

Anesthesiology Rounds
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Muscle Relaxation for Induction in Patients with a Full Stomach

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Objectives:

After reading this issue, the reader will be able to:

- list the steps involved in a rapid sequence induction
- understand the effects of hypovolemia or decreased cardiac output on the effects of drugs
- appreciate the importance of adequate muscle paralysis for a rapid sequence induction
- justify the doses of depolarizing and nondepolarizing neuromuscular blocking drugs for rapid sequence induction
- adjust the doses of succinylcholine for obese individuals
- determine the optimal doses for pre-curarization.

Questions: (only one answer is correct)

1. What is the most accurate statement about neuromuscular blocking drugs in a hypovolemic patient?
 - a. The hypovolemic patient requires a larger dose than the normovolemic patient
 - b. The hypovolemic patient requires a smaller dose than the normovolemic patient
 - c. The drug has a faster onset in hypovolemic than in normovolemic patients
 - d. The drug has a slower onset in hypovolemic than in normovolemic patients
 - e. The drug behaves in the same way in hypovolemic and normovolemic patients.
2. You would like to intubate 1 minute after induction of anesthesia. To obtain intubating conditions similar to those associated with succinylcholine 1 mg/kg, the following is required:
 - a. rocuronium, 0.6 mg/kg
 - b. rocuronium, 1 mg/kg
 - c. atracurium, 0.5 mg/kg
 - d. mivacurium, 0.2 mg/kg
 - e. no nondepolarizing agent, irrespective of the dose, can compare with succinylcholine.

3. A large pre-curarizing dose may yield all of the following, EXCEPT:
- a. prolonged succinylcholine blockade
 - b. diplopia
 - c. difficulty swallowing
 - d. difficulty breathing
 - e. aspiration of gastric contents.
4. If the dose of succinylcholine is decreased from 1 mg/kg to 0.5-0.6 mg/kg:
- a. the risk of desaturation is eliminated if there is failure to intubate
 - b. the percentage of excellent intubating conditions is the same
 - c. apnea time following succinylcholine is reduced significantly
 - d. the incidence of acceptable intubating conditions (excellent or good) is about 95%
 - e. apnea time is comparable to that following remifentanyl, 4 µg/kg.
5. In obese patients, all of the following are true EXCEPT:
- a. the dose of succinylcholine should be calculated based on ideal body weight
 - b. a dose of succinylcholine based on actual body weight yields similar intubating conditions in obese and in leaner patients
 - c. after pre-oxygenation, duration of apnea without desaturation is decreased in obese subjects
 - d. intubating conditions are better with succinylcholine, 1 mg/kg, than with 0.5-0.6 mg/kg
 - e. duration of action of succinylcholine, in mg/kg actual body weight, is approximately the same in obese subjects as in individuals with normal weight.

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