

**SAQ 9**

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)**

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**b. Clinical toxicology have been consulted and advised you to commence HDI therapy. How is HDI administered ? (4 Marks)**

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

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**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 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.*

