

Fancy some fat with that?

Using Intralipid® as a treatment option for lipophilic drug overdose

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Introduction:

St Vincent's University Hospital (SVUH), Dublin is a leading academic teaching hospital providing frontline acute, chronic and emergency care to patients all over Ireland.



The Emergency Department (ED) is the first port of call for most patients presenting with a suspected overdose.

Self-poisoning, both accidental and intentional, is a frequent presentation to ED.

Objective:

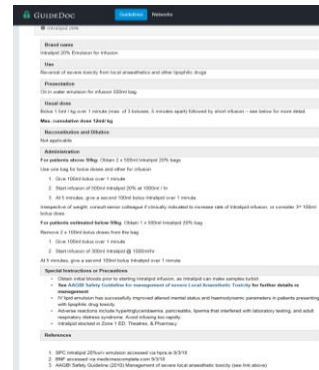
Medicines Information & the ED wanted to explore whether addition of lipid emulsion 20% (Intralipid®) as a treatment option for patients presenting with unclear polypharmacy overdose would be beneficial to their recovery.

Method:

- Literature review to ascertain use of Intralipid® in drug overdose, not solely for local anaesthetic toxicity.
- Expert Advice: National Poisons Information Centre contacted for guidance.
- Stakeholders from Pharmacy and ED consulted for approval
- Implement Guidance for Staff on Intralipid® dosing and administration in overdose setting

Results:

- IV monograph for guidance of safe administration of Intralipid® developed (see below)



- Measurement of improvement: Three cases (single and polypharmacy overdose) presented successfully managed with Intralipid® over a 6 month period in 2018
- Effects of changes: Given the relative non-toxicity of Intralipid®, we consider it as a treatment option for patients with lipophilic drug overdose.

Lessons learnt:

- Local education to take initial bloods before administration of Intralipid®, as lipid emulsion can make samples turbid, which can affect drug level assay and routine blood results for follow on in ICU.
- Clear guidance for use only in haemodynamically unstable patients with polypharmacy or lipophilic drug use

References:

1. Muller S, Diaz J, Kaye A. Clinical applications of intravenous lipid emulsion therapy J Anesth 2015 29:920-926
2. Levine M, Hoffman R, Lavergne V, Stork C, Graudins A, Chung R et al. for the Lipid Emulsion Workgroup. Systematic review of the effect of intravenous lipid emulsion therapy for non-local anesthetics toxicity Clinical Toxicology 2016 54:3, 194-221