

## Toxicology MCQs

1.Regarding Iron overdoses which is true?

- a) 95% of ingested tablets are seen on plain x-ray?
- b) Large overdose will produce a metabolic acidosis with a normal anion gap
- c) Charcoal is the recommended method of GIT decontamination in the first hour
- d) desferrioxamine when given to a severe OD will produce rose coloured urine
- e) has no local GIT irritating effects

2.Regarding arrhythmias secondary to overdose which is false?

- a) HCO<sub>3</sub> is the drug of choice for arrhythmias caused by tricyclic antidepressants
- b) In arrhythmias secondary to digoxin OD cardioversion is recommended
- c) Arrhythmias associated with cocaine may respond to benzodiazapines
- d) Quinine in OD produces 1A antiarrhythmic effects
- e) Dextropropoxyphene increases the QRS and QT segments in OD

3.With regards to acute cyanide OD which is **false**?

- a) ferric ion of cytochrome oxidase system is bound, ceasing oxidative phosphorylation and aerobic metabolism
- b) less than half the population will recognise the bitter almond odour
- c) Cobalt EDTA is a safe and non toxic method of treating overdose
- d) Hydroxycobalamin is a safe and non toxic method of treating overdose
- e) A cyanide level is rarely useful in management of acute OD

4.Which is false?

- a) at pH 7.4 salicylic acid is in the unionized form
- b) patients are often hyperthermic
- c) when alkalinizing the urine, serum K<sup>+</sup> replacement may be required
- d) haemodialysis is of benefit
- e) a serum salicylate level of 2.0 at 6 hours is sufficient for medical discharge.

5.With regard to paracetamol OD which is **false**?

- a) children are relatively resistant to toxicity because the cP450 system is under developed
- b) in "at risk" patients the threshold level for Nacetylcysteine should be halved
- c) acute alcohol coingestion in a person that does not usually drink is reason to lower the treatment threshold for paracetamol OD
- d) if a patient presents at 8-24 hours after OD, Nacetylcysteine should be commenced pending the results
- e) the Rumack Mathews nomogram is not helpful in multiple ingestions at different times over 24 hours.

6.A learning exercise: All of the below statements are true regarding GHB (gamma hydroxybutyrate)

- a) is a psychoactive drug of abuse
- b) it has been used clinically to treat narcolepsy, as an anaesthetic agents, to treat alcohol withdrawal and in body building
- c) it has a very short elimination half life (30 mins) and thus may not be detectable in a urine sample taken after delay of several hours
- d) has been involved in two separate group presentations to Gold Coast hospital where 11 of the 14 pts needed intubation
- e) usually taken with a coingestant, probably not recognized by the pt

7.With regards to management of Warfarin toxicity which is **false**?

- a) any major bleeding should be managed with 5-10 mg IV Vit K and FFP
- b) the onset of action of IV Vit K is 1-3 hours
- c) with an INR of 13, if a patient has minor or no bleeding then FFP is still warranted
- d) If a pt has an INR of 13 with minimal bleeding, an appropriate IV dose of Vit K would be 1-2 mg IV
- e) If Vit K is given for a toxic INR with no major bleeding then the INR should be checked in 6-12 hours, and the warfarin withheld for 1-2 days.

8. Lithium toxicity. Which is false?

- a) Toxicity associated with chronic use occurs at lower serum levels
- b) In a non user an acute overdose may not be symptomatic until the serum level is greater than 3
- c) Introduction of thiazide diuretics or NSAID's may cause a pt usually in the therapeutic range to become toxic
- d) Most effects of acute OD are neurological
- e) Appropriate management of an acute OD could include charcoal, IV fluids and haemodialysis

9. Which is the wrong mechanism of action for the listed drug/toxin?

- a) Colchicine: binds to intracellular tubulin preventing cell mitosis
- b) Amanita phalloides: impairs DNA synthesis
- c) Strychnine: inhibits glycine in the spinal cord
- d) Isoniazid: reduces folate activity
- e) Iron: disrupts oxidative phosphorylation
- f) Paraquat: generates oxygen free radicals

10. With regards to organophosphates and carbamates which is false

- a) both inactivate acetyl cholinesterase
- b) both cause an acute cholinergic syndrome
- c) both respond to treatment with atropine
- d) both respond to treatment with pralidoxime
- e) if there is associated CNS signs and muscle weakness the cause is likely to be organophosphates.

11. Which is false about the blue-ringed octopus?

- a) it has a toxin similar to tetrodotoxin, which causes paralysis
- b) treatment consists of antivenom administration and cardiovascular support
- c) spontaneous ventilation usually recurs after 12 hours
- d) despite needing CPR or assisted ventilation the patient is aware and conscious
- e) first aid consists of compression bandaging

12. Which is false with regard to the box jelly-fish?

- a) it has a vaccine which can be administered i.v. or i.m., though i.v. is more effective
- b) the tentacles may extend up to 3 metres and produce an extremely painful sting
- c) vinegar is used for its symptomatic relief only
- d) its toxin causes neuromuscular paralysis, cardiotoxicity and dermatonecrosis
- e) compression bandaging is recommended

13. Which is false?

- a) first aid of all marine 'spine' wounds consists of administration of hot water
- b) the stone fish has an antivenom which is available i.m.
- c) in Australia there are no reported deaths due to stone fish
- d) fatalities have been reported due to cone shell envenomation for which no antivenom is available
- e) most of the documented stingray fatalities are secondary to their toxin

14. With regard to snake bite which is true?

- a) there is no specific seasnake antivenom
- b) tiger and brown snakes are more likely to cause paralysis than black snake
- c) in Victoria the only two venomous snakes are the tiapan and the brown snake
- d) the dose of antivenom needed for tiger snake envenomation is usually one vial
- e) the antivenom should be diluted 1 in 10 in Normal Saline and given over half an hour

15. Comparing the Red back and the funnel web spiders, which is false?
- it is the female redback and the male funnel web which are harmful
  - death due to the funnel web spider can happen within 1 hour
  - the atratoxin of the funnel web spider causes cholinergic effects as well as muscle fasciculations and paralysis
  - the red back spider venom is rabbit based and given iv with little risk of allergy
  - severe toxicity with red back spider envenomation takes at least three hours.
16. With regard to the alcohols which is false?
- methanol causes snow storm vision in severe intoxication
  - ingestion of both methanol and ethylene glycol causes a metabolic acidosis with an increased anion gap and an increased osmolar gap
  - neither methanol or ethylene glycol are absorbed through the skin
  - you might expect to find oxalate crystals in the urine of a pt who had an ethylene glycol OD
  - methanol is not found in Australian methylated spirits
17. In patient taking meclizine you would only administer?
- fluoxetine
  - tramadol
  - lithium
  - pethidine
  - aspirin
18. In a child who definitely ingested some household dishwashing powder your treatment would consist of?
- inserting a NGT and aspirating stomach contents
  - giving ipecac
  - giving the child 250ml of water to drink
  - admitting for observation
  - urgent gastroscopy regardless of the time of day or night
19. With regards to antihistamines in overdose which is false?
- H2 receptor antagonists are relatively safe
  - 1<sup>st</sup> and 2<sup>nd</sup> generation H1 antagonists cause anticholinergic effects as well as alpha blockade and serotonin blockade.
  - 1<sup>st</sup> generation H1 blockers cross into the CNS but H2 blockers do not
  - Terfenadine can cause arrhythmias when mixed with ketoconazole and cimetidine
  - 1<sup>st</sup> generation blockers tend to cause more CVS and CNS effects
20. With regard to Calcium channel blocker OD which is a false statement?
- CaCl has more elemental calcium than CaGluconate per gram
  - There is no role for treatment with i.v. glucagon
  - They bind to charcoal
  - Verapamil OD will be hypotensive and bradycardic
  - Felodipine OD will be tachycardic if it is a small OD but bradycardic if it is large
21. With regard to carbon monoxide which is false?
- its half life with 100% O2 is 90 mins
  - the fetus is relatively protected from the effects of CO
  - CO moves the O2 dissociation curve to the left
  - The Alfred hospital study showed no long or short term difference between 100% O2 for 48 hours and two hyperbaric dives to 3 ATM
  - CO is a direct myocardial suppressant

22. Which is false?

- a) digoxin toxicity is more like to produce bradyarrhythmias than tachyarrhythmias
- b) acute digoxin OD in a non user will cause hyperkalemia
- c) cardioversion is safe
- d) in an elderly person who is digoxin toxic they are more likely to be hypokalemic
- e) both hyper and hypokalemia exacerbate digoxin's toxicity

23. With regard to Isoniazid OD which is not true?

- a) Impairs vit B 6 activity
- b) pyridoxine is the antidote
- c) one to 10 ampules of the antidote is usually sufficient
- d) there is a metabolic acidosis
- e) phenytoin is ineffective against seizures

24. With regard to Amanita Phalloides which is incorrect?

- a) they have characteristic pink spores and pink gills
- b) they impair DNA synthesis
- c) the cause a severe gastroenteritis initially
- d) there delayed effect is hepatic necrosis
- e) their mortality is up to 30%

25. Which is false?

- a) methHb does not carry oxygen
- b) mothballs and lignocaine produce metHb
- c) methylene blue can cause metHb
- d) metHb is the presence of Fe<sup>3+</sup> in the haem moiety of Hb
- e) methylene blue is same in pts with G6PD deficiency

ANSWERS:

- |       |       |       |       |       |              |
|-------|-------|-------|-------|-------|--------------|
| 1) D  | 2) B  | 3) C  | 4) E  | 5) C  | 6) no answer |
| 7) C  | 8) E  | 9) D  | 10) D | 11) B | 12) C        |
| 13) E | 14) E | 15) D | 16) C | 17) E | 18) C        |
| 19) B | 20) B | 21) B | 22) C | 23) C | 24) A        |
| 25) E |       |       |       |       |              |

8. Regarding cocaine induced myocardial ischaemia

- a.  $\beta$  blockers are useful in BP control.
- b. Up to 43% of patients with cocaine associated chest pain without MI met TIMI criteria for thrombolysis.
- c. Diazepam should be avoided in management as there is high risk of respiratory compromise.
- d. Mortality rates are high from cocaine associated myocardial infarction.
- e. Phentolamine is absolutely contraindicated in treatment of cocaine induced myocardial ischaemia as it causes hypotension.

46. Which of the following plants is not poisonous?

- a. Oleander
- b. Castor bean
- c. Wandering jew
- d. Water hemlock
- e. Foxglove

47. Mushrooms are one of the more common toxic exposures – many occurring in children < 6. Which of the following pairings is correct?
- Coprinus sp / visual hallucinations, ataxia
  - Amanita muscaria / delayed hepatic dysfunction
  - Psilocybe / delayed onset renal failure
  - Gyromitra esculenta / CNS excitement – anticholinergic effects
  - Clitocybe / muscarinic syndrome
48. Digoxin poisoning can be catastrophic. Which of the following statements is correct?
- Bidirectional ventricular tachycardia is the most common dysrhythmia seen with Digoxin poisoning.
  - Acute toxicity most closely correlates with the serum digoxin level.
  - Hypomagnesaemia predisposes toward ↑ digoxin toxicity.
  - Calcium chloride is the agent of choice in treatment of digoxin induced hyperkalaemia.
  - 0.5 – 1.0 vials of digoxin specific Fab are required to treat life threatening digoxin toxicity when the ingested dose is unknown.
49. Phenytoin levels are increased by all of the following drugs except
- Ethanol
  - Cimetidine
  - Amiodarone
  - Trimethoprim
  - Fluconazole
50. An ECG with a prolonged QT interval may be seen as a result of which overdose?
- Ethanol
  - Isopropanol
  - Ethylene glycol
  - Paradehyde
  - Methanol
51. Regarding serotonin syndrome
- Muscle rigidity when present is especially prominent in the upper limbs.
  - Associated seizures are usually prolonged.
  - There is a estimated 1% mortality rate associated with serotonin syndrome.
  - Hypertension associated with serotonin syndrome is associated with a more favourable prognosis than hypotension.
  - Dantrolene is the 1<sup>st</sup> line treatment agent.
52. Ingestion of caustic agents has significant morbidity associated. Which of the following statements is correct?
- Injuries by strong acids cause liquefaction necrosis.
  - Follow up endoscopy examination should be avoided between days 5 – 15.
  - Steroids are useful in treatment of grade 2a upper GI lesions.
  - NG tube placement and aspiration of gastric contents is the chief means of decontamination in alkali ingestion.
  - Increased risk for oesophageal malignancy is up to 50 times greater in patients with a history of caustic ingestion.

14 The following can cause *Torsades de Pointes* EXCEPT:

- a) Organophosphate poisoning
- b) Congenital prolonged QT syndrome
- c) Hypercalcaemia
- d) Tricyclic antidepressants
- e) Class III antiarrhythmic agents

22A 56 year old alcoholic man presents with jaundice, vomiting and epigastric pain. He tells you that he ingested 30 x 500mg tablets of Paracetamol 36 hours ago, along with some alcohol. The most appropriate treatment would be

- f) Expectant initially, then antidote (N-acetyl cysteine) only if Paracetamol level falls above "hepatotoxicity" line on nomogram
- g) Supportive care only
- h) Activated charcoal, intravenous NaHCO<sub>3</sub>
- i) Antidote initially, then ceasing if serum Paracetamol falls below "hepatotoxicity" line
- j) Empiric antidote therapy and supportive care

32A patient who has been taking a MAO Inhibitor for years presents to the ED with hyperthermia, confusion, hypertension and diaphoresis. He has no known allergies/adverse reactions. Which of the following agents should NOT be used in his management?

- a) Diazepam
- b) Pethidine
- c) Chlorpromazine
- d) Cyproheptadine
- e) Methysergide

36 Which of the following agents is NOT effectively eliminated by haemodialysis in overdose?

- k) Salicylate
- l) Iron
- m) Lithium
- n) Theophylline
- o) Methanol

49. Regarding iron overdose:

- a) Ferric (Fe<sup>3+</sup>) iron is better absorbed than ferrous (Fe<sup>2+</sup>) iron
- b) Activated charcoal has a role only if presentation occurs within 1/24 of ingestion
- c) If early GI symptoms resolve after 6 hours then significant ingestion is effectively excluded
- d) The absence of vomiting or other GI symptoms in the first 6 hours essentially excludes significant toxicity
- e) The return of normal coloured urine after desferrioxamine administration is an indication to increase the infusion rate

50. A 28 year old man has been removed from the scene of a house fire. Evidence of cyanide exposure may include all EXCEPT:

- a) Elevated anion gap
- b) Metabolic acidosis with a normal pO<sub>2</sub>
- c) Decreased measured O<sub>2</sub> saturations
- d) An increased arterio-venous (A-V) O<sub>2</sub> difference
- e) Elevated erythrocyte cyanide levels

57. Which of the following pairs of poison and antidote is incorrectly matched?

- a) mercury / British anti-Lewisite
- b) cyanide / dicobalt edetate
- c) paraquat / Fuller's Earth
- d) isoniazid / pralidoxime
- e) amitriptyline / Na HCO<sub>3</sub>

1. Regarding acid ingestion burns

- A they cause coagulative necrosis
- B they cause liquefactive necrosis
- C first aid is milk
- D steroid therapy reduces stricture formation

3. Digoxin toxicity is potentiated by all EXCEPT

- A hypokalemia
- B. hypomagnesemia
- C. hypermagnesemia
- D. hypocalcemia
- E. hypothyroidism

13. In regard to QT interval which is incorrect

- A with TCA overdose a long Qt interval predicts poor outcome
- B all class I antiarrhythmics prolong the QT interval

1. A 3. D 13. B

15. Regarding *Amanita Phylloides* mushroom toxicity, which is FALSE:

- a) Large doses of penicillin IV may be useful
- b) Silybinin, a milk thistle extract, may inhibit hepatic uptake of Amatoxin
- c) Multiple dose charcoal is indicated
- d) Haemoperfusion may be useful if utilised within 48 hours of ingestion
- e) Symptoms typically occur within the first 4 hours of ingestion

16. Which of the following toxins does NOT cause a syndrome comprising mydriasis, thirst, tachycardia, and urinary retention:

- a) Tricyclic antidepressants
- b) Trumpet lily
- c) Scopolamine
- d) Organophosphates
- e) Antihistamines

15. E 16. D

1. Regarding acute theophylline toxicity:

- a) theophylline has very poor oral bioavailability
- b) metabolic complications include hyperkalaemia and hypophosphataemia
- c) elimination is not increased by haemodialysis
- d) signs of minor toxicity usually manifest at serum concentrations from 220 to 440 µmol/L (20 to 40mg/L)
- e) phenytoin is the anticonvulsant of choice in seizures resulting from toxicity

1. D

37. Haemodialysis would increase the excretion of:

- a) tricyclics
  - b) benzodiazepines
  - c) digoxin
  - d) lithium
  - e) calcium channel blockers
- Tint 1062

37 D

45. A 30 yo man is treated in the ED after being trapped in a burning house. His carboxyHb level is 50%.

Which of the following statements is true?

- a) Both  $pO_2$  and  $O_2$  saturations are likely to be normal
- b) CarboxyHb shifts the  $O_2$  dissociation curve to the right, and therefore interferes with  $O_2$  delivery to the tissues
- c) Serum carboxyHb levels correlate well with toxicity
- d) Symptoms would be expected to be equivalent to those of a patient with 50% blood loss
- e) None of the above

Ros 1447 –1448

45. A

47. Pseudo-hyponatraemia results from a shift of water from the intracellular to extracellular space, caused by the presence of osmotically active solutes in the ECF. Which of the following causes the most significant fluid shifts?

- a) Acetone
- b) Mannitol
- c) Ethylene glycol
- d) Ethanol
- e) Urea

Ros 2432

48. A patient who has been taking a MAO Inhibitor for years presents to the ED with hyperthermia, confusion, hypertension and diaphoresis. He has no known allergies/adverse reactions. Which of the following agents should NOT be used in his management?

- f) Diazepam
- g) Pethidine
- h) Chlorpromazine
- i) Cyproheptadine
- j) Methysergide

Cam chap 26.1

47. B 48. B

4 Hydrocarbons

- a. Phenol is not easily absorbed via the skin
- b. Toluene can cause dysrhythmias secondary to myocardial sensitivity to catecholamines
- c. Petroleum distillates have higher viscosity and have low risk of systemic toxicity or chemical pneumonitis
- d. Eucalyptus oil is safe if ingested

9 All of the following are true of chemical burns EXCEPT

- A. acids cause deeper tissue injury than do alkalis
- B. most chemical burns should be copiously irrigated with water
- C. calcium gluconate is a specific antidote for hydrofluoric acid burns
- D. Neosporin ointment is useful for removing tar from skin
- E. time of exposure is the most important factor in determining the extent of tissue damage.

12 A 65-year-old female arrives via ambulance minutes after accidentally instilling several drops of cyanoacrylate (SuperGlue) into the left eye. She mistook the tube of glue for the artificial tears she uses for dry eyes. The upper and lower lids are joined medially, and there is a large concretion of glue on the lateral corneal surface. All of the following are accepted treatments EXCEPT

- F. immediate copious water irrigation
- G. acetone soaks
- H. mineral oil
- I. mechanical debridement
- J. surgical debridement

24 A young male presents to the ED unable to give a history. As part of the work-up, you find an anion gap (AG) of 38. All of the following are possible etiologies of this patient's problem EXCEPT

- K. lactic acidosis
- L. ethylene glycol
- M. hyperglycemic hyperosmolar state
- N. renal failure
- O. isopropanol

26 Which scenario is MOST typical of alcoholic ketoacidosis?

	<b>Glucose</b>	<b>Alcohol</b>	<b>Ketones</b>	<b>AG</b>
A.	Normal	High	Large	Present
B.	High	Low	Large	Present
C.	High	High	Small	Absent
D.	Mild elevation	Low	Large	Present
E.	Mild elevation	High	Small	Absent

27 Which of the following statements about alcoholic ketoacidosis (AKA) is FALSE?

- P. Therapy includes intravenous administration of glucose and saline solutions.
- Q. As AKA is treated, the nipride test becomes more positive.
- R. The development of Wernicke's encephalopathy can be prevented by administration of thiamine before glucose infusion.
- S. Most patients fully recover.
- T. AKA occurs only in chronic alcoholics.

2. If sodium bicarbonate therapy is ineffective, which of the following anti-dysrhythmics may be used to treat ventricular dysrhythmias associated with TCA overdose?

- A.  $\beta$ -blockers
- B. Calcium channel blockers
- C. Phenytoin
- D. Lignocaine

- E. Class IA or IC anti-dysrhythmics
3. All of the following statements concerning decontamination of the poisoned patient are TRUE, EXCEPT
- ipecac syrup continues to be a front-line tool in home management of poisoning.
  - gastric lavage is of limited utility except in selected overdoses when the airway has been adequately protected.
  - current superactivated charcoal has 1.5 times the absorptive area of older preparations.
  - cathartics may cause electrolyte derangements and dehydration.
  - whole bowel irrigation is a highly effective method for dealing with body “packers” or “stuffers” and overdoses with enteric-coated or sustained release medications.
4. A 22-year-old female presents to the ED comatose after a seizure, with a blood pressure of 80/40 and a pulse of 148. QRS duration is 280 ms. She has been depressed and began taking nortriptyline 2 weeks ago. What is the MOST appropriate initial therapeutic intervention?
- Intravenous access and sodium bicarbonate at a dose of 1 to 2 mEq/kg.
  - Intravenous access, gastric lavage, and diazepam to control seizures.
  - Airway control, intravenous access, and activated charcoal per nasogastric tube.
  - Airway control and mechanical ventilation, intravenous access, and sodium bicarbonate at a dose of 1 to 2 mEq/kg.
  - Physostigmine, 0.5 to 2.0 mg intravenously, diluted in 10 mL saline and given over 5 min.
5. All of the following statements concerning serotonin syndrome are TRUE, EXCEPT
- it is characterised by alterations in cognitive-behavioural ability, autonomic nervous function, and neuromuscular activity.
  - it is usually seen when monoamine oxidase inhibitors or selective serotonin reuptake inhibitors are combined with other serotonergic drugs.
  - morphine and fentanyl are contraindicated for treatment.
  - neuromuscular symptoms are greatest in the lower extremities.
  - mandatory treatment includes discontinuation of all serotonergic medications.
6. Which of the following statements about acetaminophen poisoning is FALSE?
- Hepatotoxicity has traditionally been defined as an ALT or AST level > 500 IU/L.
  - The Rumack-Matthew nomogram predicts the risk of hepatotoxicity after a single overdose of acetaminophen based on blood levels obtained 4 to 24 hours after ingestion.
  - The risk of death in an untreated patient whose blood level is in the “probable toxicity” zone of the nomogram is 5 to 24 percent.
  - The toxic metabolite of acetaminophen is *N*-acetyl-para-benzo-quinoneimine (NAPQI).
  - There are four stages of acetaminophen toxicity.
1. A 68-year-old woman presents to ED with “blue skin”, headache and nausea. She denies chest pain, dyspnea or syncope. She recently started taking isosorbide dinitrate (40mg qid). BP = 135/80, RR18/min, PR 88/min, T = 37°C. O/E The patient is markedly cyanotic, has laboured respirations and speaks in full sentences. Lungs are clear to auscultation. Administration of 100% oxygen does not change her cyanosis or clinical condition. Arterial and venous blood are a chocolate brown colour. Which of the following is the most likely diagnosis:
- Carbon monoxide poisoning
  - Cyanide toxicity
  - Methaemoglobinaemia
  - Myocardial infarction

e. Pulmonary embolism

24. Drug metabolism

- a) Polar molecules cross mucous membrane easily
- b) Drug metabolism tends to make molecules more polar
- c) A base is less ionized in an acidic environment

This is a toxicology question in disguise! Has to do with enhanced elimination in toxicology. Metabolism tends to make lipophilic drugs more polar (more excretable by the kidney) as ionized drug aren't reabsorbed.

Bases (ie most drugs), more ionized in acid environment so they are 'trapped' in acid urine and not reabsorbed. And acid drugs are more ionized in alkaline environment

Polar molecules tend not to cross mucous membranes

3. Formation of acetone occurs in poisoning with:

- a) ethanol
- b) methanol
- c) Ethyleneglycol ?
- d) isopranolol
- e) acetaminophen x

12. The following blood gases pH 7.17, PCO<sub>2</sub> 59, Bic 21, PO<sub>2</sub> 130 are most

likely to be consistent with:

- a) diabetic ketoacidosis
- b) diuretic overdose
- c) premature twin baby
- d) camphor ingestion with seizures
- e) oliguria and renal failure

15. One of the differences between morphine and pethidine relates to:

- a) analgesic efficacy
- b) route of metabolism
- c) ability to suppress cough
- d) histamine release effects
- e) abuse potential ?

68. All of the following substances bind well to activated charcoal EXCEPT:

- a) thioridazine
- b) atenolol
- c) cyanide
- d) benzotropine
- e) tetrahydrocannabinol (THC)

69. In paracetamol poisoning:

- a) there are theoretical advantages to giving the antidote at 2 hours post ingestion
- b) toxicity is less likely in children than adults
- c) the initial dose of N-acetylcysteine is given over 5 minutes
- d) N-acetylcysteine is not indicated more than 20 hours post ingestion
- e) activated charcoal is not used more than 1 hour after ingestion

**70. A patient who presents psychotically disturbed, hot, sweating, and tachycardic is most likely to be poisoned with:**

- a) promethazine
- b) chlorpheniramine
- c) dexamphetamine
- d) trumpet lillies
- e) all of the above

**71. Digoxin specific antibodies:**

- a) can be used to treat oleander poisoning
- b) should be used if serum digoxin is  $>4\text{meq/L}$
- c) are indicated if profound first degree heart block is present
- d) should be used if serum potassium is  $>4.5\text{mmol/L}$
- e) all of the above

**72. The best predictor of serious toxicity in TCA poisoning is:**

- a) drug plasma levels
- b) GCS less than 8
- c) estimates of ingested drug dose
- d) rightward deviation of the QRS vector
- e) QRS duration of  $>100\text{msec}$

**73. Lithium poisoning:**

- a) is treatable with multidose activated charcoal
- b) presents usually as cardiac arrhythmias
- c) is treated in part with frusemide
- d) is more dangerous if due to chronic poisoning
- e) produces ECG changes similar to hyperkalaemia

**74. The safest and most efficacious therapy for cyanide poisoning is:**

- a) sodium thiosulphate
- b) amyl nitrite
- c) sodium nitrite
- d) cobalt EDTA
- e) hydroxycobalamin

**85. The patient with these electrolytes:**

Na <sup>+</sup>	144 mmol/L
K <sup>+</sup>	4 mmol/L
HCO <sub>3</sub>	26mmol/L
Cl <sup>-</sup>	100 mmol/L

could be suffering from all of the following EXCEPT:

- a) acute renal failure
- b) methanol poisoning
- c) lower limb crush injury
- d) salicylate poisoning

e) severe diarrhoea

3. D 12. D 15. C 68. C 69. B 70. C 71. A 72. B 73. D 74. E 85. E

30) Something to do with overdoses, which is incorrect

- a. Ipecuac is not cardiotoxic
- b. Paracetamol less toxic in children
- c.
- d.
- e.

30) Regarding overdoses which is correct?

- a. \*Ipecuac is not cardiotoxic – cant find anything that says it is
- b. \*\*Paracetamol is less toxic in kids – true kids with doses <20mg/kg often have no toxic effects

38) Regarding methanol intoxication which is true

- a. 'Snowstorm' appearance in visual fields is unique to methanol
- b. ethanol is contraindicated in treatment if dialysis is considered
- c.
- d.
- e.

38) Regarding methanol intoxication which is true

- a. \*\*Snow storm in visual fields is unique to methanol. Formaldehyde/Formic acid with wide osmolar gap and wide agap metabolic acidosis
- b. Ethanol contraindicated if dialysis is considered. False – dialysis will take off the ETOH but is not contraindicated

Other stuff – can use 4 methyl pyrazole as antidote

Ethylene glycol – glycoaldehyde-glyoxylic acid – oxilic ascid and formic acid. Nephrotoxic + hypocalcaemia

21) Which of the following substances if ingested has the most toxic effect on a 5 year old

- a. Mineral oil
- b. Camphor
- c.
- d.
- e.

21) Which of the following substances has the most toxic effect on a 5 year old?

- a. Mineral oil. Pretty harmless – used as laxative
- b. \*\*camphor. Very toxic. 100% eucalyptus also quite toxic

23) Which of the following drugs is associated with hypoglycaemia

- a. Verapamil
- b. Propanolol
- c.
- d.
- e.

23) Which of the following drugs is associated with hypoglycaemia  
a. Verapamil  
b. **\*\***propranolol. Catecholamines increase glucose beta blockers block this process and also block the warning signs of tachycardia and tremor

32) Which of the following is ICORRECT regarding marijuana?  
a. The most common side effect is nausea  
b. Oral ingestion may be associated with drowsiness  
c. There are no reported deaths in the literature  
d. The serum level accurately reflects the degree of intoxication  
e.

32) Which of the following is incorrect regarding marijuana  
a. **\***most common side effect is nausea. False – used as an appetite stimulant in cancer patients  
b. Oral ingestion may be associated with drowsiness. True  
c. There are no reported deaths in the literature  
d. **\*\***The serum level accurately reflects the degree of intoxication. False

1. In iron overdose

Early increased PT is secondary to hepatic dysfunction **Late rise is due to hepatic failure**

Level and lab test dictate use of desferrioxamine, **lab test, iron level > TIBC (60micromol/l) and clinical symptoms dictate use of desferrioxamine**

Oral desferrioxamine should be used prior to IV **no role for oral (IV or IM)**

normal WCC and normal glucose exclude significant poisoning **false. WCC > 15 and Glucose > 8 correlate with toxicity**

Normal examination at 6h means can be safely discharged **TRUE, with non-toxic levels**

2. In TCA overdose

QRS < 0.14 not associated with seizures **> 0.12 seizure likely**

10mg/kg can be fatal **10 – 20mg/kg – severe toxicity**

bicarbonate should be used as first line antiarrhythmic **bicarbonate is first line antiarrhythmic**