

## Sulphonylurea overdose can result in profound &amp; prolonged hypoglycaemia, especially in the non-diabetic patient and in children

**Toxicity / Risk Assessment**

- Sulphonylureas have a narrow therapeutic index
- One sulphonylurea tablet can lead to life-threatening hypoglycaemia in children***
- Following deliberate overdose, anticipate profound and prolonged hypoglycaemia
- Expect delayed (6-12 hours) onset with SR/MR
- Non-diabetic patients & children are more vulnerable
- Hypoglycaemia can occur at therapeutic doses in the elderly and those with renal impairment
- Duration of hypoglycaemia varies depending on dose and preparation; and can last several days

**Clinical features of hypoglycaemia:**

- CNS: headache, dizziness, confusion, coma, seizures
- Autonomic: diaphoresis, tachycardia, tremor, nausea

**Investigations**

- Euglycaemia: BSL hourly for 4 hours then 2-4 hourly
- Hypoglycaemia: BSL every 30 min until normal for 4 hours, then hourly for 4 hours, then 4-hourly

**Management:** The best method of maintaining euglycaemia is to provide oral complex carbohydrates.

Prophylactic IV glucose is NOT recommended as hyperglycaemia stimulates endogenous insulin release

**Decontamination:** If alert and within 2 hours of ingestion (6 hours if SR/MR preparation), give single dose activated charcoal 50 g (1 g/kg in children)

**Hypoglycaemia**

- If BSL <3.3 mmol/L: 50 ml of 50% glucose IV in adults or 2 ml/kg of 10% glucose IV in children
- Beware of relapse of hypoglycemia following initial correction with glucose administration
- Maintain euglycaemia by providing oral complex carbohydrates

**Octreotide** - somatostatin analogue, decreases endogenous insulin secretion

- ***Do not wait*** for recurrent hypoglycaemia before administering – ***Give at first onset of hypoglycaemia***
- Dose: Adults 50-100 mcg SC 6-hourly (preferred) OR 50 mcg bolus IV & infusion 25 mcg/hour IV
- Children: 1-2 mcg/kg SC to max 50 mcg 6-hourly OR 1 mcg/kg bolus IV, then infusion 1 mcg/kg/hour (up to 25 mcg).

***IV glucose infusion is only indicated if hypoglycaemia persists despite octreotide***

**Disposition**

- Asymptomatic + no hypoglycaemia: observe min 18 hours, monitor BSLs regularly, *don't discharge at night*
- Symptomatic + hypoglycaemia requiring octreotide/IV dextrose - need to demonstrate euglycaemia with normal diet for a *minimum of 12 hours post cessation of octreotide/dextrose* before discharge
- In asymptomatic children, BSL can be checked 2-3 hourly while asleep, if borderline BSL then check more frequently (as per investigations)