

### SAQ 3

A 40 yr old female is brought to your Emergency Department following a 2.5g propranolol overdose taken 3 hours ago.

Vital signs:

Pulse 45

BP 82/45

RR 16

Temp 36.8 °C

GCS 13 (E=3, V=4, M=6)

BSL 6.7 mmol/L

#### a. Outline a step-wise approach to the patient's bradycardia & hypotension? (4 Marks)

1 Mark each up to 4 marks for each of in a logical order, note HDI may be appropriately commenced very early in the algorithm without penalty

*Fluid bolus 10-20 ml/kg*

*Atropine 100-300mcg iv repeat if response*

*Isoprenaline infusion*

*Adrenaline infusion*

*High Dose Insulin Infusion*

*Intra-lipid - on toxicology advice only*

*Pacing - External*

*Pacing - Transvenous*

*ECMO*

#### b. Clinical toxicology have been consulted and advised you to commence High Dose Insulin (HDI) therapy.

How is HDI administered? (4 Marks)

1 Mark for each of:

*Loading dose of glucose 25g (50ml of 50% dextrose) iv bolus*

*Loading dose of insulin 1IU/kg iv bolus*

*Infusion of glucose 25g (50ml of 50% dextrose) per hour*

*Infusion of insulin 0.5IU/kg per hour, may up titrate to effect*

#### c. What are the potential complications associated with HDI therapy? (2 Marks)

1 Mark for each of:

*Hypoglycaemia*

*Hypokalaemia*

*Answers taken from Murray et al. Toxicology Handbook 2nd Edition. Section 3.15 Beta-blocker pg 168-170. Section 4.14 Insulin (high-dose) pg398-399.*