

WHOLE BOWEL IRRIGATION

Introduction

- The technique of whole bowel irrigation attempts to cleanse the entire bowel of a toxic substance by use of the nasogastric administration of large volumes of an **osmotically balanced polyethylene glycol-electrolyte** solution.

Preparation

- Osmotically balanced polyethylene glycol-electrolyte solutions are termed generally termed, **PEG-ELS**.
- Trade name preparations include: Golytely or Colonlytely. These come in sachets which are then made up into solutions.

Indications

This is an aggressive and very labour intensive form of GIT decontamination. It is uncommonly performed as it carries significant risks in patients with (or at high risk of) altered conscious states and/ or seizures.

It may be considered in cases of: ¹

- Life threatening ingestions of sustained release or enteric coated preparations or agents that do not bind to charcoal.

and

- Where a good clinical outcome is not expected with supportive care and anti-dote administration

and

- The patient presents before established severe toxicity.

Drugs overdoses that may benefit from whole bowel irrigation:

- Iron overdose, > 60mg/ kg
- Slow release potassium chloride, > 2.5 mmol / kg
- Life threatening slow release verapamil or diltiazem ingestions

- Symptomatic arsenic trioxide ingestion
- Lead ingestion
- Body packers.

Contraindications

These include the following:

1. Risk assessment suggests that a good outcome can be measured with supportive care and antidote therapy.
2. Uncooperative patients.
3. Inability to place a nasogastric tube
4. Uncontrolled vomiting.
5. The patient has a decreased conscious state or risk assessment suggests the potential for decreased conscious state or seizure in the subsequent 4 hours.
6. Ileus or intestinal obstruction.
7. Intubated and ventilated patients, (this is a relative contraindication, as large volumes of fluid may pool in the oropharynx and flow past the tube cuff leading to aspiration.

Complications

1. Nausea, vomiting and abdominal bloating.
2. Non-anion gap metabolic acidosis.
3. Pulmonary aspiration.
4. Distraction from more important resuscitation and supportive care priorities.
5. Delayed retrieval to a hospital offering definitive care.

Technique

1. Assign one nurse to carry out procedure as this may be a full time job for up to 6 hours.
2. Obtain sufficient supplies of PEG-ELS and make up solution as directed.
3. Place nasogastric tube

4. Give activated charcoal via the nasogastric tube (for the non-metallic ingestions)
5. Give the PEG-ELS solution via the nasogastric tube **at 2 Litres per hour (children 25 mls/kg/hour)**
6. Give IV metoclopramide to minimise vomiting and enhance gastric emptying.
7. Diarrhoea can be very significant, patients should have ready access to a commode.
8. Continue irrigation until the effluent is clear. This may take up to 6 hours.
9. Cease whole bowel irrigation if abdominal distension or loss of bowel sounds are noted.
10. AXR is useful to assess the effectiveness of decontamination of radio-opaque substances such as iron and potassium salts.

References

1. Whole Bowel Irrigation in: Murray L et al. Toxicology Handbook 1st ed 2007
2. American Academy of Clinical Toxicology and the European Association of Poison Centers and Clinical Toxicologists Position Paper: Whole bowel irrigation. Clinical Toxicology 2004, 42:843-854

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