

EVALUATION OF PROCEDURAL NEUROMUSCULAR BLOCKADE REVERSAL TIME WITH SUGAMMADEX VERSUS NEOSTIGMINE PLUS GLYCOPYRROLATE.

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Rocuronium and vecuronium induced neuromuscular blockade reversal has historically been performed with neostigmine plus glycopyrrolate, however, a newer option, sugammadex, is now being utilized more frequently. Studies have demonstrated quicker neuromuscular blockade reversal times with sugammadex, and the majority of studies have shown fewer adverse events following paralytic reversal in comparison to neostigmine plus glycopyrrolate. One potential drawback of sugammadex is its significant higher cost compared to the combination of neostigmine plus glycopyrrolate. This multi-center, non-blinded, retrospective study will provide more insight into the efficacy, safety, and cost differences associated with these two regimens utilized for neuromuscular blockade reversal at SSM Health Ministries.

The purpose of this study is to evaluate the difference in the amount of time saved in the operating room following neuromuscular blockade reversal neuromuscular blockade reversal, evaluate safety data, and assess the cost implications between these two regimens utilized at SSM Health Ministries. The primary endpoint will evaluate neuromuscular blockade reversal time, and secondary endpoints will evaluate rates of hypotension and bradycardia following administration of the reversal agents. Descriptive statistics will be applied to baseline characteristics, the primary outcome will be evaluated utilizing Mann-Whitney U statistical testing, and the secondary outcomes will utilize Chi-Square testing.

The results of this study will help establish the efficacy and safety surrounding sugammadex versus neostigmine plus glycopyrrolate in order to justify the use of the agent in which the study outcomes support at SSM Health Ministries.

Learning Objectives:

- Identify differences in efficacy, safety, and cost between sugammadex and neostigmine plus glycopyrrolate for reversal of neuromuscular blockade.
- Develop appropriate neuromuscular blockade reversal dosing regimens.