

SAQ 10

A 25 yr old male is brought to your Emergency Department following an overdose of Dothiepin.

His vital signs are:

| | | | |
|------|------------------------------|------|-----------------|
| BP | 95/62 | Temp | 37.5 °C |
| Sats | 95% on 15 Lmin ⁻¹ | GCS | 7 (E=2 M=4 V=1) |
| BSL | 6.8 | | |

His ECG is on the following page:

a. What is the dose related risk assessment for this poisoning ? (4 Marks)

1/2 Mark for each completed box

| Dose | Effect |
|-------------|--|
| <5 mg/kg | Minimal symptoms |
| 5-10 mg/kg | Drowsiness & mild anticholinergic effects Major toxicity not anticipated |
| >10 mg/kg | Potential for all major side effects (coma, hypotension, seizure, dysrhythmias) to occur within 2-4 hours of ingestion Anticholinergic effects likely but often masked by coma |
| >30 mg/kg | Severe toxicity with pH-dependent cardiotoxicity and coma expected to last >24 hours |

b. List the 4 ECG abnormalities shown on his ECG ? (4 Marks)

1 Mark each for:

*QRS Prolongation (180-200ms)
Terminal R wave lead aVR OR R/S ratio lead aVR >0.7
Tachycardia (Ventricular rate ~125 bpm)*

1 Mark for any one of:

*Right axis deviation
2:1 Conduction - I initially thought this was sinus with DRS fragmentation in lead II
but on mapping I think there a p waves buried in the terminal QRS in lead II with
another in the peak of the T wave
Inferior ST depression
ST elevation V2-6, I, aVL*

c. Which ECG features are predictive of clinical features in this overdose ? (2 Marks)

1/2 Mark for each of underlined:

QRS > 100 ms predictive of seizure

QRS > 160ms predictive of VT

All answers taken from : Toxicology Handbook, 2nd Edition, Murray / Daly / Little / Brown, Chp 3.75

ECG below taken from: Life in the Fastlane Website, ECG Library, Tricyclic Overdose

<http://lifeinthefastlane.com/ecg-library/basics/tca-overdose/>

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