, you notice she has stopped breathing and you cannot feel her carotid pulse.**

The most appropriate action now is:

- A Administer boluses of flumazenil and adrenaline
- B Ask a senior colleague for a second opinion
- C Commence cardiopulmonary resuscitation
- D Respect the DNACPR order
- E Telephone the relatives and determine their wishes.

Answer: C

**Rationale:**

As the patient is in cardiorespiratory arrest, prompt action is required. Although it would be appropriate to seek senior advice (response B), this will inevitably delay matters and would not be the very first priority. Response E is also excluded on this basis. The AAGBI guidelines suggest suspending DNACPR orders during surgery, which therefore makes response D less likely to be the correct course of action. Administering flumazenil and adrenaline (response A) may be considered given the recent benzodiazepine administration, but are less likely to be effective if the patient is in cardiac arrest. Commencing cardiopulmonary resuscitation is the single best answer of the five available choices.

**2. You are asked to review a 22 year old man in the recovery area following a tonsillectomy. He was anaesthetised by a colleague and is now awake and comfortable but complains that his upper right incisor tooth has been broken off during the procedure.**

Which of the following should take priority:

- A Apologise to the patient and document this in the notes.
- B Arrange an urgent chest x-ray to identify the location of the tooth
- C Complete an incident form and inform your clinical director
- D Ensure the colleague who anaesthetised the patient is informed.
- E Examine the patient to assess damage and possible location of the tooth.

Answer: E

**Rationale:**

It is important that an apology is made to the patient and the incident documented. Similarly it will be good practice to inform your colleague who anaesthetised the patient of the problem. However, there is concern that the tooth is apparently missing and possibly in the patient's airway. On this basis, responses A, C and D can be excluded. A chest x-ray would be important if the tooth could not be located. Given the patient is apparently comfortable in recovery, it would be most appropriate to examine him first and assess the possible location of the tooth before exposing him to a dose of radiation. Answer E is therefore the single best response of the five available choices.

**3. A 33 year old woman with severe depression is detained in hospital under Section 3 of the Mental Health Act 1983. She agrees to a trial of electroconvulsive therapy (ECT). However, at your preoperative visit, she appears anxious and says she has changed her mind and no longer wants the procedure.**

The best course of action would be:

- A Advise psychiatry team that as consent has been withdrawn ECT cannot take place
- B Continue with treatment as she cannot refuse under Section 3 of the Mental Health Act
- C Give her an information leaflet on ECT and review her again in 30 minutes
- D Phone the Trust Legal Department for advice
- E Prescribe temazepam 10mg as anxiolysis

Answer: A

**Rationale:**

This is a difficult question that requires some knowledge of the provision of ECT for patients detained under the Mental health Act.

A patient is detained under section 3 if they are already known to mental health services, or following an admission under s2. Treatment cannot be refused under section 3, apart from ECT. If the patient refuses to consent to ECT and the treating team believe it to be in the patient's best interests, an assessment by a Second Opinion Appointed Doctor (SOAD) is required. Answer B is therefore incorrect. Ensuring the patient has sufficient information about a procedure or treatment is important, and it may well be that she might change her mind after considering it again. However, as it is important that patients detained under the MHA give consent for ECT freely and willingly, it would not be appropriate to continue with treatment on that day (answer C). The trust legal department would be a useful point of contact, but would advise you not to proceed if consent had been withdrawn. Although a benzodiazepine would help her anxiety, it may render the ECT less effective were it to go ahead. It would also make it impossible to conclude that consent had subsequently been given freely if she changed her mind (answer E). In the circumstances you should advise the psychiatry team that treatment cannot proceed (answer A).

**4. A healthy 10 year old is scheduled to undergo conservative dental treatment under sedation in hospital**

The most appropriate actions in this situation would be:

- A Fast patient for 6 hours. Administer Entonox. Maintain verbal contact throughout procedure
- B Fast patient for 6 hours. Administer Entonox to achieve deep sedation
- C Fast patient for 6 hours. Administer intravenous Midazolam. Maintain verbal contact throughout procedure
- D No fasting. Administer Entonox. Maintain verbal contact throughout procedure
- E No fasting. Administer oral Midazolam. Maintain verbal contact throughout procedure

Answer: D

**Rationale:**

No fasting is required. Entonox is the drug of choice.

**5. A 74-year-old man with COPD is undergoing a left pneumonectomy for adenocarcinoma of the lung. During the surgery, while on one lung ventilation, his SpO<sub>2</sub> falls to 84% on a FiO<sub>2</sub> of 100% with no increase in airway pressures or change in tidal volume. Bronchoscopy shows correct placement of the double lumen tube and 5cmH<sub>2</sub>O PEEP has been applied.**

Which is most likely to result in a significant improvement in SpO<sub>2</sub>:

- A Applying CPAP to the non-dependent lung
- B Asking the surgeon to clamp the left pulmonary artery
- C Increasing PEEP to the dependent lung
- D Instituting manual two lung ventilation
- E Insufflating oxygen to the non-dependent lung

Answer: B

**Rationale:**

With a correctly positioned double lumen tube and no change in airway pressure or tidal volume, the most likely cause of the hypoxaemia is shunt. All the manoeuvres described may help, but clamping of the pulmonary artery will have the most significant effect on SpO<sub>2</sub>. Inflating the non-dependent lung can be done but may be difficult at certain stages of the procedure.