effects is greater with low-potency drugs, because the dose given is greater, low-potency drugs do not necessarily have more side effects. For example, rocuronium (ED_{50} = 0.2 mg/kg) has fewer cardiovascular side effects than pancuronium (ED_{50} = 0.04 mg/kg).

In summary, the ideal short-acting nondepolarizing neuromuscular blocker should be a compromise between a low enough potency for rapid onset and a high enough potency to avoid side effects. Failure to consider either of these two important aspects might turn out to be a costly mistake.

François Donati, Ph.D., M.D.
Professor of Anaesthesia
McGill University
Department of Anaesthesia
Royal Victoria Hospital
687 Pine Avenue West, Room S5.05
Montreal, Quebec, Canada H3A 1A1

References

1. Bowman WC, Rodger IW, Houston J, Marshall RJ, McIndewar LI: Structure:action relationships among some desacetoxy analogues of pancuronium and vecuronium in the anesthetized cat. ANESTHESIOLOGY 69:57–62, 1988

2. Donati F, Meistelman C: A kinetic-dynamic model to explain the relationship between high potency and slow onset time for neuromuscular blocking drugs. Pharmacokinet Biopharm 19:537–552, 1991

3. Gyermek L, Nguyen N, Lee BS, Lee C: A study of the role of interonium distances in the onset and duration of action of neuromuscular blocking tropinyl diesters in the rat (abstr). ANESTHESIOLOGY 77:A913, 1992

(Accepted for publication January 6, 1993.)

Anesthesiology
78:797, 1993
© 1993 American Society of Anesthesiologists, Inc.
J. B. Lippincott Company, Philadelphia

Use of Neuromuscular Relaxants in a Child with an Abnormal Anatomy

To the Editor:—For years anesthesiologists have tried to find the best way to perform tracheal intubations in patients with difficult and uncertain airways. Most would agree that in the older child and the adult patient, adequate sedation followed by fiberoptic laryngoscopy is the best way to secure such an airway. However, in the pediatric patient, when adequate sedation and cooperation may not be attainable, one is left with two options: awake endotracheal intubation or endotracheal intubation under general anesthesia.

The first tenet of airway management is to not take away the patient's ability to breathe spontaneously until the airway is safely secured, *i.e.*, do not use muscle relaxants until the trachea is safely intubated.

In a recent case report describing airway management in a child with hemifacial microstomia,[1] the authors paralyzed the infant, thereby eliminating a safety factor and also one of the best aids for tracheal intubation in a patient with a difficult airway. Had the authors permitted spontaneous ventilation, their ability to intubate the trachea using their stylet may or may not have been easier, but the safety of spontaneous respirations would have remained. Had the infant been permitted to breath spontaneously, the endotracheal tube could have been guided into the trachea simply by listening for the breath sounds[2,3] and with no need for special equipment. This technique may be accomplished by either the nasal route or the oral route. Prior to tracheal intubation, the hypopharynx should be sprayed with lidocaine, protecting against laryngospasm and permitting a few more minutes of intubation time. If oxygen and anesthetic gases are insufflated, the time permitted for intubation can be increased. This procedure of permitting spontaneous respirations should not hamper or detract from the use of the lighted stylet but maintain a safety factor during tracheal intubation.

James F. Mayhew, M.D.
Director, Pediatric Anesthesia
Acting Chairman, Anesthesiology
Children's Hospital of the King's Daughters
601 Children's Lane
Norfolk, Virginia 23507

References

1. Krucylak, CP, Schreiner MS: Orotracheal intubation of an infant with hemifacial microsomia using a modified lighted stylet. ANESTHESIOLOGY 77:826–827, 1992

2. Mayhew JF: Anaesthesia for Treacher-Collins syndrome (letter). Can J Anaesth 34:328–329, 1987

3. Diaz JH, Guarisco J, LeJeune FE: Perioperative management of paediatric microstomia. Can J Anaesth 38:217–221, 1991

(Accepted for publication January 6, 1993.)

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/78/4/797/644251/0000542-199304000-00036.pdf by guest on 09 April 2024