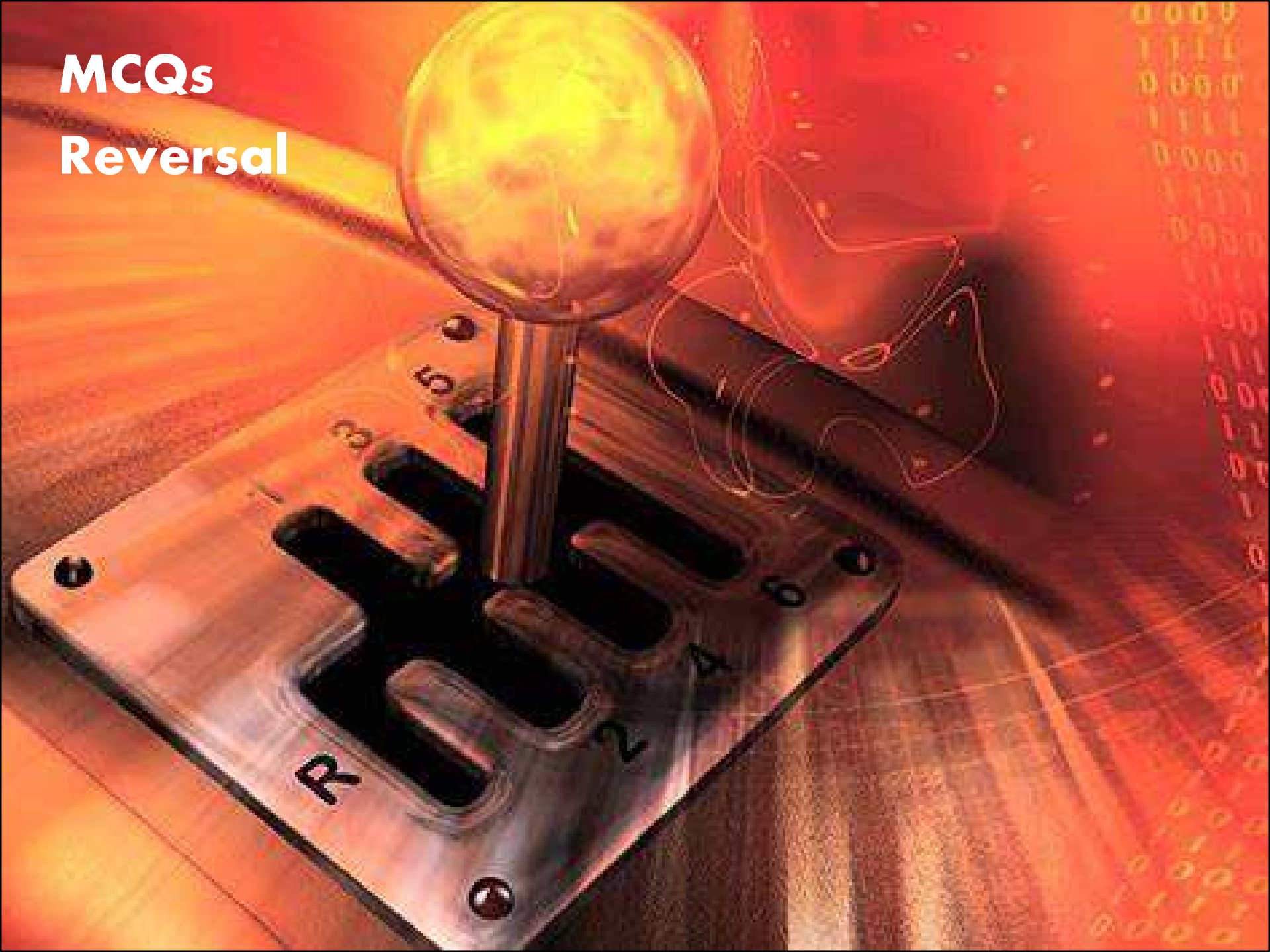


MCQs

Reversal



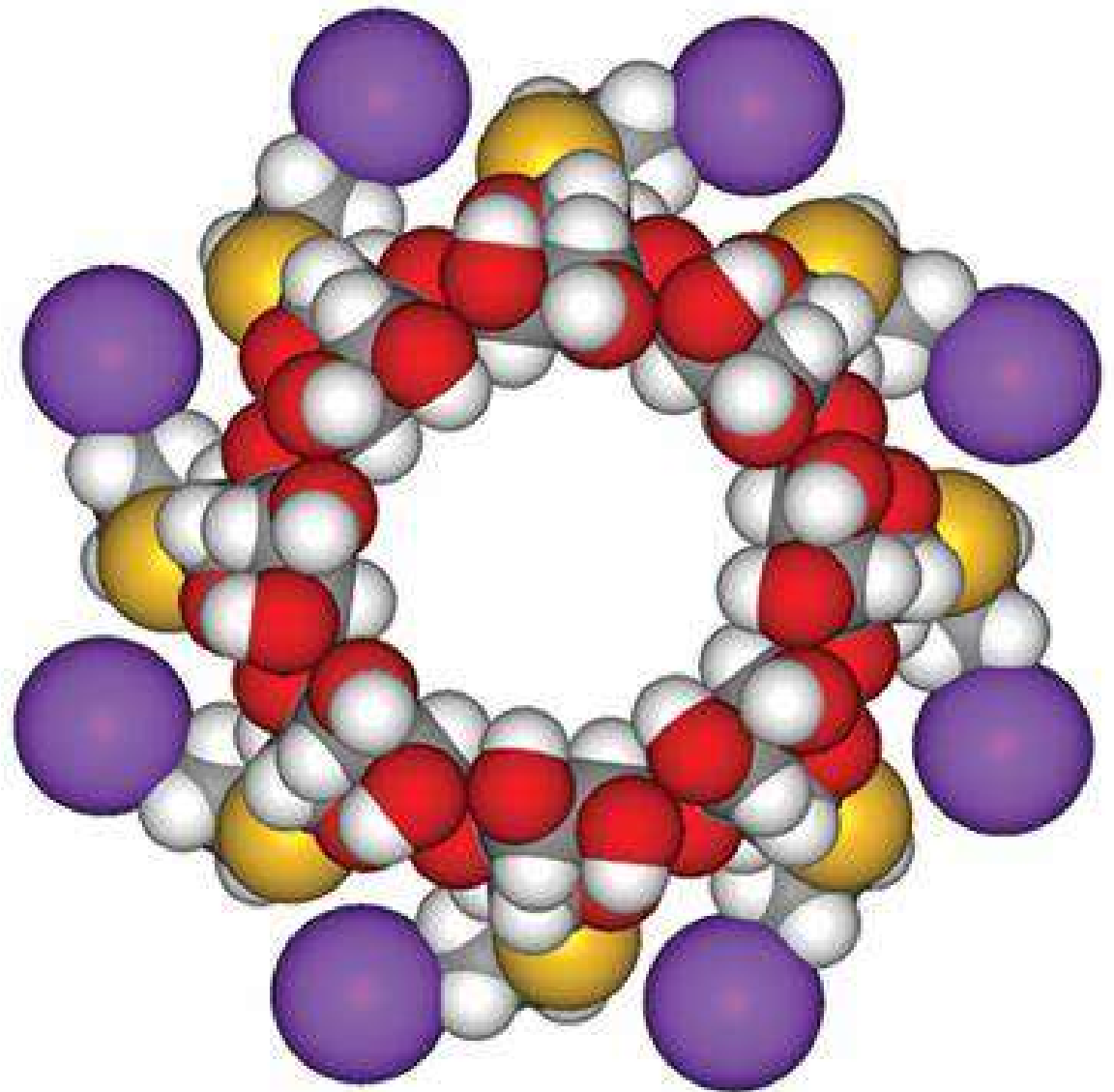
Ideal Reversal Agent?

- Can be used to reverse any neuromuscular blocking drug.
- Can be used to reverse any depth of neuromuscular block.
- A rapid onset of maximal effect (within a few minutes).
- No adverse cardiovascular effects.
- No adverse muscarinic effects (e.g. bradycardia, bronchospasm, abdominal pain, nausea and vomiting).
- No histamine release or risk of anaphylaxis.
- Not dependent on organ elimination.
- No ceiling effect.
- Does not produce depolarising block if given in excess.
- Low cost.
- Available as a solution.

MCQ One: Neostigmine

- a. Takes 2 min to have its maximal effect.
- b. Is efficacious in the absence of a train-of-four twitch response.
- c. Has a ceiling effect.
- d. Has a prolonged effect in the presence of renal dysfunction.
- e. Rarely stimulates anaphylaxis.

Sugammadex



Sugammadex: Dose

Type of Block	Dose of Sugammadex	Time to TOF >0.9
Routine – TOF count 2	2mg/kg	2 minutes
Moderate – Post tetanic count 1-2	4mg/kg	3 minutes
Profound – 3-5 minutes post NMBDs	16mg/kg	1.5 minutes

MCQ Two: Sugammadex

- a. Will reverse any degree of neuromuscular block induced by atracurium.
- b. Will reverse any degree of block produced by vecuronium.
- c. Is a dextrose compound available in solution.
- d. Has been used to treat anaphylaxis from rocuronium.
- e. Is more likely to produce anaphylaxis than neostigmine.

Sugammadex: Specific Circumstances

- Major Laparoscopy procedures
- Treatment of anaphylaxis to rocuronium
- Sugammadex in Renal Failure

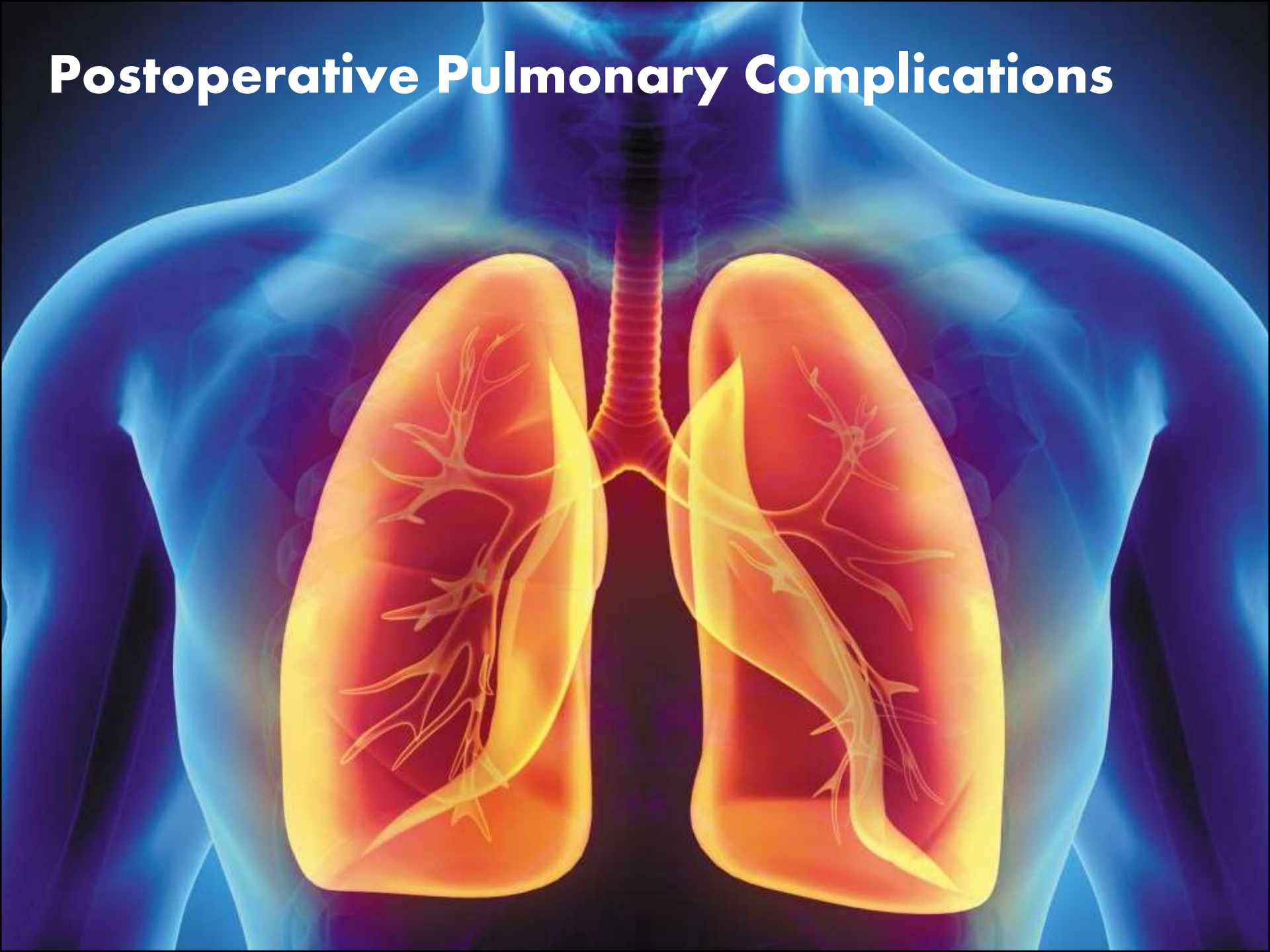
Sugammadex: Adverse Effects

- Allergy and Anaphylaxis
- Cardiac Effects – Vagal-type effect
- Interactions

MCQ Three: Residual Block is likely to be:

- a. Common if neuromuscular block is monitored perioperatively.
- b. Uncommon if quantitative rather than qualitative monitoring is used.
- c. An indicator of immediate postoperative respiratory complications.
- d. More common after sugammadex than neostigmine.
- e. Determined by measuring the train-of-four ratio (TOFR).

Postoperative Pulmonary Complications



Sugammadex *versus* Neostigmine for Reversal of Neuromuscular Blockade and Postoperative Pulmonary Complications (STRONGER)

A Multicenter Matched Cohort Analysis

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What We Already Know about This Topic

- Approximately 5% of patients experience a major pulmonary complication after noncardiac surgery
- Inadequate reversal of neuromuscular blockade increases the risk of pulmonary complications
- In the United States, sugammadex is used with similar frequency as neostigmine at many hospitals
- Sugammadex provides more rapid and effective restoration of neuromuscular tone without systemic anticholinergic activity; however, neostigmine currently remains the mainstay of practice

What This Article Tells Us That Is New

- In a multicenter observational matched cohort study of noncardiac surgery, sugammadex administration was associated with a 30% reduced risk of pulmonary complications, a 47% reduced risk of pneumonia, and a 55% reduced risk of respiratory failure compared to neostigmine

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Results: Of 30,026 patients receiving sugammadex, 22,856 were matched to 22,856 patients receiving neostigmine. Out of 45,712 patients studied, 1,892 (4.1%) were diagnosed with the composite primary outcome (3.5% sugammadex vs. 4.8% neostigmine). A total of 796 (1.7%) patients had pneumonia (1.3% vs. 2.2%), and 582 (1.3%) respiratory failure (0.8% vs. 1.7%). In multivariable analysis, sugammadex administration was associated with a 30% reduced risk of pulmonary complications (adjusted odds ratio, 0.70; 95% CI, 0.63 to 0.77), 47% reduced risk of pneumonia (adjusted odds ratio, 0.53; 95% CI, 0.44 to 0.62), and 55% reduced risk of respiratory failure (adjusted odds ratio, 0.45; 95% CI, 0.37 to 0.56), compared to neostigmine.