

FACEM part II MCQ exam (April 2003)

- 1) Regarding **anxiety related hyperventilation** which is CORRECT
 - a) Yawning and sighing make the diagnosis less likely
 - b) Associated with HYPERcalcaemia
 - c) Associated with HYPERphosphataemia
 - d) Increased incidence in females
 - e) Subjective feeling of dyspnoea is uncommon

- 2) Regarding the acute episode of testicular pain, which of the following comes closest to excluding testicular torsion
 - a) History of previous torsion of the testicle
 - b) Resolution of pain
 - c) Anterior position of the epididymis on palpation
 - d) Presence of a cremasteric reflex
 - e) Urinary symptoms

- 3) With regards to the treatment of left ventricular failure which of the following is CORRECT
 - a) GTN reduces the myocardial oxygen demand
 - b) Frusemide acts by promoting early diuresis
 - c) Morphine is contraindicated in patients with clinical signs of CO₂ retention
 - d) Dobutamine is the inotrope of choice if the patient has associated acute pulmonary oedema and a systolic blood pressure of < 80mmHg

- 4) Regarding herpes zoster infection, which of the following is CORRECT
 - a) Ramsay Hunt syndrome is associated with vesicles on the anterior 2/3 of the tongue
 - b) Neuralgia can precede the eruption of vesicles by 3 days
 - c) Trigeminal involvement is always associated with ophthalmic injury
 - d) Steroids improve the rash
 - e) Prior history of chickenpox exposure is not required

- 5) Regarding kawasaki disease all of the following are true EXCEPT
 - a) Temperature less than 39 degrees for 5 days
 - b) Associated with desquamation of the skin on hands and feet
 - c) Polymorphous rash
 - d) Oropharyngeal erythema

- 6) Haemarthrosis is associated with all of the following EXCEPT
 - a) Septic arthritis
 - b) Sickle cell anaemia
 - c) Ruptured aneurysm
 - d) Coagulopathy

- 7) Neuroleptic malignant syndrome is associated with all of the following EXCEPT
 - a) Hypotension
 - b) Fever
 - c) Altered mental status
 - d) It only occurs within the first few days of commencement of neuroleptic agents
 - e) Hypertonicity

- 8) Regarding pre-renal azotaemia which of the following are TRUE
 - a) Specific gravity of <1.012 makes a pre-renal cause likely
 - b) Urine sodium >20mmol is associated with pre-renal renal failure
 - c) RCC casts are associated with ATN

- 9) Regarding a patient presenting with liver failure, ascites and spontaneous bacterial peritonitis, which of the following are true
- They may present with encephalopathy
 - Aminoglycosides are the treatment of choice
 - Klebsiella is the commonest pathogen
 - They uncommonly have signs of peritonism
- 10) Regarding a child with a pulled elbow, which of the following is TRUE
- Pronation is painful
 - They must all be referred to orthopaedic surgeon
 - An X-ray is mandatory
 - Commonest in 5-8 year olds
 - Swelling, bruising and deformity are often absent
- 11) Regarding the lunate, which of the following is FALSE
- It is joined to the scaphoid by a ligament
 - It is susceptible to AVN
 - It commonly dislocates anteriorly
 - In peri-lunate dislocation the relationship of the lunate with the distal radius is maintained
 - It is the 2nd most common dislocated carpal bone
- 12) Regarding posterior shoulder dislocation which of the following is FALSE
- Neurovascular complications are common
 - It is difficult to diagnose both clinically and with radiology
 - It is associated with internal rotation and adduction
 - Commonly associated with electric shock and seizures
- 13) Regarding lap belt injuries in children which of the following is FALSE
- Associated with solid organ injury
 - Associated with duodenal injury
 - Associated with diaphragm rupture
 - Associated with vertebral compression fractures
- 14) In the diagnosis and treatment of DKA which of the following is TRUE
- Serial serum ketone levels are used to guide management
 - It never occurs in patients with NIDDM
 - Serum sodium is commonly greater than 140
 - Cerebral oedema occurs most frequently in children presenting for the first time with new onset diabetes
- 15) With respect to cholecystitis which of the following is TRUE
- 75% get better in 2-7 days
 - 75% are associated with deranged LFT
 - 25% are associated with palpable gallbladder
 - 25% associated with
 - Diagnosis is confirmed with the presence of gallstones on USS
- 16) Female presenting with 2 days of dysuria. Afebrile. Urinalysis revealed pure growth of E coli. Which of the following is TRUE
- Need for Treatment is determined by the number of white cells in the urine (presence of pyuria)
 - Antibiotics should be prescribed for 10-14 days
 - Investigation of the renal tract is required
 - Loin pain and flank tenderness is pathognomonic of pyelonephritis
- 17) Regarding adrenaline in cardiac arrest, which of the following is TRUE
- Double dose treatment is required if administered by the intraosseous route
 - The appropriate dose in neonates is 20mcg/kg

- c) Appropriate IV dose is 1mg every 5-10 minutes
- d) Adrenaline is incompatible with sodium bicarbonate in peripheral line

18) Regarding paediatric sedation which of the following is TRUE

- a) Atropine dose is 1mg/kg
- b) Fentanyl dose is 2-3 mg/kg
- c) Children less than 3/12 old require reduced dose narcotics as a result of impaired opioid metabolism
- d) Patients treated with ketamine must be fasted as ketamine impairs airway reflexes

19) Regarding mitral stenosis, which of the following is TRUE

- a) Left end-diastolic pressure is normal
- b) Haemoptysis is secondary to pulmonary hypertension
- c) Pulmonary oedema is worsened by tricuspid regurgitation

20) Regarding aortic dissection which of the following is TRUE

- a) Associated with a mid to late diastolic mnmurmur
- b) Interscapular pain is common with arch dissection
- c) X-ray is normal in 1/3 of cases

21) Patient presents with bleeding, epistaxis and bruising. Results reveal isolated elevated APTT. Which of the following is TRUE

- a) Cryoprecipitate is contraindicated
- b) It could be secondary to Taipan bite
- c) The next required study is a factor VIII assay
- d) May be secondary to warfarin therapy

22) Regarding insertion and management of intercostal catheter (chest drain), which of the following is TRUE

- a) Should be inserted below the rib
- b) Intrapleural pressure should be less than water pressure under seal
- c) Loops of dependent fluid in the tube can convert a simple pneumothorax to a tension pneumothorax
- d) Catheter should be clamped for transport
- e) Maximum applied suction pressure should be 5cm of water

23) Regarding a patient with severe asthma which of the following is TRUE

- a) PEFr <60%, FEV1 of 1.5 litres is indicative of severe asthma
- b) FEV1 and PEFr correlate with perceived level of dyspnoea
- c) Altered mental state indicates severe asthma and metabolic derangement
- d) Pulsus paradoxus of >10mmHg is always present in severe asthma
- e) Patients representing in less than a week is an indicator of severity

24) Regarding pyloric stenosis which of the following is FALSE

- a) Vomiting is non-bilious
- b) It is a congenital condition
- c) Much commoner in males than females
- d) Associated with an increased bicarbonate
- e) USS is the investigation of choice

25) An 11 year old girl with 10 day history of irritability and emotional lability presents with facial grimacing and jerking limb movements, which of the following diagnoses is the most likely

- a) Huntingdons chorea
- b) Sydenhams chorea
- c) Ataxia telangiectasia
- d) Complex partial seizures
- e) Conversion disorder

26) Regarding infantile seizures which of the following is FALSE

- a) Infantile spasm is usually self-limiting and benign
- b) Neonatal seizures are associated with significant early mortality and long term morbidity
- c) Neonatal seizures are frequently associated with drugs and metabolic abnormalities
- d) Febrile status epilepticus increases the likelihood of later recurrent seizures
- e) Febrile convulsions in Children less than 1 year of age is associated with a lower risk of recurrence

27) Regarding 50% blood loss which of the following is TRUE

- a) May not be clinically apparent
- b) In an adult equates to 1000ml blood loss
- c) Will always require transfusion
- d) Is usually well tolerated in a fit healthy young person

28) Regarding endocarditis all of the following are true EXCEPT

- a) Is not associated with normal valves
- b) Streptococcus is the commonest
- c) Blood cultures are usually positive
- d) May be caused by rickettsia and fungi

29) Pregnant primigravida patient in the second trimester presenting short of breath and in AF which of the following is true

- a) Verapamil is teratogenic
- b) Digoxin should not be used as it crosses the placenta
- c) Adenosine is useful for rate control
- d) The patient may have anticardiolipin antibodies

30) Regarding red back spider bites, which of the following is TRUE

- a) Usually causes pain locally shortly after the bite
- b) Usually associated with hypertension and vomiting
- c) Should be treated with pressure immobilization
- d) Tender lymphadenopathy is uncommon

31) Regarding placenta praevia which of the following is TRUE

- a) Increased risk in multigravida women
- b) It is the commonest cause of third trimester bleeding
- c) A definitive diagnosis can be made at 20 weeks

32) With regards to electric shock which of the following is TRUE

- a) It may cause arterial aneurysms
- b) DC shock is usually associated with ventricular fibrillation
- c) 2.5 Amperes is universally fatal
- d) Lightning strike commonly causes myoglobinuria
- e) Braun and Lauder charts are useful in estimating size of injury

33) Regarding the unconscious severe acute salicylate overdose, which of the following is FALSE

- a) Associated with HYPOkalemia
- b) Associated with HYPOglycaemia
- c) Associated with metabolic alkalosis
- d) Associated with HYPERthermia
- e) Associated with pulmonary oedema

34) SIADH can be caused by all of the following EXCEPT

- a) Encephalitis
- b) Renal artery stenosis
- c) Guillen-Barre syndrome
- d) Chronic obstructive airways disease
- e) Tricyclic antidepressants

- 35) Regarding biochemical analysis following acute myocardial infarction which of the following is TRUE
- TNI is the most sensitive indicator of re-infarction 1 week post MI
 - CK MB >2% of total CK is diagnostic
 - Total CK is always elevated
 - CK MB is elevated in renal failure
 - LDH isoenzyme is the most sensitive
- 36) Regarding pleural effusion fluid analysis with protein <3g/dL which of the following is the most likely diagnosis
- Cirrhosis with hepatitis B
 - Pancreatitis
 - Rheumatoid arthritis
 - Mycoplasma infection
 - Vasculitis
- 37) All of the following may be associated with cavitating lung lesions EXCEPT
- Pulmonary infarction
 - Mycoplasma infection
 - Aspergillosis
 - Klebsiella
 - Metastasis
- 38) Regarding the management of a patient's relative who calls regarding the mistreatment and long waiting time and poor staff attitude during an admission to the emergency department. Which of the following is the most appropriate response
- Listen, sympathize, apologize and offer to investigate immediately
 - Sympathize and advise to write a letter to the CEO
 - Apologize for adverse treatment
 - Deny responsibility
- 39) Regarding heat stroke which of the following is FALSE
- Associated with temperature greater than 41 degrees
 - Stop active cooling when rectal temperature less than 39 degrees
 - Cardiovascular features predominate (Tachycardia and hypotension)
 - Benzodiazepines are used to treat shivering
- 40) Regarding the management of a child who has probably ingested liquid panadol. Child found with empty bottle of panadol, not originally full and now 2 hours after possible ingestion, which of the following is TRUE
- Paracetamol toxicity is less severe in children even with the same serum paracetamol level as adults
 - Rumack-Mathews cannot be used in children
 - Liquid panadol has toxic effects earlier than tablet form and sample should be taken at 2 hours
 - The laboratory results are inconsistent with the history given
- 41) Scuba diver complains of severe ear pain following a dive. Examination revealed fluid behind the tympanic membrane (?haemotympanum) which of the following is TRUE
- Consult ENT surgeon emergently
 - Administer antibiotics and ENT review within 24 hours
 - Treat with high flow oxygen therapy
 - Treat with hyperbaric oxygen
 - Administer analgesia, decongestant and exercise programme to open the eustachian tube
- 42) Regarding hypertensive intracerebral haemorrhage which of the following is TRUE
- Most commonly occurs in the thalamus
 - Associated with rupture of perforating vessels usually
 - 30% occur in the cerebellum

- d) There is no evidence on CT within the first 3 days
- e) Pontine bleed is associated with unequal pupils

43) Regarding head trauma which of the following is TRUE

- a) SDH is associated with biconvex lesion
- b) SDH in infants rarely causes seizures
- c) Depressed skull fractures are commonest in the occipital region
- d) Basal skull fractures are best seen on skull X-ray
- e) Hemorrhagic necrosis is usually wedge shaped

44) Criteria for positive DPL following blunt trauma includes all of the following EXCEPT

- a) Food particles
- b) Bile
- c) RCC > 200,000
- d) Wcc >100
- e) E coli > 10

45) Regarding patients with SAH, which of the following are TRUE

- a) Up to 50% present with sentinel bleed
- b) 5-10% present with seizures or syncope
- c) There are no clinical indicators for those who develop vasospasm
- d) Re-bleeds are 3 x commoner than vasospasm

46) All of the following are causes of acute red eye EXCEPT

- a) Glaucoma
- b) Uveitis
- c) Pseudomonas conjunctivitis
- d) Keratitis
- e) Retrobulbar neuritis

47) Sumatriptan is contraindicated in all the following circumstances except:

- a) Ischemic heart disease
- b) Ergotamine within 24hr
- c) Controlled hypertension
- d) Suspected hemiplegic migraine

48) Serious causes of syncope is associated with all of the following EXCEPT:

- a) Occurrence while supine
- b) Chest pain
- c) Occurrence during micturition or defecation

48) Paediatric airway – all true except

- a) With the ETT taped, neck flexion tends to cause extubation
- b) Neck extension tends to cause extubation
- c) Narrowest part of the airway is subglottic, at the level of the cricoid
- d) Glottis is higher than in the adult

49) Pre-hospital fluids

- a) Have been demonstrated to improve mortality
- b) Associated with significantly longer pre-hospital transport times
- c) Should be used in all cases of shock
- d) Colloid is better than crystalloid
- e) None of the above

50) PID

- a) Admission indicated in pregnancy

- b) 50% polymicrobial

FACEM part II MCQ exam (April 2003) Answers

- 1) Regarding **anxiety related hyperventilation** which is **CORRECT**
 - a) Yawning and sighing make the diagnosis **more** likely
 - b) Associated with **HYPOcalcaemia** (associated with respiratory alkalosis with reduction in ionized calcium, also associated with **hypokalaemia**)
 - c) Associated with **HYPOphosphataemia** (respiratory alkalosis)
 - d) ****Increased incidence in females (4-8% of population Dx with anxiety disorders and the majority (80%) are in women**
 - e) Subjective feeling of dyspnoea is **common**

- 2) Regarding the **acute episode of testicular pain**, which of the following comes closest to **excluding testicular torsion (aim is to exclude or reveal testicular ischaemia)**
 - a) History of previous torsion of the testicle (prior history of torsion **DOES NOT** rule out torsion especially if absorbable sutures were used)
 - b) Resolution of pain (pain may come and go in torsion as the testicle torts and detorts)
 - c) Anterior position of the epididymis on palpation
 - d) ****Presence of a cremasteric reflex (Cremasteric reflex is usually ABSENT in testicular torsion) (presence has 96% NPV for torsion)**
 - e) Urinary symptoms (these are **rare** in testicular torsion)

- 3) With regards to the **treatment of left ventricular failure** which of the following is **CORRECT**
 - a) GTN reduces the myocardial oxygen demand (Venodilator reducing preload, but also reducing the expulsive resistance to left ventricle and reducing afterload) (Mimms states that 'GTN reduces myocardial oxygen demand by increasing venous capacitance and reducing ventricular volume')
 - b) Frusemide acts by promoting early diuresis (frusemide is associated with early pulmonary venodilation and later diuresis to relieve CHF) (Tintinalli describes effects as promoting rapid diuresis on own and decreasing preload in combination with GTN)
 - c) ****Morphine is contraindicated in patients with clinical signs of CO2 retention (morphine reduces afterload, potent vasodilator effect with histamine release, has sedative effect and should be 'given with caution' to those with respiratory insufficiency) (Mimms state morphine is contraindicated in respiratory depression)**
 - d) Dobutamine is the inotrope of choice if the patient has associated acute pulmonary oedema and a systolic blood pressure of < 80mmHg (Dobutamine is a Beta 1 selective agonist most useful in **NORMOTENSIVE** patients with APO; **dopamine is the most useful in APO associated with hypotension**)

- 4) Regarding **herpes zoster** infection, which of the following is **CORRECT**
 - a) Ramsay Hunt syndrome is associated with vesicles on the anterior 2/3 of the tongue (Ramsay Hunt is associated with involvement of the geniculate ganglion and is associated with areas of CN VII cutaneous innervation with facial palsy, loss of taste to the anterior 2/3 of the tongue and vesicles on the TM or in the ear canal) (Intra-oral lesions occur with involvement of the maxillary or mandibular branches of CN VII)
 - b) **** Neuralgia can precede the eruption of vesicles by 3 days (Prodrome with neuralgia usually precedes the rash by 1-3 days)**
 - c) Trigeminal involvement is **always** associated with ophthalmic injury (Remember that lesions on the tip of the nose are often the herald of eye involvement (due to nasociliary branch of V involved)) (Trigeminal involvement is commonly associated with HZ ophthalmicus, **BUT NOT** always)

- d) Steroids improve the rash (Steroids **DO NOT** improve the rash but improve quality of life indices in the elderly)
 - e) Prior history of chickenpox exposure is not required (Shingles occurs **only** in patients who have had chickenpox)
 - f) Note that famciclovir more effective than acyclovir, only assist if given in the first 72 hours and **DO NOT** alter the subsequent problem of post herpetic neuralgia)
- 5) Regarding **Kawasaki disease** all of the following are true EXCEPT
- a) ****Temperature less than 39 degrees for 5 days (Fever of >38.5 for >5 days is the first consideration for Kawasaki)**
 - b) Associated with desquamation of the skin on hands and feet (Normally associated with palm and sole erythema and swelling in initial presentation, this develops into desquamation 10-14 days)
 - c) Polymorphous rash (Polymorphous to confluent generalized rash characteristic)
 - d) Oropharyngeal erythema (Peri-oral and pharyngeal erythema another cardinal sign)
- 6) **Haemarthrosis** is associated with all of the following EXCEPT (Note definition of haemarthrosis is extravasation of blood into a joint or synovial cavity)
- a) ****Septic arthritis (Generally a septic condition with high pyogenic factor associated with pain and swelling, however arthrocentesis may be bloody)**
 - b) ***Sickle cell anaemia (Sickle arthropathy is associated with monoarticular joint swelling with warmth and effusion, aspiration of joint reveals sickle cells ie blood)**
 - c) Ruptured aneurysm (Can be associated with acute haemarthrosis)
 - d) Coagulopathy (Congenital or acquired coagulopathy can be associated with haemarthrosis)
- 7) **Neuroleptic malignant syndrome** is associated with all of the following EXCEPT
- a) Hypotension (Autonomic instability with labile hypertension and hypotension, tachycardia, hyperthermia)
 - b) Fever (Hyperthermia very common but not universal at presentation)
 - c) Altered mental status (From confusion to coma)
 - d) ****It only occurs within the first few days of commencement of neuroleptic agents (occurs at any time during therapy or withdrawal of therapy and is not exclusive to neuroleptic agents)**
 - e) Hypertonicity (Muscle rigidity) (Lead-pipe rigidity)
- 8) Regarding **pre-renal azotaemia** which of the following are TRUE
- a) Specific gravity of <1.012 makes a pre-renal cause likely (Pre-renal failure associated with SG >1.020 and renal failure <1.010)
 - b) Urine sodium >20mmol is associated with pre-renal renal failure (Urinary sodium usually <20 with pre-renal failure)
 - c) RCC casts are associated with ATN (RCC casts associated with renal parenchymal disease, GN, renal infarction, sickle cell, scurvy and malignant hypertension) (Epithelial casts associated with renal tubular damage, nephrosis, eclampsia, amyloidosis)
 - d) Other pre-renal facets (SG >1.012, Urinary sodium <20, urine osmolarity >500, associated with no casts or hyaline casts, U:Cr ratio >20:1 (>100))
- 9) Regarding a patient presenting with liver failure, ascites and **spontaneous bacterial peritonitis**, which of the following are true (Presentation is usually in the setting of liver failure with ascites with abdominal pain and tenderness +/- worsening encephalopathy)
- a) ****They may present with encephalopathy (Up to 50% present with encephalopathy)**
 - b) Aminoglycosides are the treatment of choice (Gentamicin useful for treating Gram negative aerobes, with metronidazole covering anaerobes in the sicker patients: 3rd generation cephalosporin for less sick)

patients and adequate cover as monotherapy for SBP: Gentamicin often used in underdose for fear of renal complications with emergence of antimicrobial resistance by enterococcus species)

- c) *Klebsiella* is the commonest pathogen (*Klebsiella* and *E. coli* account for >50% of single organism infections according to Tintinalli) (*Klebsiella* is facultative anaerobic Gram negative rod)

Etiologic agents (>90% intestinal flora)

75% are **aerobic** gram-negative organisms, and **more than 50% are *Escherichia coli***

One fourth are aerobic gram-positive organisms (19% streptococcal species)

Anaerobic organisms are rare because of the high oxygen tension of ascitic fluid

Single organism (92%)

Polymicrobial (8%)

- d) They uncommonly have signs of peritonism (Commonly have abdominal tenderness and signs of peritonism (up to 70% of cases)) (30% may be asymptomatic)

10) Regarding a child with a **pulled elbow**, which of the following is **TRUE**

- a) Pronation is painful (Arm is held in slight flexion and pronation) (**Supination** is painful)
b) They must all be referred to orthopedic surgeon (Only recurrent subluxations or cases which do not resolve with initial manipulation and observation for 24 hours with adequate analgesia must be referred)
c) An X-ray is mandatory (Not necessary unless another diagnosis is being considered)
d) Commonest in 5-8 year olds (Commonest in 1-4 year olds) (Usually NOT seen in children older than 7)
e) ****Swelling, bruising and deformity are often absent**

11) Regarding the **lunate**, which of the following is **FALSE**

- a) It is joined to the scaphoid by a ligament (Scapholunate ligament intrinsic ligament binding scaphoid and lunate together) (Most commonly injured ligament in the wrist usually secondary to dorsiflexion injury with FOOSH)
b) It is susceptible to AVN (May be associated with AVN Kienbochs disease) (Same as for Scaphoid fractures, the blood supply is from distal to proximal so proximal AVN commonest)
c) It commonly dislocates anteriorly (Perilunate dislocation involves the posterior displacement of the capitate and further distraction causes anterior dislocation of the lunate into the palm of the hand)
d) In peri-lunate dislocation the relationship of the lunate with the distal radius is maintained (In trans scaphoid peri-lunate dislocations the lunate maintains its proximal association with the distal articular surface of the radius)
e) ****It is the 2nd most common dislocated carpal bone (Lunate is the commonest carpal bone to dislocate)**

12) Regarding **posterior shoulder dislocation** which of the following is **FALSE**

- a) ****Neurovascular complications are common (Fractures are common, but neurovascular complications are less common than in anterior dislocations)**
b) It is difficult to diagnose both clinically and with radiology (Certainly can be)
c) It is associated with internal rotation and adduction (Mechanism of injury is by forceful indirect internal rotation and adduction) (As such presentation of the arm is in adduction and internal rotation) (External rotation and abduction cause severe pain)
d) Commonly associated with electric shock and seizures (Mechanism is usually a fall, or violent muscle contraction in seizures and electric shocks)

13) Regarding **lap belt injuries in children** which of the following is **FALSE** (Usually associated with bowel or mesenteric injury with associated lumbar spine injury of burst or chance nature)

- a) Associated with solid organ injury (Spleen > liver, uncommon association with lap belt injury but does occur)
b) Associated with duodenal injury (Intestinal injuries occur in <5% of paediatric lap belt trauma and commonly involves the **jejunum**)
c) Associated with diaphragm rupture (Diaphragm rupture is commonest on the left (no protective effect of liver) and associated with penetrating 1) chest trauma with <5% due to blunt chest trauma and 2) Abdominal trauma with 50% associated with pelvic fracture and 80% having other abdominal injuries) (DPL +ve in 50% associated with blunt abdominal trauma)
d) ****Associated with vertical compression fractures (Mid lumbar fractures are commonest with bowel injury and the presence of a vertebral fracture necessitates search for bowel injury) Need to define Chance,**

burst, wedge fractures by mechanism to understand vertebral compression fracture (A Chance fracture is caused by a **flexion** around an axis anterior to the anterior spinal longitudinal ligament. A high-speed MVA with the occupant in a lap belt will produce this mechanism. The Chance fracture involves the spinous process, lamina, transverse processes, pedicles, and vertebral body. The lateral radiograph will show the fracture through the posterior elements and vertebral body) (Vertebral compression can cause a burst fracture and only occurs in the lumbar and cervical spines (Thoracic too kyphosed) with great force, the disc material is forced against the spinal cord in the BURST fracture. Burst fractures are unstable and extend the anterior wedge fracture posteriorly to disrupt the posterior cortex)) (SCIWORA can occur due to spinal flexibility) (Wedge fracture associated with anterior vertebral body compression only and are stable, but treated as unstable until CT evaluation of posterior limits)

14) In the diagnosis and treatment of DKA which of the following is TRUE

- a) Serial serum ketone levels are used to guide management (Ketones initially increase with treatment then fall to normal levels, they are recommended only to be checked on presentation and serial measurements are not necessary)
- b) It never occurs in patients with NIDDM (Predominantly occurs in patients with IDDM, but has been well described in patients with NIDDM)
- c) Serum sodium is commonly greater than 140 (Serum sodium is usually depleted and serum levels are often spuriously low and do not adequately reflect the sodium deficit) (Decline of serum sodium during treatment is a potential sign of cerebral oedema developing)
- d) **Cerebral oedema occurs most frequently in children presenting for the first time with new onset diabetes (Harwood and Nuss states that risk factors for cerebral oedema in kids include 'new onset IDDM in children less than 5 and a prolonged period of untreated DKA)(IDDM with DKA in kids is common)(Commonest cause of diabetic death in patients <24) (Cerebral oedema is unpredictable but usually becomes apparent several hours after the child appears to be improving and has been thought to be associated with excessive rehydration, bicarbonate, rapid insulin administration, rapid glucose correction) (Not a presenting complaint, although the child may be in coma, they are usually 5-10% dehydrated on admission and do not have cerebral oedema)

15) With respect to cholecystitis which of the following is TRUE

- a) * 75% get better in 2-7 days (75% of patients treated medically with admission, IV fluids, bowel rest and antibiotics get better in 2-7 days) (Ultimate treatment is surgical and is usually performed with resolution of the initial attack after 24-72 hours)
- b) 75% are associated with deranged LFT (Jaundice occurs in 10-30%) (The presence of leucocytosis, deranged LFT and lipase levels are used as indicators of cholecystitis though no test has a high enough sensitivity to detect cholecystitis)
- c) 25% are associated with palpable gallbladder
- d) 25% associated with
- e) Diagnosis is confirmed with the presence of gallstones on USS (USS diagnosis in cholecystitis sensitivity 91% specificity 79% (meta-analysis) and with real time B USS sensitivity 98% and specificity 100%) (Acalculous cholecystitis accounts for 5-10% of patients presenting with cholecystitis so no gallstones seen on USS)

16) Female presenting with 2 days of dysuria. Afebrile. Urinalysis revealed pure growth of E coli. Which of the following is TRUE

- a) Need for Treatment is determined by the number of white cells in the urine (presence of pyuria)
- b) Antibiotics should be prescribed for 10-14 days (Normally need 5-7 days, subclinical PN needs 10-14 days)
- c) Investigation of the renal tract is required
- d) ** Loin pain and flank tenderness is pathognomonic of pyelonephritis (Also need systemic signs of infection)

17) Regarding adrenaline in cardiac arrest, which of the following is TRUE

- a) Double dose treatment is required if administered by the intraosseous route (No have the same treatment regimen) (ETT dose of adrenaline (0.1mg/kg) is 10 x the IV dose of 0.01mg/kg)
 - b) The appropriate dose in neonates is 20mcg/kg (10mcg/kg) (0.01mg/kg)
 - c) Appropriate IV dose is 1mg every 5-10 minutes (Every 3-5 minutes)
 - d) ** Adrenaline is incompatible with sodium bicarbonate in peripheral line
- 18) Regarding paediatric sedation which of the following is TRUE
- a) Atropine dose is 1mg/kg (0.01 to 0.02 mg/kg, 10-20mcg per kg with minimum dose 0.1mg in paediatric resuscitation) (ET dose is double IV dose) (Can be repeated every 5 mins to a maximum of 0.5mg in child, 1-2mg in adolescent and 3mg in adult)
 - b) Fentanyl dose is 2-3 mg/kg (0.001mg/kg (1mcg per Kg)) (Potency 100 x that of morphine which has a dose of 0.1mg/kg)
 - c) **Children less than 3/12 old require reduced dose narcotics as a result of impaired opioid metabolism
 - d) Patients treated with ketamine must be fasted as ketamine impairs airway reflexes (increase heart rate, BP, mild cardiac depressant with bronchodilatory effects) (0.5-2.0mg /kg for sedation to anaesthesia) (no impairment of upper airway reflexes, but increases secretions)
- 19) Regarding mitral stenosis, which of the following is TRUE
- a) **Left end-diastolic pressure is normal
 - b) Haemoptysis is secondary to pulmonary hypertension (associated with increased pulmonary vascular pressure)
 - c) Pulmonary oedema is worsened by tricuspid regurgitation
- 20) Regarding **aortic dissection** which of the following is TRUE
- a) Associated with a mid to late diastolic murmur (associated with early diastolic murmur of aortic regurgitation)
 - b) Interscapular pain is common with arch dissection (Commonly (>90%) of dissections present with chest or interscapular pain) (Anterior chest is associated with ascending aorta)(Interscapular pain is usually associated with descending aorta dissection)
 - c) X-ray is normal in 1/3 of cases (Most common radiographic finding is mediastinal widening which is present in >75% of cases) (CT sensitivity and specificity 83-100%)
 - d) NOTE: Treatment is with beta blockers and antihypertensives such as nitroprusside with SBP titrated to 120-130mmHg
- 21) Patient presents with bleeding, epistaxis and bruising. Results **reveal isolated elevated APTT**. Which of the following is TRUE
- a) Cryoprecipitate is contraindicated
 - b) It could be secondary to Taipan bite (Usually associated with black snake)
 - c) **The next required study is a factor VIII assay
 - d) May be secondary to warfarin therapy (Usually associated with PT elevation, but can involve APTT and PT rises)
- 22) Regarding insertion and management of **intercostal catheter (chest drain)**, which of the following is TRUE
- a) Should be inserted below the rib (Should be inserted directly above the rib to avoid intercostal vessels)
 - b) Intrapleural pressure should be less than water pressure under seal (Seal is attached with -20 to -30cmH2O pressure under suction so water pressure is less than intrapleural pressure)
 - c) **Loops of dependent fluid in the tube can convert a simple pneumothorax to a tension pneumothorax (Lops of dependent fluid can act as clamp and rise in pressure causes tension)
 - d) Catheter should be clamped for transport (Chest tube should not be clamped as rise in pressure will cause tension)
 - e) Maximum applied suction pressure should be 5cm of water (Applied suction -20 to -30cmH2O)
- 23) Regarding a patient with severe asthma which of the following is TRUE
- a) PEFr <60%, FEV1 of 1.5 litres is indicative of severe asthma (Usually taken as 25% of best predicted PEFr and FEV1, making PEFr <30% and FEV1 <1 litre)

- b) FEV1 and PEFV correlate with perceived level of dyspnoea (Can be used to predict the need for hospitalisation based on comparison with normal best effort when well with accuracy 86-93%)
- c) **Altered mental state indicates severe asthma and metabolic derangement (Altered mental status is associated with severe asthma and impending respiratory arrest, usually associated with metabolic derangement)
- d) Pulsus paradoxus of >10mmHg is always present in severe asthma (Pulsus paradoxus of >20mmHg is a good clinical indicator of severe asthma, but is not always present)
- e) Patients presenting in less than a week is an indicator of severity (Usually patients presenting in less than 1 week is an indicator of severity)

24) Regarding pyloric stenosis which of the following is FALSE

- a) Vomiting is non-bilious (Characteristically projectile and non-bilious)
- b) **It is a congenital condition (Familial predisposition in 50% of patients and the condition develops over the first few weeks of life and is not congenital)
- c) Much commoner in males than females (Usually associated with first born males) (1 in 150 males and 1 in 750 females)
- d) Associated with an increased bicarbonate (Hypokalaemic, hypochloraemic, hyponatraemic metabolic alkalosis)
- e) USS is the investigation of choice (Demonstrates pylorus hypertrophy) (False positives rare but false negative in 20% of cases)

25) An 11 year old girl with 10 day history of irritability and emotional lability presents with facial grimacing and jerking limb movements, which of the following diagnoses is the most likely

- a) Huntingtons chorea
- b) Sydenhams chorea
- c) Ataxia telangiectasia
- d) **Complex partial seizures
- e) Conversion disorder

26) Regarding infantile seizures which of the following is FALSE

- a) **Infantile spasm is usually self-limiting and benign (Unique form of seizures with onset 3-9 months of age; regression in development; brief spasm 1 second with neck flexion or extension; occur in clusters of 5-20 spasms several times a day; more often on arousal from sleep or with environmental stimulation; EEG abnormal in >90% with hypsarrhythmia in >50%)(Mental retardation in up to 85%)
- b) Neonatal seizures are associated with significant early mortality and long term morbidity (Very worrying for a fundamental underlying cause and progression to long term morbidity and development of epilepsy)
- c) Neonatal seizures are frequently associated with drugs and metabolic abnormalities (Frequently associated with electrolyte and metabolic abnormalities)
- d) Febrile status epilepticus increases the likelihood of later recurrent seizures (3-5% of children have febrile seizures, and 30-40% develop further febrile seizures if onset is less than 1 year old) (Increased risk of ;later seizures with status epilepticus, recurrent seizures in same illness, 3 or more seizures in 6 months, previous, underlying neurological deficit)
- e) Febrile convulsions in Children less than 1 year of age is associated with a lower risk of recurrence (Associated with a higher risk of recurrence (30-40%) (Usually at onset of illness associated with a rapid rise in temperature and may recur several times in the course of the illness)

27) Regarding 50% blood loss which of the following is TRUE

- a) May not be clinically apparent (>40% should be clinically apparent with increased HR,RR decreased BP and UO)
- b) In an adult equates to 1000ml blood loss (>2000 ml (70ml/kg in body))
- c) Will always require transfusion (Never always)
- d) **Is usually well tolerated in a fit healthy young person (can be well tolerated)

28) Regarding endocarditis all of the following are true EXCEPT

- a) **Is not associated with normal valves (Can occur with normal valves, but commonly occurs with congenital valvular defects and mechanical valves)
- b) Streptococcus is the commonest (Commonest is strep viridans (declining) and staph aureus (increasing) in left heart involvement) (Right sided infection is associated with 75% staph aureus and 25% strep)
- c) Blood cultures are usually positive (Diagnosis is based on positive blood culture results and echo findings with clinical findings)
- d) May be caused by rickettsia and fungi

29) Pregnant primigravida patient in the second trimester presenting short of breath and in AF which of the following is **true**

- a) Verapamil is teratogenic (Verapamil has been shown to be effective in reversion of SVT in pregnancy without adverse foetal outcomes)
- b) Digoxin should not be used as it crosses the placenta (Digoxin, verapamil, lignocaine can be used in pregnancy at normal doses without harmful effect to the foetus) (Beta blockers can be used in acute situation but not for prolonged use)
- c) Adenosine is useful for rate control (Not useful in rate control of AF, may be used to determine underlying rhythm (AF or flutter), but not in rate control)
- d) **The patient may have anticardiolipin antibodies (may be present in pregnancy as a risk factor in the development of PTE)
- e) Heparin can be used in normal doses in pregnancy

30) Regarding red back spider bites, which of the following is **TRUE**

- a) **Usually causes pain locally shortly after the bite
- b) Usually associated with hypertension and vomiting (May occur but generally present with abdominal pain and vomiting, hypotension more common)
- c) Should be treated with pressure immobilization (No indication for pressure immobilisation)
- d) Tender lymphadenopathy is uncommon (Most bites associated with tender lymphadenopathy)

31) Regarding placenta praevia which of the following is **TRUE**

- a) **Increased risk in multiparous women (Increased risk in multiparity and LSCS)
- b) It is the commonest cause of third trimester bleeding (Placenta praevia 20%, abruption 30%, 50% associated with PROM and bleeding from cervical or vulval lesions)
- c) A definitive diagnosis can be made at 20 weeks (Repeat scan at 20 weeks which may confirm coverage of the os, but definitive diagnosis at 32 weeks with further USS closer to delivery)
- d) Associated with 20% of bleeding episodes over 20 weeks

32) With regards to electric shock which of the following is **TRUE**

- a) **It may cause arterial aneurysms (electrical current passing through peripheral arteries may cause arterial spasm, thrombosis or aneurysm formation)
- b) DC shock is usually associated with ventricular fibrillation (DC shock usually associated with asystole)
- c) 2.5 Amperes is universally fatal (2.5A usually associated with cutaneous burns, 5-10A associated with fatality and >10 A virtually universally fatal)
- d) Lightning strike commonly causes myoglobinuria (Commonly associated with either flashover burns or death) (can cause myoglobinuria when associated with massive muscle destruction, but not common)
- e) Braun and Lauder charts are useful in estimating size of injury (Only useful in estimating extent of cutaneous burn injury, not internal injury (cause of death))

33) Regarding the unconscious severe acute salicylate overdose, which of the following is **FALSE**

- a) Associated with HYPOkalemia (Associated with hyperventilation)
- b) Associated with HYPOglycaemia (Uncommon manifestation of salicycism unless severe toxicity)
- c) **Associated with metabolic alkalosis (Associated with metabolic acidosis and respiratory alkalosis as primary entities)
- d) Associated with HYPERThermia (Uncommon manifestation unless severe overdose)
- e) Associated with pulmonary oedema (Associated with non-cardiogenic pulmonary oedema)

34) SIADH can be caused by all of the following EXCEPT

- a) Encephalitis (Associated with variety of neurological conditions ranging from cerebral infection (encephalitis) to head injury) (Central release of ADH)
- b) **Renal artery stenosis
- c) Guillan-Barre syndrome (Neurological cause as well as DT and MS)
- d) Chronic obstructive airways disease (Pulmonary cause, as well as carcinoma)
- e) Tricyclic antidepressants (Associated with SSRI and TCA antidepressants)
- f) Associated with euvolaemic hyponatraemia due to additional secretion of ADH

Aetiology of SIADH

1) Central Nervous System Disease (Central release of ADH)

Tumour

Trauma

Infection

CVA, head injury, GBS, MS, DT

2) Pulmonary Disease

Tumour (Carcinoma)

Pneumonia (Lung abscess, TB)

COPD

Lung abscess and bronchiectasis

CF

3) Carcinoma

Lung, pancreas, ovarian, lymphoma

4) Medication

Antidepressants (SSRI, TCA)

Phenothiazines

Narcotics

Chemotherapy

35) Regarding biochemical analysis following acute myocardial infarction which of the following is TRUE

- a) TNI is the most sensitive indicator of re-infarction 1 week post MI (TNI may remain elevated for 7 to 10 days post infarct and is a better indicator of myocardial necrosis than CKMB) (The rapid return to normal levels of CKMB after infarction makes it useful in the diagnosis of later re-infarction when TNI is less accurate)
- b) CK MB >2% of total CK is diagnostic (Rise to twice normal in 6 hours and peak within 24 hours, last for up to 2 days) (Sensitivity 93-100% and specificity 57-65%) (For accuracy the CK MB fraction should be >5%, but accuracy is increased with CK MB1 and 2 ratio, being specific for myocardial damage if >1.5%)
- c) Total CK is **always** elevated
- d) **CK MB is elevated in renal failure (CK MB elevated in skeletal muscle damage, chronic renal failure, muscle wasting disease and cocaine use)
- e) LDH isoenzyme is the most sensitive (TNI is the most sensitive, LDH isoenzyme 1 is the most specific for cardiac muscle but lacks sensitivity)

36) Regarding pleural effusion fluid analysis with protein <3g/dL which of the following is the most likely diagnosis (Low protein associated with transudate) (High protein associated with exudate, associated with increased WCC and inflammatory cells of infection and inflammatory disease)

- a) **Cirrhosis with hepatitis B (Transudate with Hypoalbuminemia)
- b) Pancreatitis (Associated with inflammatory exudate)
- c) Rheumatoid arthritis (Associate with inflammatory exudate)
- d) Mycoplasma infection (Infection associated with low pH, low glucose and high LDH, high WCC and increased PMN of infective exudate)
- e) Vasculitis (Associated with inflammatory exudate)

37) All of the following may be associated with Cavitating lung lesions EXCEPT

- a) Pulmonary infarction
- b) ****Mycoplasma infection**
- c) Aspergillosis
- d) Klebsiella
- e) Metastasis

38) Regarding the management of a patient's relative who calls regarding the mistreatment and long waiting time and poor staff attitude during an admission to the emergency department. Which of the following is the most appropriate response

- a) ****Listen, sympathize, apologize and offer to investigate immediately**
- b) Sympathize and advise to write a letter to the CEO
- c) Apologize for adverse treatment
- d) Deny responsibility

39) Regarding heat stroke which of the following is FALSE

- a) Associated with temperature greater than 41 degrees
- b) Stop active cooling when rectal temperature less than 39 degrees (Beware precipitating hypothermia)
- c) ****Cardiovascular features predominate (Tachycardia and hypotension) (It is the CNS features which are universal above 42 degrees and part of the definition of heat stroke is the presence of temperature elevation and CNS dysfunction) (Usually associated with cerebral oedema)**
- d) Benzodiazepines are used to treat shivering
- e) Heat stroke is defined as increased temperature >40.5 degrees with CNS dysfunction and anhidrosis

40) Regarding the management of a child who has probably ingested liquid panadol. Child found with empty bottle of panadol, not originally full and now 2 hours after possible ingestion, which of the following is TRUE

- a) ****Paracetamol toxicity is less severe in children even with the same serum paracetamol level as adults**
- b) Rumack-Mathews cannot be used in children (It can be used in children though there has been no absolute verification by prospective or retrospective studies)
- c) Liquid panadol has toxic effects earlier than tablet form and sample should be taken at 2 hours (Liquid panadol has less toxic effects than adult panadol in children and usually has less serious consequences) (No indication to take serum levels before stated time of 4 hours)
- d) The laboratory results are inconsistent with the history given

41) Scuba diver complains of severe ear pain following a dive. Examination revealed fluid behind the tympanic membrane (?haemotympanum) which of the following is TRUE

- a) Consult ENT surgeon emergently
- b) Administer antibiotics and ENT review within 24 hours
- c) Treat with high flow oxygen therapy
- d) Treat with hyperbaric oxygen
- e) ****Administer analgesia, decongestant and exercise programme to open the eustachian tube**

42) Regarding hypertensive intracerebral haemorrhage which of the following is TRUE

- a) Most commonly occurs in the thalamus (Order of common sites is Putamen, thalamus, pons, cerebellum) (PTPC) (Most commonly occurs in the putamen)
- b) ****Associated with rupture of perforating vessels usually (Blood leaks from small intracerebral arterioles chronically damaged by hypertension)**
- c) 30% occur in the cerebellum (Small percentage <10% and an acute neurosurgical emergency as operation may save life)
- d) There is no evidence on CT within the first 3 days (Immediate evidence with haemorrhagic stroke but delayed signs of embolic stroke)
- e) Pontine bleed is associated with unequal pupils (Usually associated with bilateral pinpoint pupils which are unreactive)

f) Risk factors for ICH are increasing age and previous stroke, hypertension and smoking, Asians, blacks, chronic alcohol, amyloidosis, bleeding diathesis: Associated with only 1 in 5 strokes but associated with 30-50% mortality

43) Regarding head trauma which of the following is TRUE

- a) SDH is associated with biconvex lesion (EDH associated with biconvex lesion) (SDH associated with tearing of bridging veins)(SDH usually increased risk in children, elderly , alcoholics) (Associated with increased brain parenchyma damage and mortality)
- b) SDH in infants rarely causes seizures (Anything in children causes seizures)
- c) **Depressed skull fractures are commonest in the occipital region
- d) Basal skull fractures are best seen on skull X-ray (Best viewed on CT) (Depressed skull fractures are often best visualised on plain XR especially with tangential views)
- e) Haemorrhagic necrosis is usually wedge shaped

44) Criteria for positive DPL following blunt trauma includes all of the following EXCEPT

- a) Food particles
- b) Bile
- c) RCC > 200,000 (Usually >100,000)
- d) **WCC >100 (Usually >500)
- e) E coli > 10
- f) Others include amylase >20, ALP >6

45) Regarding patients with SAH, which of the following are TRUE

- a) Up to 50% present with sentinel bleed (Tintinalli states 15-31% may present with history of sentinel bleed)
- b) 5-10% present with seizures or syncope (Tintinalli: accurate data regarding the frequency of syncope on presentation is not available but it does not seem to be very common)
- c) There are no clinical indicators for those who develop vasospasm (Vasospasm may be symptomatic or asymptomatic) (Reduced incidence with Triple H therapy with hypertension, haemodilution and hypervolemia) (Clinical indicators include reduction in GCS, confusion, anxiety, disorientation)
- d) Re-bleeds are 3 x commoner than vasospasm (rebleeds and vasospasm are the major morbid complications of SAH) (Hunt and Hess grades I-III do well with MAP 110 and Nimodipine) (Vasospasm may present from 2 days to 3 months after bleed usually from day 3 to day 10) (Vasospasm occurs in 22-40% of cases of SAH) (Vasospasm appears to be much commoner than rebleed, unless SAH not detected then rebleed rate up to 50%) (Risk of rebleeding is greatest in the first 24 hours and vasospasm 3days to 3 months)

46) All of the following are causes of acute red eye EXCEPT

- a) Glaucoma
- b) Uveitis
- c) Pseudomonas conjunctivitis
- d) Keratitis
- e) **Retrobulbar neuritis

47) Sumatriptan is contraindicated in all the following circumstances except:

- a) Ischemic heart disease (Contraindicated in coronary artery disease secondary to the vasoconstriction effect)
- b) Ergotamine within 24hr (Contraindicated within 24 hours as they both cause vasoconstriction)
- c) **Controlled hypertension (Contraindicated in **uncontrolled** hypertension)
- d) Suspected hemiplegic migraine (Contraindicated)
- e) Other include pregnancy and MAOI administration, PVD, IHD, CVA, TIA, hemiplegic migraine, ophthalmoplegic migraine, basillar migraine

48) Serious causes of syncope is associated with all of the following EXCEPT:

- a) Occurrence while supine (Recumbent episode)
- b) Chest pain

- c) **Occurrence during micturition or defecation (neurally mediated)
- d) NOTE: most cause of syncope are benign (neurally mediated syncope)

Causes of syncope with serious cause

Exertion preceding the event

History of cardiac disease in the patient

Family history of sudden death, deafness, or cardiac disease

Recurrent episodes

Recumbent episode

Prolonged loss of consciousness

Associated chest pain or palpitations

Medications that can alter cardiac conduction

48) Paediatric airway – all true except

- a) With the ETT taped, neck flexion tends to cause extubation
- b) Neck extension tends to cause extubation
- c) Narrowest part of the airway is subglottic, at the level of the cricoid (Rather than the vocal cords as in the adult)
- d) Glottis is higher than in the adult

49) Pre-hospital fluids

- a) Have been demonstrated to improve mortality
- b) Associated with significantly longer pre-hospital transport times
- c) Should be used in all cases of shock
- d) Colloid is better than crystalloid
- e) None of the above

50) PID

- a) Admission indicated in pregnancy
- b) ** 50% polymicrobial

MCQ 2003.1 Answers

Answers

1	D	21	C	41	E
2	D	22	C	42	B
3	C	23	C	43	C
4	B	24	B	44	D
5	A	25	D	45	
6	A >>B	26	A	46	E
7	D	27	D	47	C
8	None	28	A	48	
9	A	29	D	49	
10	E	30	A	50	B
11	E	31	A	51	
12	A	32	A	52	
13	D	33	C	53	
14	D	34	B	54	
15	A	35	D		
16	D	36	A		
17	D	37	B		
18	C	38	A		
19	A	39	C		
20	None	40	A		