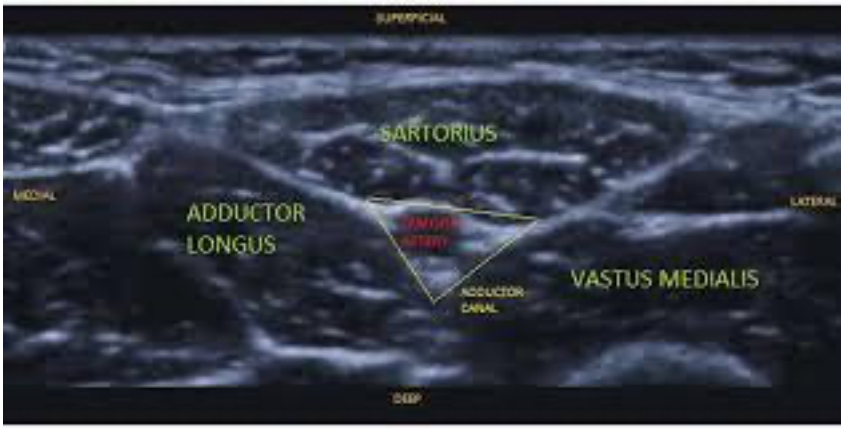
Part 2 MCQs (2018b)

1) Absolute contraindication for a TOE
a) Dysphagia
b) GORD
c) Oesophageal Stricture

2) 40 yo M following MVA. He opens his eyes to pain, speaking incomprehensible words and flexes appropriately to pain. What is his GCS?
A) 5
B) 6
C) 7
D) 8
E) 9
F) 10

3) The adductor canal (pictured). What is this? (pointed to Vastus Medialis)
- Adductor longus
- **Adductor magnus-** medial part of USS screen
- Gracilis
- **Sartorius-** superficial, boat shaped
- **Vastus medialis –** deep and lateral to NAV



4) Refuse to do high risk JW bleeding patient. Which ethical principle?
- non-maleficence
- beneficence
- autonomy
- paternalism

5) Which cardiac condition has the "highest mortality" in pregnancy
A) HOCM with hypertrophied septum- WHO III unless **LVEF < 30%**
B) Bicuspid AV with significantly dilated aortic root **IF > 50 mm**
C) Severe MR – only if ventricular dilation or dysfunction **LVEF < 30%** (MS- pregnancy not advised in severe dz, NVD)
D) PDA- WHO 1

Pregnancy not advised:
CHD with SpO2 < 85% or failing fontan
Aortic dilatation
LVEF < 40%
Left heart obstruction→ HOCM
Mechanical or bioprosthetic heart valves → high risk of need for redo and need for anticoagulation → UFH and LMWH do not cross the placenta ∴ no direct foetal coagulopathy. LMWH preferred ut monitor anti-Xa. Warfarin ok in 2nd and 3rd trimester if < 5mg/day. LUSCS if on warfarin as high risk of foetal haemorrhage with NVD.

Pregnancy CI: WHO IV extremely high risk of maternal mortality
Pulm HTN
NYHA III or IV or cyanosis
Severe MS or AS
LVEF < 30%
Marfan if aortic dilation > 45 mm – beta-block LUSCS +/- Ao root surgery
Bicusoid AV if aortic root > 50 mm

⇑ plasma vol, HR and CO --> can lead to worsening Sx and decompensation
→ AF, other arrhythmias, APO, AMI, cardiac failure, cardiogenic shock, foetal death

Due to ⇓ SVR and afterload and ⇑ blood volume women with mild to moderate MR or AR usually do well

https://academic.oup.com/eurheartj/article/34/9/657/477037
http://www.onlinejacc.org/content/accj/68/4/396/F2.large.jpg

6) What <u>decreases</u> effectiveness of methadone? CYP450

- grapefruit juice – inhibitor ∴ ⇑⇑⇑ effect of drug **(slow metabolism)**
- citalopram- inhibitor ∴ ⇑⇑⇑ effect of drug
- **phenytoin –** inducer ∴ ⇓⇓⇓ effect, speeds up metabolism

CYP450 Inhibitors: amiodarone, Cipro, flucona**zole**, clarithro**mycin**s, grapefruit juice

CYP 450 Inducers: phenytoin, carbamazepine, ST Johns Wort, rifampin

CYP 2D6 inhibitors: amiodarone, cimentidine, Benadryl, fluoxetine, paroxetine → ⇑⇑⇑ DOA/effect of codeine, tramadol

7) Patient for eye block. Average axial length as determined by ultrasound?

- 20mm
- **23**
- 26
- 29
- 32

8) Airway device in this picture?
A. Arndt bronchial blocker
B. Cohen bronchial blocker – was this one
C. Microlaryngoscopy tube
D. Hunsaker tube
E. Parker Flex tip ETT

9) Blue urticaria is a complication of which?
A. Anaphylaxis
B. Methhaemoglobinaemia
C. Patent blue dye
D. Methylene blue

10) 5 yo child in cardiorespiratory arrest. Intubated. Rate of cardiac compressions

- a) 80-100
- b) 100-120
- c) 120-140
- d) 140-150
- e) 150-160
-

11) Patient on prophylactic heparin post op. Calf swelling 7 days post surgery (DVT)

- Heparin infusion
- Warfarin
- Enoxaparin- initially therapeutic clexane then warfarin?
- Fondaparinux
- Bivalirudin

12) RCD device - touch neutral and earth what happens?
a) RCD protects from macroshock
b) Various microshock
c) Nothing

13) You're performing an infraclavicular block (Identify part of the brachial plexus)
A) Lateral Cord
B) Posterior Trunk
C) Posterior Cord

→ ONE OF THE CORDS (L, P, M – named according to position around AA

Interscalene- roots
Supraclav- trunks
Trunks to divisions to cords then
Infra-clavicular- cords
Axially- branches

Cranial → caudal USS image with probe horizontal on chest wall
Pec major and minor superficially, under fascial of pec minor = AA and AV
Lateral cord = 9 oclock, most cranial
medial cord= 5o-clock, most caudal side of AA
Posterior cord= 7 o'clock

Deep = Serratus anterior then pleura

Better for catheters than supraclav and interscalene

14) You are performing an interscalene block with a nerve stimulator. You notice the patient's abdomen is moving in time with the stimulator. Where should you move the needle?
A. Withdraw completely
B. Posterior – maybe more correct….
C. Anterior
D. Lateral
E. Cephalad
F. Caudad

C3-5 phrenic nerve stimulation
- phgrenic nerve runs

BP= C5-T1 ∴ stimulating C5 with nerve stim → **Diaphragm-** go more posterior and lateral

As per NYSORA:
AIM MORE POSTERIOR IF:
Diaphragm, neck, carotid (take needle out, pressure, then go again few mins later)
AIM MORE ANTERIOR IF:
Hit bone, accessory nerve/trapezius moves, serratus anerior/scapular moves

Pecs, deltoid, triceps, biceps, forearm, hand → all acceptable signs of BOP stimulation → accept and inject

15) Thoracic wall block for mastectomy. Most likely to miss?
supraclavicuar nerve- cervical plexus C3-4, not branch of brachial plexus (C5-T1) and nerves are superior to clavicle ie not in pecs planes

PECS I and II- medial and ateral pectoral nerves, thoracodorsal nerve, long thoracic nerve

16) Anterior mediastinal mass in a child. 70% tracheal compression near carina. Inhalational induction and child desaturates to 70%. What do you do?
Intubate if possible, if not rigid bronch
A) Turn prone
B) Intubate and spontaneous ventilation
C) Positive pressure ventilation
D) Intubate and positive pressure ventilation
E) Sternotomy

>50% tracheal compression = avoid GA ??

complete airway obstruction → maintain upright or lateral position for induction, reinforced ETT, (MLT or DLT if distal) RIGID BRONCH

CVS collapse → choose posture of least pre-op Sx, avoid high PIP/maintain SV, vasopressor, IVF, intotropes

17) Induction of labour at 35/40 for pre-eclampsia. Has eclamptic seizure. What dose of Mg should be given?
A) 1g over 20 minutes, followed by 1 g/hour
B) 1g over 20 minutes, followed by 2g/hour
C) 2g over 20 minutes, followed by 0.5g/hour
D) 4g over 20 minutes followed by 0.5g/hr
E) 4g over 20 minutes followed by 1g/hr

18) Left temporal and right nasal visual field loss. Location of lesion?
- Left optic nerve
- Right optic nerve
- Optic chiasm
- Left optic tract
- **Right optic tract**

19) What does the Pringle manoeuvre involve?
- clamping the hepatic artery and portal vein (duodenal ligament)

20) What needle is this?
- Quincke – sharp, hole at end
- Sprotte-spinal needle with circle shaped hole and rounded pencil tip
- Tuohy – rounded end (epi)
- Whitacre – pencil point sharper than sprotte and rectangle hole in side
- Pitkin - circle

21) What is first line treatment for trigeminal neuralgia?
- carbamazepine
- lamotrigine

22) Components of Prothrombinex (? Except)
II, Ix, X + heparin +
Small amount of VII

- antithrombin III
- Protein C
- Heparin
- Factor X

23) Coiling aneurysm. Surgeons tells you there is a rupture. What is an inappropriate immediate management?

- decrease BP
- give protamine
- Urgent transfer to theatre
- Continue coiling
- Mild hyperventilation

24) Patient for urgent bypass surgery. HITS antibodies

- plasmapheresis then heparin
- Bivalirudin
- Enoxaparin
- Fondaparinux
-

25) The RELIEF Trial showed that a liberal fluid strategy compared to a restrictive fluid strategy resulted in?
Also remembered as… What happened to the AKI risk in the liberal fluid group?

- Decreased acute kidney injury
- Increased mortality

26) ECG axis question - left axis deviation/ Alternative: calculate axis. (Positive lead 1 , negative lead 2, avF negative)

- -90
- **-45**
- -15
- 15
- 45
- 90
- 12

LAD

27) An ECG that only had a left axis deviation – what did it shown (? The correct recollection)
A. Left anterior fascicular block – was this one
B. Left posterior fascicular block
C. Right bundle branch block
D. Left bundle branch block

28) Which blood product is contraindicated in DIC from an AFE?

- Prothrombinex
- Tranexamic acid

29) Dental procedure. What needs IE antibiotic prophylaxis?
a) mitral ring annuloplasty
b) previous aortic balloon dilatation
c) patch VSD repair in childhood
30) High grade staphyloma. Safest way to do a single injection peribulbar block?

- Medial canthus
- Lateral canthus
- Inferotemperal

31) Female 32 weeks pregnant (also remembered as 35wks). AST 400, INR 2.1 (alternative 2.3). Most likely diagnosis?
A. Acute cholestasis of pregnancy x
B. **HELLP syndrome**
C. Severe pre-eclampsia
D. Acute fatty liver of pregnancy x
E. Hyperemesis gravidarum x
F. Choledocholithiasis x
G**. Pre-eclampsia with HELLP→ cos of INR**

32) Aortic pressure wave with LV pressure wave. What is this trace consistent with?

- aortic dissection
- aortic coarctation
- AR - ⇑ PP, ⇓ DBP (blood flows backwards from aorta to LV in diastole)
- **AS- LVP >>> Ao SBP → the LV pressure wave is much higher than Aortic due to ⇑ pressure required to eject blood, and ⇑ transvalvular gradient (LVOT:aorta)**

gradient = $4V^2$ mmHg

- MS- LAP⇑⇑, LAP > LVP in ***diastole***

  MR- LAP ⇑⇑ (volume overload) particularly ***in systole***

33) Woman comes in to ED confused and combative. Otherwise well.
Na 143
Low serum osmolality
Low urine osmolality
Urine output 400mls/hr for past 2 hours.
What is this most consistent with?
Polydipsia?? Fluid overload

Cerebral Salt wasting- ⇑ urine na

SIADH: ⇓ serum osm **<** urine Osm, ⇑ urine Osm

DI: hyperNa, ⇑ serum osm, ⇓⇓ urine osm – no response to ADH

34) Morbidly obese patient in ICU, elective tracheostomy for pneumonia. Desaturates on rolling. Management?
- **intubate orally**
- fibreoptic bronchoscopic assessment of trache position

35) DKA patient. Best assessment of effective treatment?
- Urinary ketones
- Blood ketones
- Blood glucose level
- **Venous HCO3**

36) Patient post spinal surgery. Loss of pain and temperature sensation. Preservation of proprioception and vibratory sensation. Likely diagnosis?
- **anterior spinal artery syndrome**
- posterior spinal artery syndrome

37) Patient with CVC in situ. Line isolation monitor goes off. What do you do?
- Individually disconnect each piece of non-essential equipment until problem found
- Disconnect CVC until problem found

38) Child dislocated hip at 1600. Ate at 1700. Presents at 2300. What to do to decrease risk of aspiration? (other version stated injury 1500, ate at 1600, surgery 2300)
- Postpone surgery until am
- IV sedation
- **RSI/ intubate/ cricoid/ ETT**
- Femoral nerve block
- Gaseous induction with face mask

39) Indication of severe AS
- Valve area of 1.2cm2
- Mean gradient of 35mmHg
- Loud systolic murmur at left sternal edge
- Systolic murmur radiating to carotids
- Palpable systolic thrill

40) At induction - PAC inserted. Blood coming out of ETT. What to do?
- Remove PAC and insert DLT
- Wedge PAC and insert DLT
- Wedge PAC and insert bronchial blocker
- Withdraw PAC 2cm and insert DLT
- Withdraw PAC and insert bronchial blocker
- Inflate balloon
-

41) Most effective prevention of post-herpetic neuralgia
- Amitryptiline

42) Safest treatment of neuropathic pain in pregnancy
- carbamazepine
- lamotrigine
- **gabapentin**
- sodium valproate
- phenytoin

43) 46 yo F with menorrhagia is booked for an abdominal hysterectomy. Her blood results are as followed (normal ranges were provided)
Creatinine 55
Ca2+ 2.2
PO43- 0.34

What is the cause?
A. Diuretic use
B. Fanconi syndrome
C. Vitamin D use
D. Vit D deficiency
E. Iron transfusion
F. Hyperparathyroidism

44) CRASH II trial – multiple stems/ versions recalled
- What happened to the death rate from bleeding (/)? What happened to overall mortality(/)??
Tranexamic acid resulted in higher/**lower**

- death from bleeding
- overall transfusion requirements- NO did not ⇓ Tx rate
- **overall mortality yes ⇓ all cause mortality**

45) Which anaesthetic agent invalidates the OCP
- Sugammadex

46) Hand wash. Antibiotic kill rate

- 70% isopropyl alcohol

47) Patient for elective LSCS. Has amoxicillin allergy, limited to rash. What do you give?

- **Cephazolin**
- Ceftriaxone
- Clindamycin

48) MRSA nose swab. TKR. What reduces joint infections (Alternative - Which intervention would NOT help reduce infection?

- Mupiricin nose ointment for ?2 weeks or 5 days
- Chlorhex (2 or 4%) body wash for 5 days
- Vancomycin 15mg/kg 1 hour pre-tourniquet
- Teicoplainin 800mg 30 mins pre-tourniquet

49) TURP patient, hyponatraemic. Treatment?

50) Lower 3rd molar incision/extraction. Which nerve should be blocked/Which nerve injured?

- Inferior alveolar
- Mental
- Lingual
- Superior petrosal

51) Patient on Dabigatran. Normal renal function. How long after last dose can you do a neuraxial block without checking direct thrombin time?

- 24 hours
- 48 hours
- 72 hours
- 96 hours

52) Severe spinal cord injury. How long before reflexes return?

- 50 -150 days (roughly, this was the longest)

53) You're gassing a 4yo with an URTI. What's good for reducing laryngospasm?

a. ETT is better than LMA

b. IV induction is better than inhalational
c. Deep extubation is better than awake
d. Desflurane is better than sevoflurane
e. Thiopentone is better than propofol

54) 60 year old man in ICU. Aim for SBP (missing rest of stem)

- 100mHg
- 110mHg
- 120mHg

55) Lowest possible spinal cord injury without getting spinal shock?

- C something
- T5
- T9
- T12
- L something

56) Smallest size bronchoscope/ fibreoptic scope that will fit with Aintree catheter?

- 3.7mm

57) What intervention improves mortality the most/ has best survival benefit in a neonate with congenital diaphragmatic hernia?

- Nitric oxide
- Lung protective ventilation
- Surgical correction within 6hrs
- Thoracoscopic correction instead of open correction
- high frequency oscillatory ventilation

58) Dental damage trial in 100 patients. No positive results. What is the 95% confidence interval?

- 0/100
- 1/100
- 3/100
- 5/100
- 9/100

59) Subdural haemorrhage. Surgeon wants to proceed urgently. Patient has DDD pacemaker. Technician over one hour away. What do you do?

- Wait for technician
- Proceed once transcutaneous pacing established
- Proceed with magnet available

60) Patient with headache that gets worse standing, relieved lying down. Neurologist suspects spontaneous intracranial hypotension and asks for blood patch. What do you do?

- refuse to do blood patch
- Do blood patch with no further investigations
- Order CT myelogram and MRI to confirm CSF leak and then do lumbar epidural blood patch
- Order CT myelogram and MRI to confirm CSF leak and then do epidural blood patch at level of leak

61)Desmopressin is relatively contraindicated in what subtype of vWD?

- a) 2a
- b) 2b
- c) 3
- d) Relax!! You can give it to all of them

62) MELD Score: Creatinine, INR and?

- bilirubin

63) Commonest cause of peri-operative stroke

- Hypotensive
- Embolic
- Thrombotic
- Hypertensive
- Haemorrhagic
- Commonest cause of stroke

64) Patient complains of pain after attempted IV induction. You realise cannula is intra-arterial. What is NOT indicated?

- systemic heparinisation
- IV iloprost
-

65) Treatment for dyspnoea and chest pain in HOCM?

- GTN
- Metoprolol
- Morphine
- Salbutamol

66) Risk factor for cement syndrome

- male
- previous cement syndrome
- diuretic use
- pre-existing cardiovascular conditions

67) Preferred gas for IABP inflation

- air
- CO_2
- Oxygen
- Nitrogen
- Helium

68) Medical cylinder – grey shoulders, white body. What gas does it contain?

- nitrogen
- air
- oxygen
- carbon dioxide
- helium

69) Worst greenhouse gas effect/ Alternative: Volatile with greatest Global Warming Potential?

- nitrous oxide
- sevoflurane
- desflurane
- isoflurane

70) What is an apnoea?

- stop breathing 10 seconds
- stop breathing 20 seconds
- stop breathing 30 seconds
- stop breathing 10 seconds with 3% desat
- stop breathing 20 seconds with 3% desat

71) Patient with FiO_2 of 1.0, at sea level. PaO_2 is 260mmHg, $PaCO_2$ is 40mmHg, respiratory quotient is 0.8. What is the approximate A- gradient?

- 220mmHg
- 400mmHg
- 663mmHg

72) Gold classes A-D for COPD severity are determined by:

- Exertional dyspnoea
- Exertional dyspnoea and FEV1
- Exertional dyspnoea and number of exacerbations per year
- Spirometry FEV1 only
- Number of exacerbations per year only

73) Transport cylinder. Water capacity 2L. Pressure gauge reads 150 Bar. Flows - O_2 10L/min – longest it can last?

15min
30min
45min
60min
2hrs

74) T1DM / other version said T2DM . Fasting. BSL 7. Give insulin to prevent hyperglycaemia. What's the mechanism

- Increased glucose uptake into liver
- Increased glucose uptake into muscle
- Inhibits glycogenolysis
- Prevent/decrease proteolysis

75) NAP 6 – Commonest allergen/ Worst antibiotic?

-Teicoplainin

76) What is a marker of iron deficiency anaemia?

- increased/decreased TIBC
- increased/decreased transferrin

77) PE post TKR. Management

- IVC filter
- Thrombolysis
- Fluids and inotropes

78) Cell salvage – leukodepletion filters do not protect against?

a) Vernix
b) Alpha fetoprotein
c) Foetal RBC
d) Amniotic fluid
e) Foetal squamous cell

79) During (2012-2014) - what was the commonest cause of anaesthetic death?
(Possibly the same questions?)
NAP 4 – most common cause of direct anaesthetic death?

- Aspiration
- Myocardial infarction
- Inability to oxygenate and ventilate
- Stroke
- Anaphylaxis

80) SGLT2 – what can you use to exclude ketoacidosis?

a) BSL
b) Urinary ketones
c) Plasma ketones

81) Injury during intubation with laryngoscope (WTF … have no idea what this questions about!)

- Left carotid incision
- Right carotid incision

82) Least likely to prevent agitation after ECT?

a) Remifentanil induction
b) Small dose propofol after ECT
c) Premedication with dexmedetomidin
d) Premed with olanzapine

83) When to medically intervene in seizure post ECT?

a) 30s
b) 60s
c) 90s
d) 120s
e) 150s

84) RBF during cross clamp?

- Increase by 20%
- Increase by 40%
- Decrease by 20%
- Decrease by 40%

85) Which tooth is most damaged with intubation/laryngoscopy?

86) What opioid side effect do you NOT get tolerance to?

- Nausea and vomiting
- Constipation
- Respiratory depression
- Sedation

87) Sherlock ECG guided PICC insertion trace.
When is PICC in the right spot?

88) Asystolic arrest. 1mg of adrenaline given.
When to give next dose?

- 2 minutes
- 1 minute
- 5 minutes
- After 1st loop of CPR
- After 2nd loop of CPR

89) Post blood transfusion clinical scenario
(No actual question given)

- TRALI
- APO
- Haemolytic reaction

90) Factor that is first to fall in coagulopthy?

a) I

b) II
c) V
d) VII
e) VIII

91) Which of the following drugs has the LEAST effect on thrombin time?

a) bivalirudin,
b) dabigatran,
c) heparin,
d) clexane,
e) warfarin

92) FFP dose to increase fibrinogen by 1g/L

- 5ml/kg
- 10ml/kg
- 20ml/kg
- 30ml/kg
- 50ml/kg

93) 2yo child, 12kg for orchidopexy. You perform a caudal and use 0.2% ropivocaine. How much do you give to provide post-op analgesia?

a) 3ml

b) 6ml
c) 12ml
d) 18ml
e) 24ml

-

94) Most effective intervention to prevent emergence delirium after sevoflurane GA?

- a) Parental presence
- b) Premedication with midazolam
- c) Slow emergence in a quiet room
- d) Switch to propofol at end of case
- e) Switch to isoflurane at end of case

95) According to Australian and New Zealand Resuscitation Guidelines, the minimum distance the defibrillator pads have to be from the generator box of a PPM/AICD is?

a) 4cm
b) 8cm
c) 12cm
d) 16cm
e) 20cm

96) Neonatal resuscitation. Neonate handed to midwife. Blue and apneic despite stimulation. HR drops from 140 to 90. Next step in resuscitation?

- Intubate
- CPR
- Adrenaline
- PPV

97) 10kg child. 4mg/kg dose of suxamethonium IM. Time to onset (or peak onset?)

- 30 seconds
- 60 seconds
- 2 minutes
- 4 minutes

98) What is the acceptable range for pre-ductal SPO2 in a newborn at 5mins

a) 60-70%
b) 65-75%
c) 80-90%
d) 70-90%
e) 80-95%

99) What structure are you most likely to damage in elective tracheostomy in a 4 yo?

- vertebral artery
- phrenic nerve
- vagus nerve
- left brachiocephalic vein
- thoracic duct
-

100) Patient had a proven anaphylactic reaction to suxamethonium, which of the following drugs is at most risk to cause cross-reactivity?

- pancuronium
- vecuronium
- atracurium
- rocuronium

101) During endovascular repair of ruptured aneurysm the proceduralist expresses concern about perforation of intracranial vessel following passage of a micro catheter. Each of the following could be part of your management except?

- a) Mannitol
- b) Protamine
- c) Thiopentone
- d) Vasopressor
- e) Mild hyperventilation

102) Capnography trace (answer was leak in sample line)

103) Peribulbar block - Safest approach?

- Inferolateral

104) Incidence of HCV infection post needle stick form a HCV positive patient

105) Patient with signs of retrobubar haematoma (proptosis). How does a lateral canthotomy work?

- Allow globe to continue to swell
- Drain blood from behind eyeball

106) Flow volume loop
(We got fixed upper airway obstruction)

107) Crash 2 trial (Very specific question - Dan might remember)
What happened to the death rate?
Results:
-> all cause mortality reduced in the TXA2 group
-> decreased mortality due to bleeding (RR 0.85) (which was 35% of deaths)
-> trend toward more vascular occlusive events in placebo group
-> no difference in transfusion and need for surgery
-> trend towards early treatment being more effective
-> NNT 65, ARR 1.5%, RR 0.91

108) Diabetes Insipidus treatment - ??
109) Where does the Glenn Shunt attach to?
110) NDMR least likely to cause anaphylaxis
– (cisatracurium not on list)
111) Pre-tracheal tissue volume?

112) ECG guided placement of PAC
- ECG trace when in the right atrium? (or are they asking what is the PAC trace like when you enter the RA?)

Topics

1) ABG's
- mixed resp/ metabolic acidosis and normal anion gap

2) ECGs
- There was at least 3 (All from LITFL)
- I think they choose new ECGs each time
    - LAFB
    - Torsades
    - What is the axis

3) GCS question
    - There is always one straight GCS
    - We also got which WFNS grade is this

4) Nasal MRSA?
5) US images
6) Rotem
7) CXR
8) CHADS 2