**SAQ 10**

A 48 yr old male is brought to your Emergency Department following an intentional overdose. The ambulance crew report he has ingested 15 diltiazem 180mg XR tablets 2 hours ago.
His vital signs are:

| | |
|---|---|
| HR 72 bpm | Sats 99% RA |
| BP 138/67 | Temp 36.7 $^{o}$C |
| RR 18 | BSL 6.4 |

**a. List 4 factors associated with significant toxicity following calcium channel blocker poisoning (4 Marks)**

*1/2 Mark each up to 2 marks from:*

- *Agent - diltiazem and verapamil associated with toxicity other CCBs do not cause significant toxicity*
- *Dose - x2-3 therapeutic dose can cause toxicity with XR prep and >10x tablet ingestion likely to cause significant toxicity*
- *Co-ingestion of other cardiotoxic medication increases likelihood of significant toxicity*
- *Extremes of age - paediatric ingestion and elderly*
- *Presence of significant co-morbidities*

***b. List clinical features associated with significant calcium channel blocker toxicity (3 Marks)***

*1 Mark for either of:*

- *Bradycardia*
- *AV block - 1st degree AV block commonly*

*1 Mark each for any two of:*

- *Myocardia ischaemia*
- *Stroke*
- *Mesenteric Ischaemia*
- *Hyperglycaemia*
- *Lactic acidosis*

*Note nil mark for hypotension - it's in the question below and no mark for seizure or coma as these are rare and likely signify co-ingestion.*

**c. Several hours later the patient becomes agitated and hypotensive, BP 87/40. Outline a step-wise approach to the patient's hypotension (5 Marks)**

*1 Mark for each of:*

- *Fluid bolus 10-20 ml/kg*
- *Calcium - 60mls gluconate 10% or 20mls chloride 10% - rpt bolus up to three times*

*1 Mark each up to 3 marks for each of in a logical order:*

- *Atropine 100-300mcg iv repeat if response*
- *Catecholamine infusion - adrenaline or dopamine or noradrenaline*
- *High Dose Insulin Infusion*
- *Sodium bicarbonate - if metabolic acidosis*
- *Cardiac pacing*
- *ECMO / By-pass / IABP*

*All answers taken from : Toxicology Handbook, 2nd Edition, Murray / Daly / Little / Brown, Chp 3.22*