

***Anesthesiology Rounds***  
**August/September 2002**

**Opiates and Rigidity**  
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**Objectives:**

- Review the characteristics of rigidity associated with opiates and develop an understanding of the syndrome by examining the different clinical and experimental observations.
- Assess the probability of onset of the syndrome depending on the anesthetic technique used, review the risk factors, and become familiar with the signs and symptoms.
- Specify the nuclei and neurological pathways involved.
- Provide treatment options, depending on when the symptoms occur, as well as preventive means, both theoretical and clinical.

**Questions: (Only 1 response is correct)**

1. At what stage during general anesthesia does one note the appearance of the opiate-induced rigidity syndrome?
  - a. Only at induction
  - b. At induction and arousal
  - c. This depends on the dose administered
  - d. From 2 minutes to several hours after the bolus dose
2. Regarding patients at the extremities of age (newborns and the elderly) and the opiate-induced rigidity syndrome:
  - a. The symptoms are less severe, for chest wall contraction is less intense in these two groups.
  - b. The elderly patient does not present this type of complication, as the low compliance of the ribcage hides the effects.
  - c. Dysfunction of the blood-brain barrier favours the onset of this syndrome in both groups.
  - d. In the newborn, ventilatory compliance is so low that changes due to this syndrome cannot be observed.

3. In the adult patient, which principal mechanism causes difficult ventilation?
  - a. Thoracoabdominal contraction and tonic-clonic movements
  - b. Upper airway (glottis) closure
  - c. Acute pulmonary edema
  - d. Closure of the jaws associated with pulling back of the floor of the tongue
  
4. What parts of the medical history must be elucidated if one wants to assess the risk of rigidity when anesthesia is based on a high dose of opiates?
  - a. Age, the use of neurotropic agents, and a history of cardiovascular accident
  - b. Pregnancy, slow gastric emptying, and hypovolemia
  - c. Patients in intensive care, patients with renal failure and pulmonary hepatization
  - d. Obesity, cardiac failure, and the prior use of opiates
  
5. What are the possible treatment options depending on the time of onset of the syndrome?
  - a. Paralysis with neuromuscular blockers in the recovery room
  - b. Pretreatment with a benzodiazepine
  - c. Naloxone in the patient's unit if one observes athetotic movements
  - d. Nasal trumpet and optimizing the head position for laryngoscopy

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