

POLICY

Rocuronium on the Emergency Cart

Purpose

The Non-Hospital Medical and Surgical Facilities Accreditation Program (NHMSFAP) Committee is responsible for establishing accreditation standards, policies, rules, procedures and guidelines for the NHMSFAP to ensure the delivery of high-quality and safe services in non-hospital facilities.

This policy addresses the conditions that a non-hospital facility must be in conformance with in choosing to stock rocuronium on its class 1 emergency cart.

Background

Succinylcholine

Succinylcholine has been the primary neuromuscular blocking agent used to secure an airway by way of intubation in an emergency. Major advantages of the use of succinylcholine in emergency airway management include its rapid onset, its short duration of action and clinician familiarity with its use. For some airway emergencies such as laryngospasm, the use of a low dose rapidly acting muscle relaxant is optimal.

Succinylcholine is also a known triggering agent of malignant hyperthermia (MH). When succinylcholine is stocked even if just for emergency purposes and even if there are no other malignant hyperthermia triggering agents (e.g. volatile anesthetics) on-site, non-hospital facilities are required to have a MH kit including dantrolene. Dantrolene is known to be costly, and its shelf life is relatively short.

Rocuronium

Rocuronium is becoming a dominant neuromuscular blocking agent used in emergency airway management and more recent literature has demonstrated that when used in large enough doses, rocuronium can achieve a comparable onset time to that of succinylcholine.

A concern related to rocuronium's prolonged duration of action is that clinicians less experienced with its use in rapid sequence intubation may focus on facilitating intubation as an endpoint and overlook the need for patient sedation and analgesia during spontaneous recovery from neuromuscular blockage or until active reversal of neuromuscular blockade (i.e. administration of sugammadex).

An advantage of rocuronium is that it is not an MH triggering agent and therefore, stocking rocuronium may be more cost advantageous for facilities where succinylcholine is the only

malignant hyperthermia triggering agent on site, therefore removing the need for dantrolene and a malignant hyperthermia kit. However, sugammadex is also costly, its shelf life relatively short and with several vials needed to rapidly reverse the large doses of rocuronium used in emergency airway management any cost differences may be insignificant.

Committee Decision

Following consideration of the growing body of evidence for the use of rocuronium in emergency airway management and three independent expert opinions, the NHMSFAP Committee has amended its requirement that succinylcholine be stocked on a class 1 emergency cart. The amended class 1 emergency cart standard requires that a neuromuscular blocking agent be stocked and leaves the choice of agent stocked on the cart, either succinylcholine or rocuronium and sugammadex, to the judgement of the medical director in consultation with their head of anesthesia.

Policy

Non-hospital facilities are required to have an emergency cart that is stocked with emergency medications and equipment appropriate to the class of facility.

In accordance with the NHMSFAP Emergency Cart standards, Class 1 facilities are required to stock a neuromuscular blocking agent on their emergency cart, **as follows:**

- succinylcholine, **or**
- rocuronium plus reversal agent, **or**
- succinylcholine and rocuronium plus reversal agent (if facility chooses to stock both on the cart).

The medical director in consultation with their head of anesthesia makes the decision on which neuromuscular blocking agent is stocked on the emergency cart.

If rocuronium is stocked on the emergency cart, the medical director is responsible for:

- notifying the College of their intention to stock rocuronium and its reversal agent sugammadex on their emergency cart
- ensuring that all anesthesiologists with privileges at the facility are pre-informed of the change to rocuronium on the emergency cart
- ensuring that the facility has written policy and procedures for the use of rocuronium for emergency airway management including the need for adequate analgesia and sedation during neuromuscular blockade and the need for having a reversal agent within its labeled expiry date readily available
- ensuring that the facility has written policy and procedures for the use of sugammadex including early recognition and management of sugammadex-induced anaphylaxis
- ensuring all facility staff (e.g. anesthesiologist, physicians, nurses) have been in-serviced on the use, dosing, duration and side effects of rocuronium when used for emergency airway management
- ensuring all facility staff (e.g. anesthesiologists, physicians, nurses) have been in-serviced on the use, dosing, duration and side effects of sugammadex

- ensuring all facility staff (e.g. anesthesiologists, physicians, nurses) have participated in simulated emergency drills for emergency airway management using rocuronium and sugammadex

Only facilities which have a NHMSFAP letter on file acknowledging the medical director's confirmation of conformance with the responsibilities outlined in this policy may stock rocuronium on their emergency cart.

Although the class 2 emergency cart standard does not require a neuromuscular blocking agent, this policy also applies to class 2 facilities with an anesthesiologist on staff who chooses in consultation with the medical director to stock rocuronium on their emergency cart.

Responsibility

Role	Responsibility
Medical Director	<ul style="list-style-type: none"> Notifying the College of the intention to stock rocuronium on the emergency cart. Submitting a letter of assurance prior to making the change to rocuronium on the emergency cart confirming conformance with the responsibilities outlined in this policy. Ensuring conformance with the accreditation standards, policies, rules, procedures and guidelines for the NHMSFAP, and the Bylaws.
NHMSFAP	<ul style="list-style-type: none"> Maintaining records of the facilities which stock rocuronium on their emergency cart.
NHMSFAP Committee	<ul style="list-style-type: none"> Establishing accreditation standards, policies, rules, procedures and guidelines for the NHMSFAP. Administering the NHMSFAP and ensuring facility compliance with the accreditation standards, policies, rules, procedures and guidelines, and with the Bylaws.