**Misc Drugs**

**MD01** [Mar96] [Jul97] [Mar03] Oxytocin:
A. Synthesised in posterior pituitary
B. Poorly absorbed orally
C. Metabolised by oxytocinase in the liver
D. Bolus dose will increase central venous pressure
E. Bolus dose will increase systemic vascular resistance
F. Metabolised by the liver and kidney
(see also EM15)

**MD01b** [Mar99] [Jul99] Oxytocin:
A. Has diuretic effect
B. Partially depolarises uterine muscle / ?effect on membrane threshold
C. Causes emesis
D. Increases threshold of receptors for depolarisation
E. Hypertension

**MD01c** [Feb00] Oxytocin:
A. Ringed octapeptide
B. Effects on uterus antagonized by beta agonists
C. ADH like effect
D. ?

**MD02** [Mar96] [Mar97] [Jul97] [Jul98] [Jul99] [Feb00] Cisapride:
A. Will increase gastric motility in the presence of atropine
B. Can be used to treat opioid induced gastric stasis
C. Decreases/increases lower oesophageal sphincter tone (?due to atropine)
D. Decreases gastric pH
E. Increases gastric volume
F. Blocks histamine receptors
G. Agonist at D2 receptors

**MD03** [Mar96] [Jul97] [Jul98] Regarding the plasma half-life of heparin:
A. Clearance affected by warfarin
B. Depends on site of injection
C. Less for low MW heparins
D. Depends on dose given

**MD03b** [Jul97] Heparin:

A. Has a half life dependent on dose  
B. Inactivates factors XII, XI, X, IX  
C. ?  
D. ?  
(see also [[MD49]]

**MD04** [Mar96] [Jul99] [Apr01] **Paracetamol**:

A. Has an active metabolite  
B. Interferes with renal blood flow  
C. Does NOT cause gastric irritation  
D. Causes **methaemoglobinaemia**  
E. Maximum adult dose 4g

Apr 2001 version: Paracetamol:  
A. Frequently causes dyspepsia (gastric irritation)  
B. Acid-base abnormalities common with overdose  
C. Maximum dose 4 grams in adult  
D. ?  
E. ?

**MD04b** [Jul98] [Mar99] [Feb00] [Jul04] **Paracetamol**:

A. Is a powerful anti-inflammatory agent  
B. Should never be given in a dose > 20 mg/kg to children  
C. Increased risk of hepatic necrosis in chronic alcoholics  
D. Sulphate conjugation is major metabolic pathway  
E. pKa 3.5  
F. ?Glutathione conjugation

Alt version remembered from Feb 2000:
Paracetamol:
A. Has analgesic, antipyretic and anti-inflammatory effects
B. Is metabolised to BENZOQUINONIMINE which is inactivated by conjugation to glutathione
C. Dose should not exceed 4000mg/day in an adult
D. Gastric irritation is common

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Paracetamol:
A. Has analgesic, antipyretic and anti-inflammatory effects
B. Is metabolised to N-methyl-p-benzoisopuinonimine conjugated to glutathione
C. Toxic dose is 10 times the normal ?daily dose?
D. pKa 3.5
E. ?

MD04c [Jul00] Paracetamol:
A. Minimum toxic dose 8-12G/day in an adult
B.-E. ?

MD05 [Mar96] Aspirin:
A. At low doses inhibits prostacyclin
B. Reversibly inhibits lipoxygenase
C. Irreversibly inhibits cycloxygenase
D. Can cause asthmatic reactions

MD06 [Mar97] [Jul97] [Jul99] [Feb00] Serotonin (5-HT) is most common in:
A. Platelets
B. Enterochromaffin cells
C. Cerebral cortex (?neurones)
D. Pineal gland
E. GIT
F. Mast cells

MD07 [Mar97] [Jul97] [Jul98] [Mar99] [Feb00] Mannitol:
A. Metabolised in the liver
B. Half-life is proportional to GFR
C. Increases Na+
D. Excretion is dependent on GFR
E. Urine will be hyperosmolar compared to plasma
F. Absorbed orally
G. Isotonic
H. Clearance dependent on GFR
(see also [[CD17]]

MD07b [Feb04] Mannitol:
A. is a sugar and is not metabolised
B. does not increase delivery of sodium to distal tubule

MD08 [Mar97] [Jul97] [Mar99] [Mar03] [Jul04] Gastric drugs: Which is true?
A. Sucralfate is a mixture of sulphated sucrose and bismuth that sits in the ulcer
B. Gastrin & acetylcholine directly & indirectly inhibit H+ secretion
C. Misoprostol decreases gastric acid and causes marked constipation
D. Pirenzipine is less effective than H2 blockers
E. Omeprazole reversibly inhibits proton pump

MD09 [Mar97] [Feb00] A decrease in renal function might be expected with:
A. Gentamicin
B. Cis-platin
C. Busulphan
D. Methotrexate
E. All of the above

MD10 [Mar97] [Jul02] Thrombocytopenia is a side-effect of which ONE of the following:
A. Busulphan
B. Cis-platin
C. Methotrexate
D. All of the above

By Adam Hollingworth
MD11 [Jul97] [Jul98] [Jul99] Theophylline levels increased with:
A. Smoking
B. Phenytoin
C. Cimetidine
D. ?

MD12 -renumbered as EN02

MD13 [Jul97] [Feb00] When a beta agonist binds to a G-protein:
A. There is a fall in cAMP
B. The signal is amplified 108 times
   - (Comment: Several sources indicate that the wording on the paper in July 97 was as above but this doesn't make sense as a beta-agonist does not bind directly to the G protein but to a G-protein coupled receptor)
   - (Comment Mar 2000: This question has now been corrected to read: "When a ligand binds to a receptor linked to a G-protein:")
(see also EM18 in Physiol MCQs)

MD14 [Jul97] [Apr01] Dantrolene:
A. Is a benzyl-isoquinoline derivative
B. Undergoes oxidative and reductive metabolism
C. Inhibits sodium channel activation
D. Causes a marked reduction in contractility
E. Not effective as prophylaxis because of poor oral bioavailability
F. Acts via ryanodine receptor

Alt version: Dantrolene:
A. Benzylisoquinolonium
B. Undergoes hepatic and renal metabolism
C. Profound myocardial depression
D. Poor oral bioavailability

**MD15 [Jul97] Omeprazole:**
A. Irreversibly inhibits the parietal cell
B. Acts at apical membrane of parietal side
C. Acts at the basolateral membrane of the parietal

**MD16 [Mar98] Diclofenac:**
A. Plasma protein binding is ....%
B. Percent absorption . . %
C. Mechanism of action via increase in endorphins
D. ?

**MD17 [Mar98] [Apr01] [Jul04] Regarding phenytoin**
A. Acts via blockade of Na channels and via effect on K channels
B. Weak base with pKa 8.3
C. Has active metabolites
D. ?
E. ?

**MD18 [Mar98] [Mar99] [Feb00] [Apr01] [Jul02] [Mar03]** Which ONE of the following decrease gastric pH?
A. Omeprazole
B. Famotidine
C. Calcium salts
D. Misoprostil
E. PGE2

July 2000, 2002 and 2003 version: Which ONE of the following decreases gastric acid secretion?:

**Misc Drugs - 6**
A. ?  
B. Misoprostil  
C. Cisapride  
D. Na citrate  
E. Metoclopramide  

Apr 2001 version: Decrease gastric pH:  
A. Calcium salts  
B. H2 antagonists (?ranitidine)  
C. Omeprazole  
D. Pirenzipine  
E. PGE2  

MD19 [Jul98] [Mar99] [Feb00] [Jul01] [Jul04] NSAIDs:  
A. Exhibit no selectivity for COX 1 & 2  
B. Exert renal effects other than effect on afferent arterioles  
C. Cause renal toxicity separate to inhibition of prostaglandins  
D. Aspirin & ketorolac irreversibly bind COX1 & 2  
E. Directly cause gastrointestinal ulceration  

Alt version: NSAIDs:  
A. All inhibit COX 1  
B. Aspirin and ketoralac inhibit COX irreversibly  
C. They can cause renal toxicity by mechanisms other than alterations in renal blood flow by PG mediators.  

MD20 [Jul98] [Mar99] [Feb06] Irreversible cardiomyopathy can be due to: (OR: Which of the following causes dose-dependent cardiac toxicity?)  
A. Vincristine  
B. Bleomycin
C. Danorubicin
D. Asparaginase
E. Cyclophosphamide
F. All of the above

MD21 [Jul98] [Jul99] [Mar02] Streptokinase:
A. Acts on circulating plasmin
B. ?
C. Is antagonised by aminocaproic acid (EACA)
D. ?
E. ?

MD22 [Mar99] [Apr01] [Mar03] Gastric lavage:
A. Not useful if more than one hour has elapsed
B. In children, use normal saline instead of water
C. Contraindicated if poison corrosive
D. Is performed in the right lateral position
E. Should not be performed in the unconscious
(Comment: The restriction in unconscious patients is they should be intubated for airway protection)

MD23 [Mar99] [Apr01] Long term prednisolone 20mg/day will result in:
A. Increased lymphocyte count
B. Increased capillary permeability
C. Metabolic alkalosis
D. ??glucose

MD24 [Mar99] NSAIDs cause gastric side-effects by:
A. Direct effects on mucosa
B. Indirect effects

MD25 [Mar99] Phenylbutazone:
A. Interferes with heparin metabolism
B. Increases warfarin plasma concentration
C. Decreases warfarin plasma concentration
D. Reduces the elimination of warfarin

July 2000 version: Phenylbutazone's effect on the coagulation system are due to:
A. Binding to albumen, displacing warfarin
B. Inhibiting warfarin metabolism
C. ? some interaction with aspirin
D. ? effect on platelets

MD26 [Jul98] [Jul99] With respect to prednisone:
A. [Prednisone] is converted to active prednisolone in the gut
B. Prednisone 5mg is equivalent to 100mg cortisol
C. Betamethasone has equivalent mineralocorticoid activity
D. Methylprednisolone ?

Alternative version of options A & E:
A. Prednisone is converted to prednisolone after absorption from the gut.
E. Betamethasone has adrenocorticoid and mineralocorticoid activity

MD27 [Jul98] [Jul99] [Jul00] Aspirin:
A. Greatest absorption is from the stomach
B. Peak plasma level is achieved in 30]] minutes
C. Has cross-reactivity with all NSAIDs
D. Half-life 4 hours

July 2000 version: Aspirin:
A. Plasma half-life 4 hrs
B. Peak plasma concentration within 10mins of oral administration
C. Requires conversion to salicylic acid for activity
D. ? is more ?? than salicylic acid
E. Better absorption if food in stomach
F. Cross reactive sensitivity with all NSAIDs

**MD28** [Jul98] [Mar03] Organophosphates:
A. Phosphorylate the esteratic site
B. Phosphorylate the anionic site
C. ?
D. ?
(See also **MB11, MB27**)

**MD29** [Mar99] [Feb00] Warfarin affects:
A. Factor XIII
B. Protein S (? or Protein C)
C. ?

**MD30** [Jul99] [Feb00] Bleomycin
A. Related to nitrogen mustard
B. Can cause agranulocytosis (or: frequently causes myelosuppression)
C. Causes pulmonary toxicity in 90% of patients
D. Is an alkylating agent
E. Causes pulmonary oxygen toxicity due to production of superoxide radicals

**MD31** [Jul99] Which drug causes the most anaphylaxis?
A. Suxamethonium
B. High potency non-depolarisers
C. ?
D. ?

**MD32** [Jul99] [Jul04] Syrup of Ipecac:
A. Is not effective in phenothiazine overdose
B. Has peripheral irritant and direct CTZ action
C. The syrup is more potent than the fluid
D. ?
MD33 [Feb00] Regarding antiemetics which drug has anti-5HT3, anti-H1 and anti-D2 actions:

A. Ondansetron
B. Scopolamine
C. Domperidone
D. Droperidol
E. Prochlorperazine
F. Chlorpromazine

Alternative versions:
- Which of the following anti-emetics have D2, ACh, 5HT-3 antagonist effects?
- Which drug is a D2 antagonist, H1 antagonist and 5HT3 receptor antagonist?

MD34 [Jul99] [Feb00] With regard to nitric oxide

A. It is anaesthetic at high concentration
B. May improve V:Q mismatch
C. Is a liquid in the cylinder, gas at room temperature
D. ?

MD35 [Feb00] [Jul01] Ethanol

A. About 35% excreted via the lungs
B. Concentration falls at a fixed rate with respect to time
C. Only 60% is metabolised, the remainder being excreted in expired air
D. Is excreted at a rate independent of the plasma concentration
E. Constant elimination independent of plasma concentration
F. Elimination is not dependant upon amount absorbed from GIT

MD36 [Feb00] Which drugs cause convulsant activity?

A. Cocaine
B. Lithium
C. Norpethidine
D. Enflurane
E. All of the above
MD37 [Feb00] Metoclopramide
A. Increases gastric emptying faster with an oral dose than an IV dose
B. Causes diarrhoea in children
C. Is a dopamine agonist
D. ?

MD38 [Feb00] [Jul00] Physostigmine
A. Causes (? excitatory activity / ?alerting response) on the EEG
B. Doesn't cross the blood brain barrier
C. Doesn't cause sedation
D. Only has its effects at nicotinic receptors
E. Causes amnesia
F. Causes excitatory activity on the EEG
G. Is/isn’t a quaternary ammonium that does/doesn't cross BBB

MD39 [Jul00] Drugs filtered and secreted in the PCT include:
A. Penicillin
B. Probenecid
C. Chlorothiazide
D. ?
Also remembered as:
Which basic drug is secreted by the kidney for excretion?
A. Procainamide
B. Probenecid
C. Penicillin
D. Acetazolamide

MD40 [Jul00] Which of the following is bacteriostatic only?
A. Penicillin
B. Gentamicin
C. Vancomycin
D. Trimetophan
E. Cefoxitin / Cefuroxime

(see also [[MD40]]

**MD41** [Jul00] With respect to serotonergic receptor action, which ONE of the following is true?
A. Sumatriptan is a 5HT1 antagonist
B. Ondansetron is a 5HT3 agonist
C. Serotonin is a 5HT3 agonist
D. Metoclopramide is a 5HT4 agonist
E. ?

**MD42** [Jul00] Acetazolamide:
A. secreted by the renal tubules
B. diuresis
C. develop tachyphylaxis

**MD43** [Jul00] Best antiemetic for motion sickness:
A. Metoclopramide
B. Ondansetron
C. 
D. 
E. Hyoscine

**MD44** [Jul00] Complications of salbutamol used in asthma treatment include the following EXCEPT:
A. Tachycardia
B. Decreased V/Q mismatch
C. Tremors
D. Pulmonary oedema
E. Hyperkalaemia

**MD45** [Apr01] (Antibiotic sensitivities against certain bacteria)
A. Penicillin and …?
B. Amoxycillin and …staph +?
C. Flucloxacillin and G +ve?
D. ?cephalosporin and …?

**MD46** [Apr01] Aspirin overdose
A. Causes metabolic & respiratory acidosis
B. Causes metabolic & respiratory alkalosis
C. Causes metabolic alkalosis & respiratory acidosis
D. Causes metabolic acidosis & respiratory alkalosis

**MD47** [Apr01] Atropine overdose in neonates
A. Causes hyperpyrexia
B. ??

**MD49** [Apr01] [Jul01] [Jul02] [Jul04] Low molecular weight heparin
A. Has better bioavailability
B. Molecular weight 1/10 that of normal heparin
C. More protein bound than heparin
D. ?
E. ?

**MD50** [Apr01] [Jul01] [Mar03] [Jul04] Desmopressin
A. Increases factor X
B. Increases factor V
C. Causes sustained severe hypertension
D. Can be used to improve haemostasis in haemophilia
E. Increases factor VIII activity
F. ? v2B receptors?
An intravenous infusion of 8.4% sodium bicarbonate to a healthy adult may cause:
A. Hypotonicity
B. Intracellular Acidosis
C. Ionized Hypercalcaemia
D. Respiratory Alkalosis
E. Rebound Metabolic Acidosis

Bicarbonate
A. Complications include intracellular acidosis
B. 100ml of 8.4% NaCO3 has 200 milliosmoles
C. ?

Cyclo-oxygenase-1 (COX-1) isoenzyme:
A. Is increased by inflammation
B. Is predominant mode of action of indomethacin
C. Is increased by lipopolysaccaride
D. Is NOT involved in gastric mucosal protection
E. Is increased by cytokines

Caffeine
A. Is a CNS depressant
B. Causes cerebral vasoconstriction
C. Reduces the acidity of gastric fluid secretion (or: Not a gastric irritant)
D. Reduces plasma glucose level
E. Is a potent diuretic.
F. Has been shown to be dependence producing
G. Does not show an improvement in psychomotor function

Which of the following drug interactions is mediated by serotonin?
A. ?
B. ?
MD55 [Feb04] Metabolism of which drug is decreased in pseudocholinesterase activity:

A. Mivacurium
B. Cocaine
C. Procaine
D. Remifentanil
E. Esmolol

MD56 [Jul04] What drugs affecting ganglia?

A. Hexamethonium,
B. Carbachol
C. ?

MD57 [Jul04] Which of these agents does not reduce uterine contractions?

A. Nifedipine
B. Glycerol trinitrate
C. Indomethicin
D. Isoprenaline
E. Phenytoin

MD58 [Jul04] Which of the following is the MOST COMMON side effect of oxytocin?

A. Hypotension
B. ADH effect
C. Supraventricular tachycardia
D. Histamine release

MD59 [Jul04] Cause of hypotension during iv Vancomycin administration

A. ?
B. ?
C. ?
MD60 Which of the following is a non particulate antacid
A. Aluminium hydroxide
B. Sodium citrate
C. Magnesium hydroxide
D. Cimetidine
E. ?

MD61 Mechanism of action of ondansetron?
A - blocks ligand gated ion channel - True, blocks non selective cation channel - only 5HT3 subtype are ion channels, others are GPCR
B peripheral blockade 5HT3 - false - central and peripheral action - CTZ and vagal afferents / myenteric plexus
C blockade 5HT4 - false - low affinity
D increases amount of serotonin in CTZ - false I think, but only rough lack of confirmatory information

MD62 Which of the following is true regarding action on platelets?
A. Non-selective COX inhibitors act irreversibly - false
B. Clopidogrel acts reversibly
C. ?
D. Abciximab acts reversibly
E. ?

MD63 Regarding warfarin?
A. Affects platelet function
B. Increases the action of vitamin K epoxide reductase
C. ?More effective when given as an intravenous dose
D. Doesn't cross the placenta
E. Peak effect 36-72 hours following dose
Vancomycin:
A. Is less sensitive than penicillin for methicillin sensitive Staphylococci
B. ?
C. Something like "equal sensitivity for both gram positive and negative bacteria"
D. Can be used orally in outpatient
E. Half life of ?12 hours and not removed by haemodialysis

A patient for surgery is allergic to azithromycin. What else would you avoid?
A. Clindamycin
B. tobramycin
C. clarithromycin
D. ..-mycin
E. ..-mycin

MD74