

# Final FRCA Questions, Answers and Notes

## Long Clinical Cases

Patient	<ul style="list-style-type: none"> <li>• Male, 50</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Elective ankle operation</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Previous Whipple's</li> <li>• Chronic pain and peripheral neuropathy</li> <li>• Cerebrovascular disease</li> <li>• Ischaemic heart disease</li> <li>• 'Back implant'</li> <li>• Diabetes</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Oxycodone</li> <li>• Fentanyl patch</li> <li>• Amitriptyline</li> <li>• Tramadol</li> <li>• Gabapentin</li> <li>• ACEi</li> <li>• Clopidogrel</li> <li>• Insulin</li> <li>• Statin</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• AXR – showing device ~T10</li> <li>• Normochromic normocytic anaemia</li> <li>• WCC10</li> <li>• Plt300</li> <li>• Fasting glucose 9, HbA1c 8.5%</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Management of various co-morbidities</li> <li>• Cause of anaemia</li> <li>• Diabetic investigations / perioperative management and hyperglycaemia</li> <li>• What is the implant (spinal cord stimulator, alternatively insulin pump)</li> <li>• Anticoagulation and surgery</li> <li>• Conduct of anaesthesia</li> <li>• Post op analgesia - blocks, equivalence of opioids, ketamine and action</li> <li>• Confused and agitated in recovery - causes and investigation</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• Female, 16</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Cervical LN biopsy</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Recently increasing SOB, unable to lie flat, SVC obstruction</li> <li>• Cough</li> <li>• Refuses LA</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• CXR – mediastinal mass</li> <li>• CT – tracheal compression</li> <li>• Lymphocytosis WCC 17 Lymp 12</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Differentials, probable diagnosis</li> <li>• Discuss investigations</li> <li>• Other possible clinical features (inc. SVC obstruction)</li> <li>• Further investigations required</li> <li>• Perioperative management</li> <li>• Airway options</li> <li>• Alternatives to GA</li> <li>• Cervical plexus block</li> <li>• Management of extubation</li> <li>• Tumour lysis syndrome</li> <li>• Treatment of hyperkalaemia</li> <li>• Post extubation airway obstruction</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 13 year old</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Progressive weakness, areflexia, drooling (bulbar palsy)</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Jehovah's witness</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• ABG – respiratory acidosis</li> <li>• CXR – pneumothorax, pneumomediastinum</li> <li>• CSF results</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Differential</li> <li>• Review investigations</li> <li>• Management of GBS</li> <li>• Triggers for intubation, normal vital capacity values</li> <li>• Analgesia in GBS</li> <li>• Causes and management of pneumomediastinum</li> <li>• Issues with Jehovah's witnesses, immunoglobulin therapy</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• Male, 76</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• EVAR</li> </ul>
Background	<ul style="list-style-type: none"> <li>• CABG (2 vessel)</li> <li>• LVF</li> <li>• ICD in situ</li> <li>• Alternate version – previous lobectomy</li> <li>• Alcoholism</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Frusemide</li> <li>• Digoxin</li> <li>• PPI</li> <li>• Eplerenone (aldosterone antagonist)</li> <li>• Carvedilol</li> <li>• Rosuvastatin</li> <li>• Clopidogrel</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Echo - dilated LA, aortic valve calcification, severe LVF</li> <li>• CXR – blunted CP angle right</li> <li>• (Pulmonary function tests)</li> <li>•</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Review of history and investigations</li> <li>• Perioperative beta blockers</li> <li>• Optimisation of cardiac function</li> <li>• Alcoholic cardiomyopathy</li> <li>• Management of anticoagulants</li> <li>• ICD management perioperatively</li> <li>• Anaesthetic management for EVAR</li> <li>• CPEX</li> <li>• Management of massive haemorrhage</li> </ul>
Patient	73
Procedure / problem	<ul style="list-style-type: none"> <li>• Urgent AAA repair</li> <li>• Ischaemic lower limb</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Smoker</li> <li>• Arthritis hips</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Creatinine 100</li> <li>• AF 115</li> <li>• Echo biatrial enlargement, RVH</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Periop optimisation</li> <li>• Management of AF</li> <li>• Cardiac risk assessment / investigation</li> <li>• Conduct of open AAA</li> <li>• Cross-clamping</li> <li>• Periop renal protection</li> <li>• Role of mannitol</li> <li>• Coagulation – TEG, antifibrinolytics (inc. aprotinin)</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 65, male</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Elective AAA</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Hypertension</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Enalapril</li> <li>• Frusemide</li> <li>• ISMN</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• CXR – cardiomegaly</li> <li>• Hypokalaemia, borderline hypernatraemia</li> <li>• Creatinine 182</li> <li>• ECG – lateral ST depression, Qs</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Cardiac risk assessment and investigation</li> <li>• CPEX</li> <li>• Elevated glucose in non-diabetics</li> <li>• Cardiac output monitoring</li> <li>• AAA physiology, anaesthesia</li> <li>• Massive haemorrhage</li> <li>• ST changes after clamp off – management</li> <li>• When to extubate</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 28 female</li> </ul>

Procedure / problem	<ul style="list-style-type: none"> <li>• PPH 7 hours following emergency LSCS</li> <li>• Unrecordable BP, HR 140</li> </ul>
Background	
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Hb 2.8, plat 84</li> <li>• Raised APTT, PT. Fibrinogen 1.8</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Causes PPH</li> <li>• Management of PPH</li> <li>• Uterotonics</li> <li>• Massive transfusion – practicalities, transfusion targets, complications</li> <li>• TRALI – definition, features, management, prevention (screening donors, avoiding multiparous female donors)</li> <li>• Pathophysiology of DIC</li> <li>• Conduct of anaesthesia</li> </ul>
Patient	80
Procedure / problem	<ul style="list-style-type: none"> <li>• Elective laparoscopic hiatus hernia</li> </ul>
Background	<ul style="list-style-type: none"> <li>• AF</li> <li>• Hypertension</li> <li>• Angina, recently worsening</li> <li>• Recent LRTI</li> <li>• Pale and frail</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Frusemide</li> <li>• Digoxin</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• ECG – LAD, T wave inversion V2-6</li> <li>• Blunted left base on CXR creps left base</li> <li>• Normocytic anaemia</li> <li>• Albumin 22</li> <li>• Low Ca and Mg</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Types of hiatus hernia, investigations</li> <li>• CPEX testing</li> <li>• Targets for optimisation</li> <li>• Transfusion triggers in anaemia</li> <li>• Conduct of anaesthesia inc NG</li> <li>• Modes of ventilation</li> <li>• PaO<sub>2</sub> 10 on 40% oxygen on ABG, alveolar gas equation</li> <li>• Causes of deranged magnesium, calcium, albumin</li> <li>• ICU nutrition</li> <li>• Digoxin toxicity</li> <li>• Analgesia</li> <li>• Tension pneumothorax in recovery, chest drain</li> <li>• Fast AF in ICU</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• Middle aged, male</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Incarcerated umbilical hernia</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Familial DCM</li> <li>• PPM, ICD</li> <li>• Awaiting heart transplant</li> <li>• Tachycardic, hypotensive, oedematous</li> </ul>

Drugs	<ul style="list-style-type: none"> <li>• Frusemide</li> <li>• Spironolactone</li> <li>• Metolazone</li> <li>• Digoxin</li> <li>• Beta blocker</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Macrocytic anaemia</li> <li>• AKI</li> <li>• Right pleural effusion</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Investigations</li> <li>• Cardiomyopathy</li> <li>• Optimisation</li> <li>• Pacemakers – identifying type from CXR, indications, periop management</li> <li>• Conduct of anaesthesia</li> <li>• Postoperative renal failure - causes, management</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• Older, male</li> </ul>
Procedure / problem	Acute neck pain – for posterior cervical stabilisation
Background	<ul style="list-style-type: none"> <li>• Awaiting lobectomy for lung malignancy</li> <li>• ESM on auscultation</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Candesartan</li> <li>• Enoxaparin</li> <li>• Simvastatin</li> <li>• Lansoprazole</li> <li>• Bendrofluazide</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Reduced PEFR</li> <li>• Aortic stenosis – gradient 37mmHg</li> <li>• Lateral C-spine – high subluxation / C2 problem</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• AS – pathophysiology, investigations, management</li> <li>• Airway management</li> <li>• Prone positioning</li> <li>• Cord monitoring</li> <li>• Extubation criteria</li> <li>• Post op management</li> <li>• SOB and desaturation in recovery</li> <li>• Preop preparation / assessment for lobectomy</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 2 year old, African child</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Adeno-tonsillectomy</li> </ul>
Background	<ul style="list-style-type: none"> <li>• OSA symptoms</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Hypochromic, microcytic anaemia</li> <li>• Overnight oximetry – significant desats</li> <li>• ECG</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Causes of anaemia</li> <li>• What is red cell width, significance</li> <li>• OSA - causes, grading, investigations</li> <li>• Sleep studies</li> <li>• ECG in children</li> <li>• Conduct of anaesthesia - calculations</li> <li>• Post-operative monitoring</li> <li>• Malnutrition</li> <li>• Bleeding post-tonsillectomy</li> <li>• Obstruction on induction</li> <li>• Extubation criteria</li> </ul>
Patient	• 67, female
Procedure / problem	• Neck dissection (parotid)
Background	<ul style="list-style-type: none"> <li>• COPD, limited exercise tolerance</li> <li>• Htn</li> <li>• PVD</li> <li>• Hypothyroid</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Asprin</li> <li>• Statin</li> <li>• BDZ</li> <li>• Ramipril</li> <li>• Inhalers</li> <li>• Thyroxine</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Obstructive PFTs, 40% DLCO</li> <li>• Reversibility with bronchodilators</li> <li>• Polycythaemia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Respiratory assessment</li> <li>• Optimisation</li> <li>• Other investigations</li> <li>• Why polycythaemic</li> <li>• Transfer factor</li> <li>• Neck dissection management</li> <li>• Facial nerve stimulation</li> <li>• Neck swelling post-operatively</li> <li>• What is a RAE tube - why is it called RAE</li> <li>• Anatomy of phrenic and recurrent laryngeal and facial</li> </ul>
Patient	• 67, male
Procedure / problem	• Laparoscopically assisted anterior resection
Background	<ul style="list-style-type: none"> <li>• COPD</li> <li>• Hypertension</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Bendrofluazide</li> <li>• Enalapril</li> <li>• Inhalers</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• ECG – RAD, clockwise rotation</li> <li>• Polycythaemia</li> <li>• CPEX – Vmax 12.3</li> <li>• ABG – PaO2 8.2, PaCO2 7.4</li> <li>• PFTs - obstructive</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Polycythaemia – pathophysiology, causes</li> <li>• Monitoring</li> <li>• Laparoscopy</li> <li>• Fluid management</li> <li>• Post-op desaturation in recovery</li> </ul>
Patient	• 28, female
Procedure / problem	• Puerperal sepsis
Background	<ul style="list-style-type: none"> <li>• 4 days post NVD</li> <li>• ERPC 8 hours ago</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• DIC</li> <li>• Metabolic acidosis</li> <li>• CXR – left lower zone opacity</li> <li>• Blood cultures – group A strep</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Resuscitation / massive transfusion</li> <li>• Blood products – contents</li> <li>• Conduct of anaesthesia</li> <li>• ARDS</li> <li>• Lung protective ventilation</li> <li>• Cardiac output monitoring</li> </ul>
Patient	• Middle aged male
Procedure / problem	• Perforated globe
Background	<ul style="list-style-type: none"> <li>• Learning difficulties</li> <li>• Poorly controlled epilepsy, vagal nerve stimulator</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Keppra</li> <li>• Carbamazepine</li> <li>• Clonazepam</li> <li>• Quetiapine</li> <li>• Diazepam</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• ABG – type 2 RF</li> <li>• Vagal nerve stimulator on CXR, cardiomegaly</li> <li>• Polysomnograph OSA</li> <li>• Polycythaemia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• OSA, obesity hypoventilation, STOPBANG</li> <li>• Obesity</li> <li>• Airway assessment</li> <li>• Vagal nerve stimulators</li> <li>• Epilepsy perioperatively</li> <li>• Urgency or surgery</li> <li>• Management of IOP</li> <li>• Confused in recovery</li> <li>• VTE prophylaxis</li> </ul>
Patient	• 70, male
Procedure / problem	• Radical nephrectomy



Background	<ul style="list-style-type: none"> <li>• Haemodialysis</li> <li>• COPD, limited ET</li> <li>• PPM</li> <li>• Angina</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Frusemide</li> <li>• Perindopril</li> <li>• Doxazosin</li> <li>• ISMN</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Anaemia – normochromic, normocytic</li> <li>• CXR – RIJ vascath, cardiomegaly, PPM</li> <li>• Obstructive PFTs, reduced TLCO</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Pacemaker classification and management</li> <li>• Timing around dialysis</li> <li>• Renal failure and anaesthesia</li> <li>• Positioning for nephrectomy</li> <li>• Surgical technique and approaches</li> <li>• Drop in EtCO<sub>2</sub></li> <li>• Hyperkalaemia</li> </ul>
Patient	• 4 year old
Procedure / problem	• Lap Nissen's fundoplication
Background	<ul style="list-style-type: none"> <li>• HIE at birth</li> <li>• Poorly controlled epilepsy</li> <li>• Multiple LRTIs requiring critical care</li> <li>• Severe reflux</li> <li>• Developmental delay</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Valproate</li> <li>• Lamotrigine</li> <li>• Hyoscine</li> <li>• Omeprazole</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Na 128</li> <li>• Microcytic anaemia</li> <li>• Right lower zone changes n CXR</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Causes of hyponatraemia</li> <li>• Hyoscine and secretions</li> <li>• Perioperative management epilepsy</li> <li>• Paediatrics – expected weight, tube sizes</li> <li>• Bradycardia on insufflation</li> <li>• Causes of hypoxia intraoperatively</li> <li>• Analgesia if conversion to open – consideration caudal</li> </ul>
Patient	64
Procedure / problem	• Laparoscopic hepatic ablation for hepatoma
Background	<ul style="list-style-type: none"> <li>• Autoimmune hepatitis</li> <li>• Thyroid dysfunction</li> </ul>
Drugs	

Investigations	<ul style="list-style-type: none"> <li>• Microcytic anaemia</li> <li>• Thrombocytopaenia</li> <li>• Prolonged APTT, PT</li> <li>• Hyponatraemia</li> <li>• Low albumin</li> <li>• ECG – bifascicular block</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Causes of abnormal biochemistry and haematology</li> <li>• Liver failure and anaesthesia</li> <li>• Pharmacokinetics and liver failure</li> <li>• Possible aetiology of bifascicular block (autoimmune)</li> <li>• Laparoscopic surgery</li> <li>• Complete heart block</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 53, female</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• RTC car vs lorry</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Fracture pelvis, femur</li> <li>• Paradoxical chest</li> <li>• FAST +ve</li> <li>• Hypotensive, tachycardic, tachypnoeic</li> <li>• Head and neck CT normal</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Acidotic ABG</li> <li>• CT and CXR (multiple rib fractures, chest drain)</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Resuscitation strategy</li> <li>• Cervical spine protection</li> <li>• C-spine clearance</li> <li>• Management of chest injury</li> <li>• Cause of acidosis</li> <li>• Coagulation, TXA</li> <li>• Laparotomy for abdominal bleeding management</li> <li>• ITU management</li> <li>• Intra-abdominal pressure / compartment syndrome</li> <li>• Analgesia</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 37, female</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Peripartum cardiomyopathy</li> </ul>
Background	<ul style="list-style-type: none"> <li>• 28/40</li> <li>• 3x previous LSCS</li> <li>• C/o orthopnoea, tiredness</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Thyroxine</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Normocytic anaemia</li> <li>• ECG - LAD, LBBB</li> <li>• Echo – biventricular systolic dysfunction</li> <li>• CXR - oedema</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Differential</li> <li>• Management of heart failure – inc. pacemaker</li> <li>• Anticoagulation</li> <li>• ACEi in pregnancy</li> <li>• Pre-term labour, requiring LSCS – management</li> <li>• Pregnancy counselling</li> </ul>
Patient	62
Procedure / problem	• THR elective
Background	<ul style="list-style-type: none"> <li>• COPD</li> <li>• IHD</li> <li>• Hiatus hernia</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• GTN</li> <li>• Ranitidine</li> <li>• Aspirin</li> <li>• Ipratropium</li> <li>• Ramipril</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• CXR – right lower zone consolidation</li> <li>• Obstructive PFTs</li> <li>• ECG - RBBB</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• DVT prophylaxis</li> <li>• Smoking advice</li> </ul>
Patient	• 17 months
Procedure / problem	• Inhaled FB (Bombay mix)
Background	• Red-faced, grunting
Drugs	
Investigations	CXR – hyperinflation right
Questions	<ul style="list-style-type: none"> <li>• Mechanism of inhaled FB</li> <li>• FB problems – chemical pneumonitis, peanuts</li> <li>• Conduct of anaesthesia</li> <li>• Long paediatric cases</li> <li>• Temperature management</li> <li>• Attenuating effect of laryngoscopy / bronchoscopy</li> <li>• Pathophysiology of grunting, hyperinflation (valve effect)</li> <li>• Management of laryngospasm on gas induction</li> <li>• Pre-medication</li> </ul>
Patient	• 81, female
Procedure / problem	• Supracondylar # humerus following fall
Background	<ul style="list-style-type: none"> <li>• Breathless</li> <li>• WLE right breast mass and radiotherapy</li> <li>• Hypertension</li> <li>• Hypothyroid</li> <li>• Anaemia</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Atenolol</li> <li>• Thyroxine</li> </ul>

Investigations	<ul style="list-style-type: none"> <li>• CXR – pleural effusion</li> <li>• Hyponatraemia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Management of effusion</li> <li>• Cause of anaemia</li> <li>• Why did she fall, other injuries</li> <li>• Regional vs GA</li> <li>• Hypothyroidism</li> <li>• Thyroid coma</li> </ul>
Patient	• 45, Afro-caribbean female
Procedure / problem	• Thyroidectomy
Background	<ul style="list-style-type: none"> <li>• Goitre</li> <li>• Sickle cell trait</li> <li>• Obese</li> <li>• Hypertension</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Enalapril</li> <li>• Bendrofluazide</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Euthyroid</li> <li>• CXR – thyroid mass</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Sickle cell disease vs trait, complications, pathophysiology</li> <li>• Airway assessment</li> <li>• SVC obstruction</li> <li>• Postoperative stridor</li> <li>• Haematoma</li> <li>• Hypoparathyroidism</li> </ul>
Patient	• 31, female
Procedure / problem	• Thyroidectomy
Background	• Grave's
Drugs	<ul style="list-style-type: none"> <li>• Carbimazole</li> <li>• OCP</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Hyperthyroid</li> <li>• WPW on ECG</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Thyroid hormones</li> <li>• Carbimazole and drug management of hyperthyroidism</li> <li>• Retrosternal goitre</li> <li>• Grave's disease in pregnancy, antibodies and placenta</li> <li>• Air embolus intraoperative</li> </ul>
Patient	• 55 year old male
Procedure / problem	• Abdo pain, vomiting for laparotomy
Background	<ul style="list-style-type: none"> <li>• Alcoholism</li> <li>• Cerebrovascular disease</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Hyponatraemia</li> <li>• Fast AF</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Differentials (inc. incarcerated hernia)</li> <li>• Intraoperative hypotension, tension pneumothorax</li> <li>• Emergency laparotomies</li> <li>• Postop oliguria</li> <li>• Hyponatraemia</li> <li>•</li> </ul>
Patient	• 56, male
Procedure / problem	• Sigmoid colectomy for cancer (elective)
Background	<ul style="list-style-type: none"> <li>• Ex-miner</li> <li>• COPD poor ET, home nebs</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• 2.5mg prednisolone</li> <li>• Inhalers</li> </ul>
Investigations	• FEV1 0.68
Questions	<ul style="list-style-type: none"> <li>• ECG changes in heart strain</li> <li>• Criteria for pathological Q waves</li> <li>• Definitions of respiratory failure</li> </ul>
Patient	• 42 year old male
Procedure / problem	• Full dental clearance
Background	<ul style="list-style-type: none"> <li>• Bipolar disorder</li> <li>• Hypertension</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Lithium</li> <li>• Flupenthixol</li> <li>• Amlodipine</li> <li>• Chlorpromazine</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Obstructive PFTs</li> <li>• Creatinine 135</li> <li>• Eosinophilia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Lithium and anaesthesia</li> <li>• Throat pack</li> <li>• Airway obstruction in recovery</li> <li>• ECT</li> <li>• Causes of eosinophilia</li> </ul>
Patient	• 34, male
Procedure / problem	• Cataract (failed local)
Background	• Down's
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• ECG – RAD, RBBB, RVH</li> <li>• Polycythaemia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Cardiac complications Down's</li> <li>• Managing anaesthesia in uncooperative patients</li> </ul>
Patient	• 62, male

Procedure / problem	<ul style="list-style-type: none"> <li>• Craniotomy and debulk tumour</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Recent LRTI – sent hoe with abx</li> <li>• Now inappropriate behaviour</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Dexamethasone</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Neutrophilia</li> <li>• CXR – LLZ consolidation</li> <li>• CT head – large parietotemporal lesion</li> </ul>
Questions	
Patient	<ul style="list-style-type: none"> <li>• 24, male</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Found collapsed</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Depression</li> <li>• IVDU</li> <li>• Alcoholism</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• CK 49000</li> <li>• Creatinine 231</li> <li>• K 7.5</li> <li>• CXR – possible aspiration</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Principles of management</li> <li>• Hyperkalaemia</li> <li>• Components of GCS</li> <li>• Metabolic acidosis</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 70, female</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Extended hemicolectomy adenocarcinoma colon</li> </ul>
Background	<ul style="list-style-type: none"> <li>• MI 5 years ago</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Co-amlofruse</li> <li>• Aspirin</li> <li>• Atenolol</li> <li>• Enalapril</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Stenosis left circumflex</li> <li>• Mitral regurgitation</li> <li>• Anaemia</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• What is an extended hemi colectomy</li> <li>• Indications for pre-op angio</li> <li>• Cardiovascular risk</li> <li>• Non-surgical options</li> <li>• Induction in event of perforation</li> <li>• TIVA vs volatile</li> <li>• Treatment of pulmonary oedema postop</li> </ul>
Patient	<ul style="list-style-type: none"> <li>• 86, female</li> </ul>
Procedure / problem	<ul style="list-style-type: none"> <li>• Open cholecystectomy</li> </ul>

Background	<ul style="list-style-type: none"> <li>• Arthritis</li> <li>• Thoracolumbar kyphosis</li> <li>• Jaundice</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Fast AF</li> <li>• Cardiomegaly</li> <li>• Restrictive PFTs</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Causes of jaundice</li> <li>• AF management</li> </ul>
Patient	• 66, male
Procedure / problem	• Cervical laminectomy
Background	<ul style="list-style-type: none"> <li>• 1 year radicular symptoms</li> <li>• Hypertensive</li> <li>• AF, failed ablation x2</li> <li>• Obese</li> <li>• COPD</li> <li>• 40 units / week</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Perindopril</li> <li>• Bendrofluazide</li> <li>• Diltiazemr</li> <li>• Aspirin</li> <li>• Warfarin</li> <li>• PPI</li> <li>• Salbutamol, beclomethasone</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• C-spine Xrs</li> <li>• ECG</li> <li>• Na 129</li> <li>• K 5</li> <li>• MCV 100</li> <li>• INR 1.5</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Periop ACEi</li> <li>• Causes of chronic cough (inc. ACEi)</li> <li>• Periop anticoagulation</li> <li>• Anaesthesia fo laminectomy</li> <li>• Spinal cord monitoring</li> <li>• Periop alcohol withdrawal</li> </ul>
Patient	• 81, female
Procedure / problem	• C3-5 decompression
Background	<ul style="list-style-type: none"> <li>• RA</li> <li>• Fixed neck deformity</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Sulphasalazine</li> <li>• Steroids</li> <li>• Diclofenac</li> <li>• Ranitidine</li> </ul>

Investigations	<ul style="list-style-type: none"> <li>• Restrictive PFTs</li> <li>• Macrocytic anaemia</li> <li>• CXR – fibrosis, deviated trachea</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Rheumatoid</li> <li>• Causes of macrocytic anaemia</li> <li>• Causes of tracheal deviation</li> <li>• Airway assessment</li> <li>• Rheumatoid neck – assessment and value</li> <li>• Failed intubation</li> </ul>
Patient	• 54, female
Procedure / problem	• Oesophagogastrectomy for cancer
Background	<ul style="list-style-type: none"> <li>• Obese</li> <li>• Scleroderma</li> <li>• Raynaud's</li> <li>• Hypertension</li> <li>• Hypothyroid</li> <li>• Previous pulmonary valvotomy</li> <li>• Corneal grafts</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Co-amilofruse</li> <li>• Aspirin</li> <li>• Irbesartan</li> <li>• Seretide</li> <li>• Sildenafil</li> <li>• Iloprost</li> <li>• Poor compliance with thyroxine</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Pulmonary stenosis, biventricular dilatation</li> <li>• Pulmonary hypertension</li> <li>• Mildly elevated calcium</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Scleroderma implications, CREST</li> <li>• Raynaud's and arterial lines</li> <li>• OLV, management of hypoxia</li> <li>• Thyroid hormone synthesis and treatment</li> <li>• Common complications oesophagectomy</li> <li>• Pulmonary hypertension – treatment, anaesthesia</li> </ul>
Patient	• 76, female
Procedure / problem	Abdominal pain, nausea, vomiting – laparotomy for caecal perf
Background	• Previous sub-total thyroidectomy, goitre
Drugs	<ul style="list-style-type: none"> <li>• Digoxin</li> <li>• Aspirin</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• AF, rate controlled</li> <li>• Polycythaemia</li> <li>• WCC 18</li> </ul>



Questions	<ul style="list-style-type: none"> <li>• Pre-optimisation</li> <li>• Airway management</li> <li>• Cardiac output monitoring</li> <li>• Intraop fast AF</li> <li>• Post op extubation</li> <li>• Polycythaemia causes</li> </ul>
Patient	• 63, female
Procedure / problem	• Malignant melanoma excision from back and skin graft
Background	<ul style="list-style-type: none"> <li>• Smoker</li> <li>• Hypertension</li> <li>• Multiple LRTIs</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Obstructive PFTs with reversibility</li> <li>• Elevated creatinine</li> <li>• Right basal opacity CXR</li> <li>• LVH on ECG</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Prone positioning</li> <li>• Wheeze in recovery</li> </ul>
Patient	• 74, female, West African
Procedure / problem	Cervical laminectomy – reduced limb power
Background	<ul style="list-style-type: none"> <li>• Hypertension</li> <li>• Diabetes</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Insulin</li> <li>• Atenolol</li> <li>• Prazosin</li> <li>• Acei</li> <li>• Aspirin</li> <li>• Dipyridamole</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Murmur</li> <li>• Creat 190</li> <li>• 1st degree HB</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Aortic stenosis</li> <li>• naemias</li> <li>• Sick cell</li> <li>• Renal failure</li> <li>• Causes of heart block, sinus arrhythmia</li> <li>• Periop diabetes</li> </ul>
Patient	• 76 female
Procedure / problem	• Mastectomy and axillary clearance
Background	<ul style="list-style-type: none"> <li>• COPD, limited ET</li> <li>• AVR 3 years ago</li> </ul>

Drugs	<ul style="list-style-type: none"> <li>• Warfarin</li> <li>• Inhalers</li> <li>• Theophylline tabs</li> <li>• Frusemide</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Severe obstructive PFT</li> <li>• Normocytic anaemia</li> <li>• ECG – left axis deviation</li> <li>• PaO2 9.5</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Respiratory optimisation</li> <li>• Balancing risk of delay</li> <li>• Causes of LAD</li> <li>• Anticoagulation management</li> <li>• Management of post op respiratory distress</li> <li>• Indications / CIs to NIV</li> </ul>
Patient	• 68, male
Procedure / problem	T8-10 decompression via thoracotomy – cauda equina
Background	<ul style="list-style-type: none"> <li>• Nephrectomy for RCC</li> <li>• Spinal metastases - previous decompression with postop respiratory failure (HDU)</li> <li>• Hypertension</li> <li>• TIA previously</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Amlodipine</li> <li>• Bendrofluazide</li> <li>• Simvastatin</li> <li>• MST</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Creatinine 190</li> <li>• Glucose 17</li> <li>• Lactic acidosis</li> <li>• 1st degree HB</li> <li>• Abnormal CXR</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• OLV and hypoxia including artefact near spine</li> <li>• Analgesia</li> <li>• Effects of smoking</li> <li>• Post op care</li> </ul>
Patient	• 70, male
Procedure / problem	Elective AAA 4 days previously – severe SOB on ITU
Background	<ul style="list-style-type: none"> <li>• Hypertension</li> <li>• IHD</li> <li>• Diabetes</li> <li>• Hiatus hernia</li> <li>• Cerebrovascular disease</li> <li>• Limited ET</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Bilateral hilar shadowing</li> <li>• Basal creps</li> <li>• PaO2 11 on 70%, metabolic acidosis</li> <li>• Fast AF</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Differential</li> <li>• Management of LVF</li> <li>• Management of AF</li> </ul>
Patient	• 78, male
Procedure / problem	• Freeflap maxilla (cancer)
Background	<ul style="list-style-type: none"> <li>• IHD</li> <li>• Diabetes</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Hb 11, MCV 83</li> <li>• Creatinine 145</li> <li>• Glucose 10.3</li> <li>• LBBB, LAD, LVH</li> <li>• Triple vessel disease on angio</li> <li>• Echo – anterior hypokinesia, EF 40%</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Cardiovascular risk</li> <li>• Microcirculatory flow</li> <li>• Free-flaps</li> </ul>
Patient	• 21, female
Procedure / problem	<ul style="list-style-type: none"> <li>• 32/40 pregnant</li> <li>• SOB, dizzy, exertional chest pain – congenital bicuspid valve</li> </ul>
Background	• Lost to cardiology follow-up
Drugs	
Investigations	Echo – peak radiant 78mmHg, valve area 1cm <sup>2</sup> , EF 60%
Questions	<ul style="list-style-type: none"> <li>• Physiological changes in pregnancy</li> <li>• Pathophysiology and anaesthetic management AS</li> <li>• Early delivery?</li> <li>• Intra-uterine transfer to tertiary centre?</li> <li>• Plan for LSCS</li> <li>• Uterotonics and aortic stenosis</li> <li>• Breastfeeding and anaesthesia</li> <li>• ITU management</li> </ul>
Patient	• Elderly, female
Procedure / problem	• Elective clipping of aneurysm 2 weeks post SAH
Background	<ul style="list-style-type: none"> <li>• COPD, limited ET</li> <li>• PPM for complete heart block</li> </ul>
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Obstructive PFTs</li> <li>• CXR hyperinflated with PPM</li> <li>• CT angiogram</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Pacemaker management</li> <li>• COPD optimisation and anaesthesia</li> <li>• Isoflurane and neurosurgery</li> <li>• Monitoring</li> <li>• Intra-operative ICP management</li> <li>• Post-operative seizure</li> </ul>
Patient	• 20 yr old female
Procedure / problem	30/40 pregnant – abdo pain, nausea, vomiting, tender swollen wrist
Background	<ul style="list-style-type: none"> <li>• T1 DM</li> <li>• Asthma</li> <li>• Social issues</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Insulin (novrapid, glargine)</li> <li>• Inhalers</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Acidotic</li> <li>• Ketones in urine</li> <li>• Glucose 22</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Anion gap</li> <li>• Treatment of DKA</li> <li>• Needs washout of septic arthritis – when, options for anaesthesia, blocks</li> <li>• Intraoperative seizure</li> </ul>
Patient	• 35 year old male
Procedure / problem	• ORIF ankle
Background	• Ex-IVDU
Drugs	<ul style="list-style-type: none"> <li>• Buprenorphine</li> <li>• Diazepam</li> </ul>
Investigations	• 1st degree HB, p-mitrals
Questions	<ul style="list-style-type: none"> <li>• Anaesthetic problems in IVDU</li> <li>• Opioids and tolerance</li> <li>• IV access issues</li> <li>• Post-op analgesia</li> </ul>
Patient	• 76 year old male
Procedure / problem	• Laryngectomy, recent stridor and sleeping upright
Background	• COPD
Drugs	<ul style="list-style-type: none"> <li>• Amlodipine</li> <li>• Inhalers</li> <li>• Diuretic</li> </ul>
Investigations	
Questions	<ul style="list-style-type: none"> <li>• How would change the ETT for a tracheostomy intraoperatively</li> <li>• Critical incident: on ITU, becomes hypoxic, agitated, tachycardic. What are the differentials? Showed ECG with ischaemic changes. How would you manage acute cardiac event?</li> <li>• Is he likely to have cardiac problems?</li> <li>• What tests?</li> </ul>

Patient	• 65 year old female
Procedure / problem	• THR NOF fracture
Background	• CLL
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• Pancytopenia</li> <li>• Anaemia</li> <li>• eGFR 58</li> <li>• Hypoxic on ABG</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Hypoxia with LMA</li> <li>• Bone cement</li> <li>• Chemotherapy agents</li> <li>• Analgesia</li> </ul>
Patient	• 52 year old female
Procedure / problem	• Lung resection
Background	<ul style="list-style-type: none"> <li>• COPD</li> <li>• Hiatus hernia</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Salmeterol</li> <li>• Budesonide</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• PFTs FEV1 1.4 Pred 2.3,</li> <li>• FVC reduced</li> <li>• FEV1/FVC reduced, DLCO reduced, FRC + TLC increased</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Features of lung CA – including extra pulmonary manifestations</li> <li>• Criteria for lung resection – how will this affect this lady? PPOFEV1 calculation</li> <li>• What can we do to optimize her lung function prior to surgery? Effects of smoking?</li> <li>• Why is HH important?</li> <li>• Indications for one lung ventilation? Ventilatory parameters in OLV?</li> <li>• Managing hypoxia. DLT sizes. Bronchial blocker indications.</li> <li>• Postop management esp pain – what options? Compare and contrast thoracic epidural vs paravertebral block for this operation</li> <li>• Paravertebral space anatomy, how to do a paravertebral block</li> </ul>
Patient	• 14 week old
Procedure / problem	• Vomiting, FTT - pyloric stenosis
Background	• Murmur, recent echo moderate ASD under surveillance
Drugs	<ul style="list-style-type: none"> <li>• Salmeterol</li> <li>• Budesonide</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Na 129, K 2.4, U 10, Cr 79, Cl low.</li> <li>• Hb 141, PCH, MCV, MCH all low.</li> <li>• WCC &amp; platelets normal.</li> <li>• CXR appeared largely normal, but ?upper right zone shadowing.</li> <li>• ECG sinus tachycardia at 150, with borderline RBBB, T-wave inversions v4-v6</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• pertinent issues in this case?</li> <li>• Why do you say he's dehydrated?</li> <li>• How do you assess dehydration in a paediatric patient? What percentage dehydration?</li> <li>• Comment on the blood results. Why is he hyponatraemic/hypokalaemic/hypochloraemic? What happens to his urine? (acidic/alkalotic?) Why is his Hb high?</li> <li>How would you correct his dehydration &amp; electrolyte abnormalities? (wanted a precise fluid type, and regime)</li> <li>• Comment on his CXR. What can be other causes of the upper zone shadowing in a paediatric patient? (thymus)</li> <li>• Comment on his ECG. What do you think of these changes? (said some normal for paed, but also changes can be due to his ASD)</li> <li>• How would you assess him, and what would you do pre-operatively?</li> <li>• How would you anaesthetise this child? (classic RSI vs real-life inhalational)</li> <li>• What monitoring would you use?</li> <li>• If you were doing an RSI, what drugs &amp; doses would you use at induction?</li> <li>• What would be the difficulties of performing an RSI in a 14-week old?</li> <li>• What are the airway differences between a paediatric patient, and an adult patient?</li> <li>• What agents would you use for inhalational induction? Would you use nitrous oxide?</li> <li>• What size ETT would you use? What formula?</li> <li>• What else can you use his NGT for? Would you put anything down his NGT prior to aspirating?</li> <li>• What would you use for analgesia? Would you use opioids? (it is an open procedure)</li> <li>• Where will this patient go to post-op?</li> <li>• Critical incident part - post extubation hypoxia, laryngospasm</li> </ul>
Patient	• 28 year old woman
Procedure / problem	• Sepsis post MROP, for hysterectomy
Background	Para 4 post partum. 4/7 history of generally unwell with increasing SOB. She had retained placenta removed 2/7 ago and has deteriorated since then with drowsiness and high temperatures. Gynaecologists would like to take her for a hysterectomy. HR 135, BP 125/60, GCS 13, Temp 38.5. she is on 70% oxygen with CPAP 10.
Drugs	
Investigations	<ul style="list-style-type: none"> <li>• ABG - hypoxia, compensated metabolic acidosis</li> <li>• Bloods – Hb 110, WCC 10.5, Plt 22, Urea 6.9, creat 70?, Bil 100, ALP increased)</li> <li>• ECG – Sinus tachy</li> <li>• CXR – CVP in situ</li> </ul>

Questions	<ul style="list-style-type: none"> <li>• Differential diagnosis</li> <li>• Pre op optimisation – fluid resus and clotting, what parameters I would expect for surgery</li> <li>• Induction – awake art line, induction agents (I chose thio and got questioned intensely about this and CV instability. I stuck to my guns and talked about fluid loading and vasopressors with small dose of thio – seemed happy with this)</li> <li>• Sepsis management</li> <li>• Post op ICU Management</li> <li>• ARDS - Diagnosis, ventilator strategies, and other management including ECMO</li> <li>• Criteria for ECMO</li> </ul>
Patient	• 78, male
Procedure / problem	<ul style="list-style-type: none"> <li>• Fempop for ischaemic limb</li> <li>• Failed management radiologically. Recent episode of chest pain</li> </ul>
Background	<ul style="list-style-type: none"> <li>• CABG</li> <li>• PVD</li> <li>• L3-5 decompression, back pain</li> <li>• Angina</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• ACEi</li> <li>• Beta blocker</li> <li>• Nitrates</li> <li>• Diuretic</li> <li>• High dose MST</li> <li>• Aspirin</li> <li>• Statin</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• ABG - hypoxia, compensated metabolic acidosis</li> <li>• Bloods – Hb 110, creat 96, eGF 64</li> <li>• ECG – LAD, LBBB</li> <li>• CXR – CVP in situ</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Risks, scoring</li> <li>• Optimisation</li> <li>• Troponins</li> <li>• NSTEMI management</li> <li>• Surgical options</li> <li>• Induction</li> <li>• On table VF</li> <li>• Extubation criteria</li> <li>• Analgesia</li> <li>• Ensuring graft survival</li> </ul>
Patient	• 78, male
Procedure / problem	<ul style="list-style-type: none"> <li>• Fempop for ischaemic limb</li> <li>• Failed management radiologically. Recent episode of chest pain</li> </ul>
Background	<ul style="list-style-type: none"> <li>• CABG</li> <li>• PVD</li> <li>• L3-5 decompression, back pain</li> <li>• Angina</li> </ul>

Drugs	<ul style="list-style-type: none"> <li>• ACEi</li> <li>• Beta blocker</li> <li>• Nitrates</li> <li>• Diuretic</li> <li>• High dose MST</li> <li>• Aspirin</li> <li>• Statin</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• ABG - hypoxia, compensated metabolic acidosis</li> <li>• Bloods – Hb 110, creat 96, eGF 64</li> <li>• ECG – LAD, LBBB</li> <li>• CXR – CVP in situ</li> </ul>
Questions	<ul style="list-style-type: none"> <li>• Risks, scoring</li> <li>• Optimisation</li> <li>• Troponins</li> <li>• NSTEMI management</li> <li>• Surgical options</li> <li>• Induction</li> <li>• On table VF</li> <li>• Extubation criteria</li> <li>• Analgesia</li> <li>• Ensuring graft survival</li> </ul>
Patient	Female
Procedure / problem	<ul style="list-style-type: none"> <li>• Laparoscopy, exploration of biliary tree</li> <li>• Vomiting, pain, jaundice, fatigue, septic</li> </ul>
Background	<ul style="list-style-type: none"> <li>• Hypothyroid</li> <li>• BMI 46</li> </ul>
Drugs	<ul style="list-style-type: none"> <li>• Levothyroxine</li> </ul>
Investigations	<ul style="list-style-type: none"> <li>• Bloods – anaemia, elevated WBC, TSH 200, T4 unrecordable, raised ALT and LP, prolonged PT</li> <li>• ECG – sinus brady</li> </ul>



Questions	<ul style="list-style-type: none"><li>• What do the blood tests show? Why is she anaemic?</li><li>• What does the ECG show? I said it showed sinus bradycardia, but because there was artefact interference in V3 it was inadequate and needed to be repeated. They seemed happy with that.</li><li>• What is the biggest issue? Sepsis or Hypothyroidism?</li><li>• How will hypothyroidism affect your anaesthetic?</li><li>• What do you need to do to optimise her pre-operatively?</li><li>• What is the dose of IV thyroxine, and what other medications will you give her peri-operatively? How would you optimise her coagulopathy?</li><li>• How would you give her an anaesthetic? What monitoring do you need?</li><li>• What antibiotics would you give her and why?</li><li>• What are the physiological changes associated with capnoperitoneum?</li><li>• They convert to open on the table, what incision are they likely to make, what are the analgesic options now the case is open?</li><li>• Will you extubate this patient?</li><li>• I said bearing in mind all other parameters –cardiac, respiratory pattern and effort etc. I said I would, they seemed happy with that.</li><li>• Where does she need to go post-operatively?</li><li>• You arrive in ITU and the patient's GCS drops, what is your approach?</li><li>• Have you heard of NELA? What is it?</li></ul>
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# Short Clinical Cases

- Hypertrophic obstructive cardiomyopathy
  - Elective patient with murmur - investigation
  - ECG with LAD, LVH, T inversion
  - Definition
  - Pathophysiology
  - Management
  - Anaesthesia
- AF
  - 80 yo for removal SCC
  - ECG with AF, LBBB, LVH
  - How to optimise, when to anaesthetise
  - Rate vs rhythm control
  - Methods of cardioversion
  - Causes of AF
  - What would you be looking for on echo
  - Complications
  - Management of intraop fast AF
  - Q waves on ECG
  - Management of periop anticoagulation, CHADS2 score
- Preeclampsia
  - 36 week primigravida BP 160/90, Pulse, 124/min for LSCS category 2. Had nifedipine and hydralazine.
  - Classification
  - Clinical features
  - Investigation
  - Magnesium
  - How is different from pregnancy induced hypertension
  - Antihypertensives
  - Conduct of anaesthesia
- OSA
  - 45 year old for elective cholecystectomy with h/o snoring
  - Shown a polysomnograph or overnight oximetry - asked to interpret
  - Classification of sleep apnoea
  - Clinical features
  - Epworth, STOPBANG
  - Polysomnography
  - Management
  - Perioperative management
- Ruptured AAA
  - 80yo male was eating lunch when developed severe pain and hunched over. Brought into A+E. BP 60/30. Surgeons believe ruptured AAA
  - Resuscitation
  - Suitability for surgery, Glasgow aneurysm score
  - Conduct of anaesthesia
  - Massive transfusion
- Paediatric squint surgery
  - Anaesthetic concerns
  - Management of PONV
  - Oculocardiac reflex
  - Airway choice
  - Premedication
  - Risk factors for squint
  - Malignant hyperthermia and squint surgery

- Weight, tube, LMA, fluid calculations
- Myotonic dystrophy
  - Extraction of wisdom teeth, presumed to be difficult
  - Clinical features
  - Pre-op investigations with detail about respiratory function, ABG, echo.
  - Anaesthesia for myotonic dystrophy
  - Muscle relaxants
  - Dental surgery - airway choice, throat packs
- Cholesteatoma
  - What is cholesteatoma, what makes the tumour
  - Facial nerve monitoring
  - Conduct of anaesthesia for middle ear surgery
  - PONV
- Grommets with runny nose
  - Anaesthetic implications of an URTI
  - Indications/contraindications for paediatric day case
  - How would you proceed
  - Airway choice
  - Management of laryngospasm
- Jehovah's Witness
  - Colectomy: what are you going to do?
  - Gillick competence
  - Methods of preventing blood transfusion in pre-operative and post-operative periods.
  - Advanced directive and consent
  - What would you do in emergency if patient unconscious and no advance directive
- Pneumothorax
  - Trumpeter falls while playing trumpet and sustain Colle' fracture
  - Shown XR of tension pneumothorax
  - Management of tension
  - ICD insertion
  - Types drain and container
  - Relevance of length and depth of tubing
  - Flutter valve drains
- Pneumothorax
  - Patient following RTC. GCS 15; BP & HR normal; breathless; chest x-ray shows pneumothorax:
  - What kind of pneumothorax?
  - What are you going to do?
  - British Thoracic Society guidelines.
  - What if patient needs to go to theatre? What would be different in your management?
  - How would you manage a patient with pneumothorax in theatre?
- Lung malignancy
  - 77yr old female for bunion operation. Complained of right sided chest pain and weight loss. Shown CXR with R-sided lesion
  - Describe CXR
  - Differential diagnosis
  - What investigations are required, methods of obtaining biopsy
  - She comes for R sided thoracotomy and resection - anaesthetic considerations, airway management
  - Double-lumen tubes and OLV
  - Analgesia for thoracotomy
- Thoracic surgery pre-assessment
  - Pulmonary function tests inc. transfer factor
  - Shuttle testing
  - Exercise and sats
  - CPEX
  - 'Cut-offs' for surgery

- ICU nutrition
  - Shown CXR of NG tube sitting in left lung
  - NGT position checking
  - What would you do
  - Normal nutritional requirements (fat, protein, carbohydrate, electrolytes, water, trace elements)
  - Benefit of enteral feeding
  - Constituents of enteral feed
  - Complications of enteral feed
  - Feeding and critical illness
- Microlaryngoscopy for hoarse voice
  - Causes of hoarseness, commonest
  - Innervation of larynx
  - Structures seen on nasendoscopy
  - Airway assessment
  - Conduct of anaesthesia
  - Microlaryngeal tubes
  - Other methods of ventilation
  - LASER
- Neck haematoma
  - Patient end stage CKD, morbid obesity, attempted vascath insertion (internal jugular) by renal team haematoma; stridor. Vascular surgeon wants to operate ASAP.
  - Discuss issues / concerns
  - Differential diagnosis
  - Likely site of obstruction
  - Conduct of anaesthesia
- Tetanus
  - Farmer presents with dysphagia and muscle pain
  - What is Tetanus, describe organism
  - Clinical features
  - Grading (Ablett scale)
  - Management
  - ICU management
- Sepsis
  - Principles of management
- TB
  - Female patient from India presenting with ruptured ectopic, persistent cough. Shown CXR - miliary TB
  - Differential diagnosis
  - Implications for anaesthesia
  - Investigations
  - Infection control measures and protection of staff
  - Management of TB
- Awareness
  - 43 year old, 6 weeks post-hysterectomy during which she remembers being awake
    - Actions
    - What can you look for on the chart
    - Definition
    - Incidence
    - Risk factors
    - Types of awareness
    - Trials
  - 25 year old lady asked to review about having awareness post GA for c-section
    - Management
    - What would you look for on the anaesthetic chart
    - Reasons for awareness in obstetrics
    - Incidence

- Other high risk areas for awareness
- Depth of anaesthesia monitoring
- Fractured mandible
  - 19 year old man has been assaulted in a pub whilst out drinking. He had a period of loss of consciousness. He presents for repair of fractured mandible.
  - Indications for CT head
  - How would you assess him
  - Urgency of operation - when to bring to theatre
  - Airway assessment
  - Airway management
- Eisenmenger's
  - 50 yr old with Down syndrome with # NOF for urgent fixation.
  - Pathophysiology of Eisenmenger's
  - Anaesthetic implications
  - What factors affect the shunt
  - ECG analysis
- Sick cell
  - Unbooked 30yr old presents for emergency C-section due to foetal distress. Sickledex positive.
    - Perioperative management
    - Types of testing
    - Sick cell genotypes
    - Post-op SOB, hypoxia, pleuritic chest pain - differential
    - Exchange transfusion
  - 19yr old Afro-Caribbean male for appendicectomy, sickledex positive.
    - Sickledex test and meaning of a positive test
    - What is sickle cell disease and sickle trait
    - What levels of oxygen tension does sickling occur
    - Problems of sickle cell disease
    - Implications for anaesthesia and precautions
    - Chest crises
    - Could this be anything other than appendicitis given history
    - Comparison with thalassaemia
    - Reticulocytes - significance
- Paediatric SVT
  - 2yo post grommets in recovery. Agitated and distressed. How would you manage?
  - What can cause agitation in recovery?
  - ECG with SVT rate 300. Management, who would you involve
  - Dose of adenosine in child
  - Estimation of wait
  - Chemical and electrical cardioversion
- Hypothermia
  - 78 year old patient is brought to hospital by ambulance. She was found at the bottom of her stairs. She is unconscious and hypothermic.
  - Resuscitation
  - Differential
  - Grading of hypothermia
  - Correction of hypothermia
  - Management of broad complex tachy
- Exacerbation of COPD
  - Pathophysiology (bronchitis vs emphysema)
  - Causes
  - Oxygen therapy
  - Mechanism of oxygen induced hypercapnoea
  - Management
  - Indications / CIs for NIV and invasive ventilation
  - Weaning

- Spinal cord perfusion
  - Weak Legs post AAA repair (CSE)
  - Causes - including Artery of Adamkiewicz thrombosis
  - CSE and coagulation
  - Physiology of cord perfusion
  - Lumbar drains - management, settings
- Blocked trachea
  - Physiotherapist unable to pass the suction catheter through tracheostomy. Breathless.
  - Differential diagnosis
  - Causes of blocked tracheostomy
  - Assessment
  - Management
  - Complications of tracheostomy
- Bleeding tracheostomy
  - 4 days old trachea, bleeding around stoma
  - Initial management
  - Causes
  - Action if tracheostomy dislodged on way to theatre
  - Conduct of anaesthesia in theatre
- Failing epidural
  - Patient had colectomy for UC earlier, epidural not working, in pain
  - Block assessment
  - What do you look for in notes
  - Practical management
  - Back pain following removal of catheter - differential
  - Features and management of epidural abscess
- Cystic fibrosis
  - Woman with end-stage cystic fibrosis presenting following trauma to her arm needing debridement, repair of median nerve and brachial artery.
  - Definition
  - Pathophysiology, incidence
  - Features
  - Conduct of anaesthesia
  - Anaesthetic options, types of regional
- Penetrating neck injury (stabbing)
  - Obese neck stabbing, afro-caribbean
  - Asked to describe clinical findings on examination
  - Likely to have OSA
  - Shown AP and lateral neck xrays - blade in neck, had been taken with contrast.
  - Asked what structures in the neck may have been damaged
  - How would I manage the airway?
  - Told sickle negative
  - What are your concerns?
  - What further tests would you do? CT, naso-endoscopy
  - How would you assess airway?
  - What structures could be damaged?
  - What are the options to secure airway for surgery?
  - Which one would you do? Talk me through it
- ECT
  - Indications
  - Preoperative assessment, likely issues
  - Antipsychotics and other psych drugs (inc. lithium) and influence on anaesthesia
  - Autonomic effects – shown rhythm strip with bradycardia then tachycardia
  - Conduct of anaesthesia
  - Remote site anaesthesia
  - Capacity and consent

- Long term complications of spinal cord injury
  - Man 2 years post T2 transection presenting for urological procedure
  - Complications of cord injury
    - Autonomic dysreflexia – pathophysiology, causes, clinical features, precipitants, treatment
  - Other anaesthetic considerations
- Empyema
  - Young male, fever, SOB, type 2 respiratory failure, CXR – consolidation
  - Management
  - Antibiotics
  - Likely organism
  - CT demonstrates empyema – specific management of this inc. surgical technique
  - Anaesthetic technique for VATS
  - OLV and management of hypoxia
- PONV
  - Woman for lap steri with history of PONV
  - Anti-emetics mechanism/site of action
  - Number needed to treat
  - Scoring systems
  - Risk factors
  - Anaesthetic technique
- Bleeding tonsil
  - 5 years old
  - Assessment, resus
  - Anaesthetic technique
  - Tube / drug calculations
  - Cannula falls out after induction – how will you manage it
- Wolff-Parkinson-White
  - 25 year old for cystoscopy, c/o of palpitations
  - ECG shown
  - What is WPW
  - Describe normal electrical conduction
  - Risks of WPW, drugs to avoid
  - Anaesthesia for ablation
- Pacemakers
  - Indications
  - Types
  - What is now commonest (DDD), why no longer VVI
  - Benefits DDD
  - Preop assessment of patients with pacemakers
  - Anaesthetic drugs and their affect upon function
  - Loss of capture intraop – causes, management
  - Management of asystole
  - What are the differences in managing a patient with an ICD
  - Coding of ICDs and pacemakers in detail
- Trauma
  - 22 year old female, 30/40 pregnant, GCS 15, tachycardic, normal BP
  - Initial assessment and management
  - Trauma team composition
  - Investigations
  - DDx of lower abdo pain / pelvic pain in this scenario
  - Cardiovascular changes in pregnancy
- Regional anaesthesia
  - 45 year old for hydrocoele, want to avoid GA after bad experience 25 years ago
  - Risks / benefits of neuroaxial block vs GA
  - Innervation of testicle
  - Spinals and day-case

- Consent
- Emergency LSCS
  - 23 year old, LSCS for foetal distress
  - Classification of urgency
  - Influence on choice of anaesthesia
  - Management of cord prolapse
  - Process of spinal anaesthesia, choice of drug
  - Extubation
- Malignant hyperthermia
  - 9 year old for scoliosis correction, tachycardic intraop
  - Causes of tachycardia
  - Now rising EtCO<sub>2</sub>
  - Pathophysiology of MH
  - Genetics, testing
  - Incidence
  - Management
  - Mechanism of action of dantrolene
  - Who will you test, parent refuses to be tested how to counsel
- Intra-uterine fetal death
  - G4P3, 20/40, in labour
  - Incidence
  - Complications
  - Investigations
  - Shown FBC, UE, coag – platelets 100, elevated PT / APTT
  - Options for labour analgesia
  - Antibiotics
  - Management of DIC
- Cardiac risk
  - 64 year old. AF (warfarinised), decompensated heart failure, previous MI. For revision of stump – septic
  - Investigations
  - Risk stratification scoring systems
  - Perioperative warfarin
  - Anaesthetic options / conduct
- Brainstem death
  - 48hr post SAH and cardiac arrest, persistent coma still occasional spontaneous respiratory effort
  - Prognosis
  - Communication around withdrawing care
  - Living will, advance directives, mental capacity act
  - Non-heart beating donation
  - Diagnosis of death, brainstem tests
  - Organ donation and family consent
  - Management of SAH in ITU
- Management of retained placenta / PPH
  - Causes of PPH
  - Assessment preop
  - Regional and differences post partum
- Management of intrapartum haemorrhage
- Anaphylaxis
  - Woman for ERPC. Anaphylaxis 6 weeks previously.
  - Precautions
  - Investigations after anaphylaxis
  - Causes of a chronic raised tryptase
  - Acute management
- Dural tap in obstetrics
  - Management in labour



- Intrathecal catheters
- Management of PDPH, blood patching
- Laparoscopy
  - Physiology
  - Complications
  - Anaesthesia
- Collapse – suspected overdose
  - 25 year old female, unconscious, suspected overdose (alcohol / paracetamol)
  - Assessment
  - Metabolic acidosis and anion gap
  - Indications for intubation
  - N-acetylcysteine and other specific management
  - Pathophysiology of paracetamol OD
  - Management of hepatic failure
- LA toxicity
  - Epidural top up for LSCS, drowsy - differential
  - Presentation of LA toxicity
  - Risk factors
  - Pharmacology of LAs - levo vs racemic bupiv
  - Management including intralipid dosing
  - GA for LSCS
- Laryngospasm
  - Definition
  - Causes / precipitants
  - Management
  - Laryngeal anatomy and innervation
  - Negative pressure pulmonary oedema
- Hyperparathyroidism
  - Patient for renal stone removal trans-urethral
  - Classification of hyperparathyroidism
  - Clinical features
  - Effect on anaesthesia
  - Anaesthesia for urology
- Blast injury
  - Traumatic amputation of lower limb
  - Classification of blast injury (primary, secondary, tertiary, quaternary)
  - Anatomical injuries expected
  - Management of exsanguinating trauma
  - Triage, major incidents
- Epilepsy
  - 50 year old male for open chole, epileptic
  - Classification of epilepsy
  - Anti-epileptic drugs and side effects
  - Effect of anaesthetic drugs on epilepsy
  - Perioperative management
- Inhaled FB
  - Coin in right main bronchus on CXR (AP and lateral)
  - CXR signs of collapse
  - Anaesthetic management
- Heart block
  - ECG interpretation
  - Types of heart block
  - Causes
  - Investigation
  - Indications and method of pacing
  - Calibration and calibration mark on ECG

- Management of complete heart block
- Diathermy and electrical safety
- Steroid replacement
  - Ulcerative colitis with toxic megacolon
  - Morbiund
  - Pre-op resuscitation
  - Monitoring
  - Steroid replacement
- Extra-dural haematoma
  - Young male with EDH in A&E
  - Physiology of ICP and CBF
  - Indications for intubation
  - Parameters to aim for
  - Equipment, monitoring
  - Practicalities of transfer
  - Oxygen requirement calculations
  - Transfer ventilators
- Aortic stenosis
  - 75yo for THR
  - Clinical features AS
  - Investigations
  - Grading of severity, how the pressure gradient is calculated by echo machine
  - Anaesthetic management
  - AF
  - Coronary perfusion
- Diabetes
  - Problems with DM
  - Assessment of control
  - Perioperative management
- Wrist fracture
  - 60 year old heavy smoker with lung cancer, presents with wrist fracture
  - CXR interpretation
  - Options for reduction of fracture – IVRA, haematoma, regional, sedation, GA
- IVRA
  - What is IVRA
  - Practicalities, cuffs, etc.
  - Drugs, doses
  - Complications
- Penetrating eye injury
  - 15 year old, full stomach
  - Discuss concerns
  - Physiology of IOP, effect of drugs
  - Conduct of anaesthesia
- Pyloric stenosis
- Epiglottitis
- Autonomic nervous system disorders
  - Classification
  - Causes
  - Manifestations
  - Physiology of Valsala and effects
- Uncontrolled hypertension
  - Inguinal hernia electively BP 220/110
  - Causes
  - Problems
  - Management
  - NICE guidance on hypertension management, antihypertensives and anaesthesia

- Investigations to assess end organ damage
- Acceptable levels / control
- Pt comes back with strangulated hernia, conduct of anaesthesia
- Circumcision
  - Analgesic options
  - Doses of simple analgesics in children
  - Caudal
  - Penile block
  - Paediatric daycase in general
- Down's syndrome
  - 16 year old female for dental work
  - Problems with Down's
  - Anaesthetic considerations
  - Consent
  - Day-case criteria
  - Anaesthesia for dental clearance
  - Throat pack
- IVDU
  - IVDU for Hickman line
  - Perioperative problems
  - Communicable diseases
  - Needlestick injuries in high risk patients
- Cardiac risk
  - 60yo man. 2x stents for cardiac disease. Presents for knee arthroscopy
  - Investigations
  - ECG – lateral T wave inversion, inferior Qs, LVH
  - Risk of peri-op MI. Risks of surgery post MI
  - Anaesthetic options
- Carotid endarterectomy
  - Publican due to have CABG. Now found to have carotid stenosis
  - Regional vs GA
  - Regional technique
  - Monitoring CNS function
  - Other issues with carotid surgery, inc. BP management
- Airway assessment
  - Airway tests, sensitivity and specificity
  - Management of failed intubation
- TURP
  - 75yo man for TURP. 3 MIs previously, last 8 months ago. Takes irbesartan, nicorandil, salbutamol, nifedipine.
  - Indications for his drugs
  - Investigations
  - Urgency
  - Effect of irbesartan on electrolytes
  - Anaesthesia for TURP
  - TURP syndrome
- ALI / ARDS
  - 50yo male with cough, fever, diarrhoea. Returned from Mediterranean holiday recently. Tachypnoeic, hypoxic, tachycardic, hypotensive, pyrexial
  - Initial assessment, resuscitation
  - CXR – bilateral infiltrates
  - Differential diagnosis
  - Definition ALI / ARDS
  - Non-invasive ventilation
  - Indications for intubation
- Anaemia

- 58 yo female for hemicolectomy. FBC and haematinics.
- Causes of iron deficiency anaemia
- Transfusion triggers
- Oxygen delivery and oxygen flux
- Oxygen dissociation curve
- Shortness of breath in pregnancy
  - Causes / differential
  - Pathophysiology and management of
  - Amniotic fluid embolus
  - Pre-eclampsia
  - Pulmonary oedema
- Critical illness neuropathy / myopathy
  - 76 yo on ITU with CAP. Develops weakness.
  - Differential
  - Diagnosis / pathophysiology of critical illness neuropathy / myopathy
  - Conduction studies
  - Treatment
  - Prevention
- Trauma
  - 8yo boy found in ditch with open tib/fib
  - Initial assessment and resus
  - Assessment of conscious level in children
  - Indications for CT head, signs suggestive of intracranial pathology
  - Management of traumatic brain injury / raised ICP
- Atrial flutter
  - ECG – flutter at rate 75
  - Patient for renal transplant, dialysed yesterday
  - Investigation
  - Conduct of anaesthesia
  - Rate control vs rhythm control
  - Renal failure and anaesthesia
- Myocardial infarction
  - ECG – inferolateral MI
  - 55 year old male, no pain at time of ECG. Previous MI 4 years ago
  - What drugs is the patient likely to be taking already
  - Clinical assessment
  - How to assess axis on an ECG
  - Symptoms of heart failure
- Epidural abscess
  - 4 weeks post epidural steroid injection for chronic pain. Perineal numbness, severe back pain
  - Differential
  - Investigations
  - Markers of inflammation / infection
  - Management
- Tension pneumothorax
  - Young pt post thoracoscopy – CXR
  - Clinical features
  - Management
  - How to insert a chest drain
- Rheumatoid arthritis
  - Lateral C-spine XR interpretation
  - Problems with RA
  - Patient going for hip surgery – anaesthetic options
  - Conduct of general anaesthesia
  - Airway management
- Sux apnoea

- 8 yo girl for appendicectomy. Doesn't wake up post op.
- Differential, investigations
- Neuromuscular monitoring
- Sux apnoea in detail
- Head injury and C-spine
  - 19 yo male involved in RTC. GCS 13, open tib/fib needs theatre for fixation.
  - Indications for CT head
  - C-spine clearance and imaging
  - Problems with immobilisation
  - Differences between CT and MRI
- Hypotensive anaesthesia
  - Indications
  - Methods
  - Pharmacology
  - FESS procedure
  - Throat pack
- Tracheal tumour
  - Was shown an CT scan of the neck. Asked what was wrong? Subglottic tumour
  - The surgeon wants to take a biopsy of the lesion. How would I provide anaesthesia?
  - I mentioned I would need to assess the length of the tumour and tracheal circumference.
  - What are the indications for tracheostomy?
  - How do you perform a surgical tracheostomy?
- Crohn's colonoscopy
  - Incidence, pathophysiology of Crohn's - locations affected
  - Management of Crohn's
  - Sedation - conscious, definitions, problems
  - Options for colonoscopy
- Cataract
  - 70yo on warfarin - anaesthetic options
  - Eye blocks - how to perform each, disadvantages
  - Managing wrong side block
  - Preventing wrong side block
  - Never events
- Type 2 Respiratory Failure
  - 75 yo admitted SOB
  - Differential diagnosis
  - Severity of COPD
  - Indications for NIV
  - Advantages over invasive ventilation
  - How to start NIV (pressures)
- Left bundle branch block
  - ECG analysis
  - Causes of LBBB
  - Which leads look at left ventricle
  - Why M pattern in lateral leads
  - Pt for elective arthroscopy - what would you do?
- Phrenic Nerve Palsy
  - Elderly woman having had right humerusoperation, post-operative difficulty in breathing
  - Shown CXR of patient with raised right hemidiaphragm and associated right lower lobe collapse
  - Differentials of postop difficulty in breathing
  - How do you approach this patient - management plan and investigations and why
  - Differentials of raised right hemidiaphragm
  - Causes of phrenic nerve palsy
  - Other ways to distinguish this as phrenic nerve palsy
  - CXR signs of phrenic nerve palsy
  - Incidence of phrenic nerve palsy following interscalene block

- How long does it last
- What else would you see following interscalene block e.g. Horner's syndrome
- Anaesthetic implications of high spinal cord injury
  - Pathophysiology of autonomic dysreflexia
  - Anaesthetic management of a patient coming for urinary catheterization
  - High cervical spine injury- autonomic dysreflexia, signs and symptoms, management
  - Other issues
  - Changes that occur with a high spinal injury.
  - Pathophysiology of spinal shock, and autonomic dysrhythmia.
  - Treatment of bradycardia
- Enhanced recovery
  - 50 year old woman with bowel cancer, Hb 9 and MCV 70, seen in pre-op clinic.
  - What type of anaemia?
  - Why is she anaemic?
  - What will you do next?
  - What about transfusing?
  - She also has IHD. Does this change your management?
  - What non invasive cardiac tests?
  - Echocardiography - What information does it give us
  - How do you perform CPET testing? What information does it give us?
  - What is enhanced recovery?
- SAH
  - 55 yr old, sudden onset occipital headache and nausea.
  - Likely diagnosis?
  - Other causes of Sudden onset headache.
  - She is for clipping of aneurysm, GCS 7.
  - How do you manage this? Talked about intubation, arterial line.
  - Complications during procedure specifically those that are vasculature related?
  - Talked about vasospasm - presentation, treatment.
  - Rebleeding.
  - They mentioned dislodged coil.
- COPD
  - 65 yrs old, severe, stable COPD, Knee arthroscopy, wants a spinal anaesthetic
  - What are the criteria for day surgery?
  - Does having severe COPD mean you cannot have day surgery?
  - Shown a CXR: What does the CXR show?
  - My interpretation - hyperinflated lung fields, opacity left upper lobe
  - What could the opacity be?
  - What makes you say hyperinflated? What are the criteria?
  - The patient wants a spinal for her arthroscopy, are you going to do it?
  - What medication would you use for a day case spinal anaesthetic?
  - How would you perform a spinal anaesthetic?
  - If you can't pass the needle at L3/4, would you go L1/2? Why not?
- Status epilepticus
  - A 9 year old fitting for 30 minutes
  - What are the differential diagnoses?
  - Could this be a febrile convulsion?
  - What is the incidence of febrile convulsions in this age group?
  - How will you approach this? (ABC Approach, Collat hx, bed side Ix, Pharmacological Management of status)
  - What other drugs might you use prior to GA (paraldehyde)?
  - If hypotensive what and how much fluid
  - When would you resort to GA and exact dose of drugs, tube etc
  - What other investigations would you do? (CT Head)
  - Where does the patient need to go?
  - How will you transfer the patient to scan and PICU

- What sedation would you use?
- Would you really use muscle relaxants? (risks of undetected seizures vs coughing during transfer etc)
- Previous MI
  - Elective hernia repair, previous MI
  - 60 year old man for inguinal hernia repair, previous MI
  - Given an ECG- what does it show? Now look at his ECG: RBB, inferior Q waves Acute inferior MI
  - Which coronary artery is affected?
  - He had a drug eluting stent
  - What anti platelets would you expect him to be on
  - What is the mechanism behind drug eluting stents?
  - Why do they need dual anti platelets for 1 year?
  - He had been on dual anti platelets for 6 months? What would you do? (Hernia is not incarcerated)
- Laryngeal tumour
  - I was shown an endoscopic view of the vocal cords which showed a mass invading the vocal cords. Asked
    - what it is?
    - They asked me my concerns.
    - Asked what else I would want to know from the history?
    - Then asked what other investigations I would like, I said CXR and CT.
    - Then shown a CT scan- which showed deviated and narrowed trachea.
    - What would you want to know in the history from this patient?
    - Options for putting her to sleep for ENT procedure
    - How do you anaesthetize for an asleep tracheostomy
    - How do you confirm trache position
    - Management of a trache that gets pulled out later that night on ITU
    - Asked how would I anaesthetise. In my head, I wanted to say induction, but for some reason I started talking about awake fibreoptics. The examiner didn't seem so keen on the awake fibreoptics. Unfortunately the bell went and I didn't get to discuss this.
- Placenta abruption
  - 38weeks, uneventful pregnancy. Obstetricians have declared a Cat 1 CS due to suspected abruption.
  - What does CaU mean?
  - What are the concerns and issues?
  - How would you anaesthetise (I said if it would check the urgency, then they pushed for an answer and said
    - they estimated 2L blood loss so I said GA)
    - Asked about levels of shock.
    - They asked about Massive obstetric haemorrhage protocol.
    - How much blood would I give?
    - Complications of massive transfusion
    - DIC and MOF
    - What drugs could I use and surgical methods for stopping the bleeding
- Hip revision on warfarin
  - Elderly gentleman. They didn't give much medical history. I think he was on warfarin but they didn't tell you
    - why. His INR was 2.1.
    - Asked the main issues regarding this case.
    - Any investigations I would like?
    - Why might he be on warfarin?
    - Asked pros and cons of various techniques
    - Asked what my preference was - asked what would you be looking for in the history/examination/investigations.
    - Explained guidelines regarding hip surgery.