Multiple-Dose Activated Charcoal (MDAC)

MDAC involves repeated administration (> 2 doses) of Activated Charcoal) given orally to enhance elimination of a drug from the body

MDAC may enhance the elimination of the following drugs and should be considered in cases of significant clinical toxicity (please discuss with clinical toxicology)

- Carbamazepine
- Lamotrigine
- Colchicine
- Dapsone
- Phenobarbitone (phenobarbital)
- Phenytoin
- Theophylline
- Amatoxin (*A.Phalloides*)
- Quinine

MDAC should not delay haemodialysis when this is indicated for any of the above exposures.

MDAC may reduce absorption of large ingestions of drugs that delay gastric emptying (e.g. anticholinergics), modified release preparations or in cases of possible pharmacobezoar (e.g. large ingestions of aspirin)

Contraindications

- Unprotected airway (decreased GCS, uncooperative)
- Risk of imminent seizures/decreased conscious state
- Active vomiting
- Bowel obstruction -
- Evidence of ileus

Dose & Administration

Adults: Initial dose of 50 g orally and repeat dose of 25 g every 2 hours (or 50g every 4 hours)

Children: Initial dose of 1 g/kg (max 50 g) – mixed with ice-cream or cordial improves palatability.

Repeat 0.5 g/kg every 4 hours (or 0.25 g/kg every 2 hours)

Intubated patient: via oral or naso-gastric tube AFTER placement confirmed with CXR

In the intubated patient, AC is given via oro- or nasogastric tube

If patient requires MDAC but has an unprotected airway, secure airway first with intubation.

Only on rare occasions is intubation required specifically for MDAC administration (discuss with clinical toxicologist)

Ongoing monitoring and duration of MDAC (discuss with clinical toxicologist)

Duration of therapy with MDAC varies with drug, dose, response to Rx and severity of toxicity

Check bowel sounds and examine for evidence of abdominal distention before administration of each dose

Cease further administration if there is clinical evidence of ileus

Pregnancy & Lactation: it is acceptable to use MDAC if clinically indicated

Adverse Effects

- Vomiting (20%)
- Impaired absorption of orally administrated therapeutic agents
- Charcoal bezoar formation
- Constipation