CLINICAL UPDATE

Brand Name	LifEMS Naloxone
Generic Name	naloxone hydrochloride
Drug Manufacturer	Lifsa Drugs LLC

Clinical Update

TYPE OF CLINICAL UPDATE

New brand

FDA APPROVAL DATE

June 8, 2018

LAUNCH DATE

November 20, 2020

REVIEW DESIGNATION

N/A

TYPE OF REVIEW

Abbreviated New Drug Approval (ANDA): 072076

DISPENSING RESTRICTIONS

N/A

Overview

INDICATION(S) FOR USE

Naloxone hydrochloride injection is indicated for the complete or partial reversal of opioid depression, including respiratory depression, induced by natural and synthetic opioids including, propoxyphene, methadone, and certain mixed agonist-antagonist analgesics: nalbuphine, pentazocine, butorphanol, and cyclazocine. Naloxone hydrochloride is also indicated for the diagnosis of suspected or known acute opioid overdosage.

Naloxone hydrochloride injection may be useful as an adjunctive agent to increase blood pressure in the management of septic shock.

MECHANISMS OF ACTION

The mechanism of Naloxone hydrochloride prevents or reverses the effects of opioids including respiratory depression, sedation, and hypotension. Also, it can reverse the psychotomimetic and dysphoric effects of agonist-antagonist such as pentazocine.

Naloxone hydrochloride is an essentially pure opioid antagonist, i.e., it does not possess the “agonistic” or morphine-like properties of other opioid antagonists. When administered in usual doses and in the absence of opioids or agonistic effects of other opioid antagonists, it exhibits essentially no pharmacologic activity.

Naloxone hydrochloride has not been shown to produce tolerance or cause physical or psychological dependence. In the presence of physical dependence on opioids, naloxone hydrochloride will produce withdrawal symptoms. However, in the presence of opioid dependence, opiate withdrawal symptoms may appear within minutes of

naloxone hydrochloride administration and subside in about 2 hours. The severity and duration of the withdrawal syndrome are related to the dose of naloxone hydrochloride and to the degree and type of opioid dependence.

While the mechanism of action of naloxone hydrochloride is not fully understood, in vitro evidence suggests that naloxone hydrochloride antagonizes opioid effects by competing for the mu, kappa, and sigma opiate receptor sites in the CNS, with the greatest affinity for the mu receptor.

DOSAGE FORM(S) AND STRENGTH(S)

2 mL single dose disposable prefilled syringes, in the MIN-I-JET® system with 21 G. x 11/2" needle.

DOSE & ADMINISTRATION

Naloxone hydrochloride injection may be administered intravenously, intramuscularly, or subcutaneously. The most rapid onset of action is achieved by intravenous administration, which is recommended in emergency situations. Since the duration of action of some opioids may exceed that of naloxone, the patient should be kept under continued surveillance. Repeated doses of naloxone should be administered, as necessary.

Intravenous Infusion Naloxone hydrochloride injection may be diluted for intravenous infusion in normal saline or 5% dextrose solutions. The addition of 2 mg of naloxone in 500 mL of either solution provides a concentration of 0.004 mg/mL. Mixtures should be used within 24 hours. After 24 hours, the remaining unused mixture must be discarded. The rate of administration should be titrated in accordance with the patient's response.

EFFICACY

Study results were then synthesized, qualitatively, and within the current research, there is overwhelming support of take-home naloxone programs being effective in preventing fatal opioid overdoses. A significant limitation of this systematic review is the lack of randomized controlled trials as it is viewed as unethical withholding a known lifesaving medication from an at-risk population.