



EMERGENCY MEDICINE:

Intralipid Therapy

What is Intralipid Therapy?

In 1993 Gary Weinberg, MD discovered that an infusion of 20% intravenous lipids can reverse the cardio toxicity associated with local anesthetic agents such as bupivacaine. This method is used in human medicine to reverse central nervous system and cardiac arrhythmias that are associated with local anesthetic toxicity.

Usage

Recently intralipids have been used to reverse CNS signs and cardiac arrhythmias associated with lipophilic drug overdoses such as ivermectin, permethrin, and baclofen. If given early, intralipids can reduce hospitalization time for our patients and improve their prognosis. Intralipids will not work on a hypoxic cardiac arrest because the pH is too low for the lipids to bind properly.

Side effects

There have been no adverse side effects seen so far in our veterinary patients. Potential side effects are hyperlipidemia, pancreatitis, worsening of diabetes mellitus or a fatty embolism.

How does it work?

There are two main theories. The first is that intralipids form a lipid sink in the intravascular space to attract and bind the lipophilic drugs which are then processed safely out of the body as any other lipid. Another theory is that the lipids provide energy in the form of ATP and/or calcium to the cardiac cells to allow them to overcome the blockage of acylcarnitine transferase that is being blocked by some of the local anesthetics.

Dosage

The recommended dose reported by the ASPCA is 1.5 ml/kg as a bolus and 0.25 ml/kg given as a CRI over 30-60 minutes. If needed, the infusion can be repeated q 6-8 hours provided the patient is not lipemic.

Other lipid options

Propofol does contain 10% lipid emulsion, but the recommended therapy is 20% lipid emulsion. Intralipids do not contain preservative so they have a long shelf life, ~ 2 years, but once opened must be refrigerated and are only viable for 24 hours.

Questions?

Our 24/7 Emergency and Critical Care service is open year round and staffed by excellent doctors and technicians. MVS attracts the top veterinarians from Canada and the United States for its positions and the ER doctors have access to specialists 24 hours a day, 7 days a week.

LOCATIONS

3412 East Walton Boulevard
Auburn Hills, MI 48326
Ph. (248) 371-3713

1425 Michigan Street NE
Grand Rapids, MI 49503
(616) 284-5300

29080 Inkster Road
Southfield, MI 48034
Ph. (248) 354-6660