**Long Clinical Cases**

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| Patient | • Male, 50 |
| Procedure / problem | • Elective ankle operation |
| Background | * Previous Whipple's * Chronic pain and peripheral neuropathy * Cerebrovascular disease * Ischaemic heart disease * 'Back implant' * Diabetes |
| Drugs | Oxycodone, Fentanyl patch, Amitryptiline, Tramadol, Gabapentin, ACEi, Clopidogrel, Insulin, Statin |
| Investigations | * AXR – showing device ~T10 * Normochromic normocytic anaemia * WCC10 * Plt300 * Fasting glucose 9, HbA1c 8.5% |
| Questions and Answers | * Management of various co-morbidities: optimise glucose, iron status, angina control, lose weight, beta blockers, bridging of clopidogrel, pain expectations * Cause of anaemia: chronic disease, iron/B12/folate deficiency * Diabetic investigations / perioperative management and hyperglycaemia * What is the implant (spinal cord stimulator, alternatively insulin pump) * Anticoagulation: stop clopidogrel for 5/7, bridge, contact cardiology ?stents * Conduct of anaesthesia: PNB, Spinal + sedation, ?GA, bipolar if necessary * Post op analgesia - blocks, equivalence of opioids, ketamine and action * Confused and agitated in recovery - causes and investigation |

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| Patient | • Female, 16 |
| Procedure / problem | • Cervical LN biopsy |
| Background | * Recently increasing SOB, unable to lie flat, SVC obstruction * Cough * Refuses LA |
| Drugs | • Nil |
| Investigations | * CXR – mediastinal mass * CT – tracheal compression * Lymphocytosis WCC 17 Lymp 12 |

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| Questions | * Differentials, probable diagnosis * Discuss investigations * Other possible clinical features (inc. SVC obstruction) * Further investigations required * Perioperative management * Airway options * Alternatives to GA * Cervical plexus block * Management of extubation * Tumour lysis syndrome * Treatment of hyperkalaemia * Post extbation airway obstruction |
|  |  |
| Patient | • 13 year old |
| Procedure / problem | • Progressive weakness, areflexia, drooling (bulbar palsy) |
| Background | • Jehovah's witness |
| Drugs |  |
| Investigations | * ABG – respiratory acidosis * CXR – pneumothoax, pneumomediastinum • CSF results |
| Questions | * Differential * Review investigations * Management of GBS * Triggers for intubation, normal vital capacity values * Analgesia in GBS * Causes and management of pneumomediatsinum * Issues with Jehovah's witnesses, immunoglobulin therapy |
|  |  |
| Patient | • Male, 76 |
| Procedure / problem | • EVAR |
| Background | * CABG (2 vessel) * LVF * ICD in situ * Alternate version – previous lobectomy • Alcoholism |
| Drugs | * Frusemide * Digoxin * PPI * Eplerenone (aldosterone antagonist) * Carvedilol * Rosuvastatin * Clopidogrel |
| Investigations | * Echo - dilated LA, aortic valve calcification, severe LVF * CXR – blunted CP angle right * (Pulmonary function tests)   • |

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| Questions | * Review of history and investigations * Perioperative beta blockers * Optimisation of cardiac function * Alcoholic cardiomyopathy * Management of anticoagulants * ICD management perioperatively * Anaesthetic management for EVAR * CPEX * Management of massive haemorrhage |
|  |  |
| Patient | 73 |
| Procedure / problem | * Urgent AAA repair * Ischaemic lower limb |
| Background | * Smoker * Arthritis hips |
| Drugs |  |
| Investigations | * Creatinine 100 * AF 115 * Echo biatrial enlargement, RVH |
| Questions | * Periop optimisation * Management of AF * Cardiac risk assessment / investigation * Conduct of open AAA * Cross-clamping * Periop renal protection * Role of mannitol * Coagulation – TEG, antifibrinolytics (inc. aprotinin) |
|  |  |
| Patient | • 65, male |
| Procedure / problem | • Elective AAA |
| Background | • Hypertension |
| Drugs | * Enalapril * Frusemide * ISMN |
| Investigations | * CXR – cardiomegaly * Hypokalaemia, borderline hypernatraemia * Creatinine 182 * ECG – lateral ST depression, Qs |
| Questions | * Cardiac risk assessment and investigation * CPEX * Elevated glucose in non-diabetics * Cardiac output monitoring * AAA physiology, anaesthesia * Massive haemorrhage * ST changes after clamp off – management * When to extubate |
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| Patient | • 28 female |

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| Procedure / problem | • PPH 7 hours following emergency LSCS • Unrecordable BP, HR 140 |
| Background |  |
| Drugs |  |
| Investigations | * Hb 2.8, plat 84 * Raised APTT, PT. Fibrinogen 1.8 |
| Questions | * Causes PPH * Management of PPH * Uterotonics * Massive transfusion – practicalities, transfusion targets, complications * TRALI – definition, features, management, prevention (screening donors, avoiding multiparous female donors) * Pathophysiology of DIC * Conduct of anaesthesia |
|  |  |
| Patient | 80 |
| Procedure / problem | • Elective laparoscopic hiatus hernia |
| Background | * AF * Hypertension * Angina, recently worsening * Recent LRTI * Pale and frail |
| Drugs | * Frusemide * Digoxin |
| Investigations | * ECG – LAD, T wave inversion V2-6 * Blunted left base on CXR creps left base * Normocytic anaemia * Albumin 22 * Low Ca and Mg |
| Questions | * Types of hiatus hernia, investigations * CPEX testing * Targets for optimisation * Transfusion triggers in anaemia * Conduct of anaesthesia inc NG * Modes of ventilation * PaO2 10 on 40% oxygen on ABG, alveolar gas equation * Causes of deranged magnesium, calcium, albumin * ICU nutrition * Digoxin toxicity * Analgesia * Tension pneumothorax in recovery, chest drain • Fast AF in ICU |
|  |  |
| Patient | • Middle aged,male |
| Procedure / problem | • Incarcerated umbilical hernia |
| Background | * Familial DCM * PPM, ICD * Awaiting heart transplant * Tachycardic, hypotensive, oedematous |

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| Drugs | * Frusemide * Spironolactone * Metolazone * Digoxin * Beta blocker |
| Investigations | * Macrocytic anaemia * AKI * Right pleural effusion |
| Questions | * Investigations * Cardiomyopathy * Optimisation * Pacemakers – identifying type from CXR, indications, periop management * Conduct of anaesthesia * Postoperative renal failure - causes, management |
|  |  |
| Patient | • Older, male |
| Procedure / problem | Acute neck pain – for posterior cervical stabilisation |
| Background | * Awaiting lobectomy for lung malignancy * ESM on auscultation |
| Drugs | * Candesartan * Enoxaparin * Simvastatin * Lansoprazole * Bendrofluazide |
| Investigations | * Reduced PEFR * Aortic stenosis – gradient 37mmHg * Lateral C-spine – high subluxation / C2 problem |
| Questions | * AS – pathophysiology, investigations, management * Airway management * Prone positioning * Cord monitoring * Extubation criteria * Post op management * SOB and desaturation in recovery * Preop preparation / assessment for lobectomy |
|  |  |
| Patient | • 2 year old, African child |
| Procedure / problem | • Adeno-tonsillectomy |
| Background | • OSA symptoms |
| Drugs |  |
| Investigations | * Hypochromic,microcytic anaemia * Overnight oximetry – significant desats * ECG |

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| Questions | * Causes of anaemia * What is red cell width, significance * OSA - causes, grading, investigations * Sleep studies * ECG in children * Conduct of anaesthesia - calculations * Post-operative monitoring * Malnutrition * Bleeding post-tonsillectomy * Obstruction on induction * Extubation criteria |
|  |  |
| Patient | • 67, female |
| Procedure / problem | • Neck dissection (parotid) |
| Background | * COPD, limited exercise tolerance * Htn * PVD * Hypothyroid |
| Drugs | * Asprin * Statin * BDZ * Ramipril * Inhalers * Thyroxine |
| Investigations | * Obstructive PFTs, 40% DLCO * Reversibility with bronchodilators * Polycythaemia |
| Questions | * Respiratory assessment * Optimisation * Other investigations * Why polycythaemic * Transfer factor * Neck dissection management * Facial nerve stimulation * Neck swelling post-operatively * What is a RAE tube - why is it called RAE * Anatomy of phrenic and recurrent laryngeal and facial |
|  |  |
| Patient | • 67, male |
| Procedure / problem | • Laparoscopically assisted anterior resection |
| Background | * COPD * Hypertension |
| Drugs | * Bendrofluazide * Enalapril * Inhalers |
| Investigations | * ECG – RAD, clockwise rotation * Polycythaemia * CPEX – Vmax 12.3 * ABG – PaO2 8.2, PaCO2 7.4 * PFTs - obstructive |

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| Questions | * Polycythaemia – pathophysiology, causes * Monitoring * Laparoscopy * Fluid management * Post-op desaturation in recovery |
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| Patient | • 28, female |
| Procedure / problem | • Puerperal sepsis |
| Background | * 4 days post NVD * ERPC 8 hours ago |
| Drugs |  |
| Investigations | * DIC * Metabolic acidosis * CXR – left lower zone opacity * Blood cultures – group A strep |
| Questions | * Resuscitation / massive transfusion * Blood products – contents * Conduct of anaesthesia * ARDS * Lung protective ventilation * Cardiac output monitoring |
|  |  |
| Patient | • Middle aged male |
| Procedure / problem | • Perforated globe |
| Background | * Learning difficulties * Poorly controlled epilepsy, vagal nerve stimulator |
| Drugs | * Keppra * Carbamazepine * Clonazepam * Quetiapine * Diazepam |
| Investigations | * ABG – type 2 RF * Vagal nerve stimulator on CXR, cardiomegaly * Polysomnograph OSA * Polycythaemia |
| Questions | * OSA, obesity hypoventilation, STOPBANG * Obesity * Airway assessment * Vagal nerve stimulators * Epilepsy perioperatively * Urgency or surgery * Management of IOP * Confused in recovery * VTE prophylaxis |
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| Patient | • 70, male |
| Procedure / problem | • Radical nephrectomy |

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| Background | * Haemodialysis * COPD, limited ET * PPM * Angina |
| Drugs | * Frusemide * Perindopril * Doxazosin * ISMN |
| Investigations | * Anaemia – normochromic, normocytic * CXR – RIJ vascath, cardiomehaly, PPM * Obstructive PFTs, reduced TLCO |
| Questions | * Pacemaker classification and management * Timing around dialysis * Renal failure and anaesthesia * Positioning for nephrectomy * Surgical technique and approaches * Drop in EtCO2 * Hyperkalaemia |
|  |  |
| Patient | • 4 year old |
| Procedure / problem | • Lap Nissen's fundoplication |
| Background | * HIE at birth * Poorly controlled epilepsy * Multiple LRTIs requiring critical care * Severe reflux * Developmental delay |
| Drugs | * Valproate * Lamotrigine * Hyoscine * Omperazole |
| Investigations | * Na 128 * Microcytic anaemia * Right lower zone changes n CXR |
| Questions | * Causes of hyponatraemia * Hysocine and secretions * Perioperative management epilepsy * Paediatrics – expected weight, tube sizes * Bradycardia on insufflation * Causes of hypoxia intraoperatively * Analgesia if conversion to open – consideration caudal |
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| Patient | 64 |
| Procedure / problem | • Laparoscopic hepatic ablation for hepatoma |
| Background | * Autoimmune hepatitis * Thyroid dysfunction |
| Drugs |  |

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| Investigations | * Microcytic anaemia * Thrombocytopaenia * Prolonged APTT, PT * Hyponatraemia * Low albumin * ECG – bifascicular block |
| Questions | * Causes of abnormal biochemistry and haematology * Liver failure and anaesthesia * Pharmacokinetics and liver failure * Possible aetiology of bifascicular block (autoimmune) * Laparoscopic surgery * Complete heart block |
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| Patient | • 53, female |
| Procedure / problem | • RTC car vs lorry |
| Background | * Fracture pelvis, femur * Paradoxical chest * FAST +ve * Hypotensive, tachycardic, tachypnoeic * Head and neck CT normal |
| Drugs |  |
| Investigations | * Acidotic ABG * CT and CXR (multiple rib fractures, chest drain) |
| Questions | * Resuscitation strategy * Cervical spine protection * C-spine clearance * Management of chest injury * Cause of acidosis * Coagulation, TXA * Laparotomy for abdominal bleeding management * ITU management * Intra-abdominal pressure / compartment syndrome • Analgesia |
|  |  |
| Patient | • 37, female |
| Procedure / problem | • Peripartum cardiomyopathy |
| Background | * 28/40 * 3x previous LSCS * C/o orthopnoea, tiredness |
| Drugs | • Thyroxine |
| Investigations | * Normocytic anaemia * ECG - LAD, LBBB * Echo – biventricular systolic dysfunction * CXR - oedema |

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| Questions | * Differential * Management of heart failure – inc. pacemaker * Anticoagulation * ACEi in pregnancy * Pre-term labour, requiring LSCS – management * Pregnancy counselling |
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| Patient | 62 |
| Procedure / problem | • THR elective |
| Background | * COPD * IHD * Hiatus hernia |
| Drugs | * GTN * Ranitidine * Aspirin * Ipratropium * Ramipril |
| Investigations | * CXR – right lower zone consolidation * Obstructive PFTs * ECG - RBBBB |
| Questions | * DVT prophylaxis * Smoking advice |
|  |  |
| Patient | • 17 months |
| Procedure / problem | • Inhaled FB (Bombay mix) |
| Background | • Red-faced, grunting |
| Drugs |  |
| Investigations | CXR – hyperinflation right |
| Questions | * Mechanism of inhaled FB * FB problems – chemical pneumonitis, peanuts * Conduct of anaesthesia * Long paediatric cases * Temperature management * Attenuating effect of laryngoscopy / bronchoscopy * Pathophysiology of grunting, hyperinflation (valve effect) * Management of laryngospasm on gas induction • Pre-medication |
|  |  |
| Patient | • 81, female |
| Procedure / problem | • Supracondylar # humerus following fall |
| Background | * Breathless * WLE right breast mass and radiotherapy * Hypertension * Hypothyroid * Anaemia |
| Drugs | * Atenolol * Thyroxine |

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| Investigations | * CXR – pleural effusion * Hyponatraemia |
| Questions | * Management of effusion * Cause of anaemia * Why did she fall, other injuries * Regional vs GA * Hypothyrodism * Thyroid coma |
|  |  |
| Patient | • 45, Afro-caribbean female |
| Procedure / problem | • Thyroidectomy |
| Background | * Goitre * Sickle cell trait * Obese * Hypertension |
| Drugs | * Enalapril * Bendrofluazide |
| Investigations | * Euthyroid * CXR – thyroid mass |
| Questions | * Sickle cell disease vs trait, complications, pathophysiology * Airway assessment * SVC obstruction * Postoperative stridor * Haematoma * Hypoparathyroidism |
|  |  |
| Patient | • 31, female |
| Procedure / problem | • Thyroidectomy |
| Background | • Grave's |
| Drugs | * Carbimazole * OCP |
| Investigations | • Hyperthyroid • WPW on ECG |
| Questions | * Thyroid hormones * Carbimazole and drug management of hyperthyroidism * Retrosternal goitre * Grave's disease in pregnancy, antibodies and placenta • Air embolus intraoperative |
|  |  |
| Patient | • 55 year old male |
| Procedure / problem | • Abdo pain, vomiting for laparotomy |
| Background | * Alcoholism * Cerebrovascular disease |
| Drugs |  |
| Investigations | * Hyponatraemia * Fast AF |

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| Questions | * Differentials (inc. incarcerated hernia) * Intraoperative hypotension, tension pneumothorax * Emergency laparotomies * Postop oliguria * Hyponatraemia   • |
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| Patient | • 56, male |
| Procedure / problem | • Sigmoid colectomy for cancer (elective) |
| Background | * Ex-miner * COPD poor ET, home nebs |
| Drugs | * 2.5mg prednisolone * Inhalers |
| Investigations | • FEV1 0.68 |
| Questions | * ECG changes in heart strain * Criteria for pathological Q waves * Definitions of respiratory failure |
|  |  |
| Patient | • 42 year old male |
| Procedure / problem | • Full dental clearance |
| Background | * Bipolar disorder * Hypertension |
| Drugs | * Lithium * Flupenthixol * Amlodipine * Chlorpromazine |
| Investigations | * Obstructive PFTs * Creatinine 135 * Eosinophilia |
| Questions | * Lithium and anaesthesia * Throat pack * Airway obstruction in recovery * ECT * Causes of eosinophilia |
|  |  |
| Patient | • 34, male |
| Procedure / problem | • Cataract (failed local) |
| Background | • Down's |
| Drugs |  |
| Investigations | * ECG – RAD, RBBB, RVH * Polycythaemia |
| Questions | * Cardiac complications Down's * Managing anaesthesia in uncooperative patients |
|  |  |
| Patient | • 62, male |

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| Procedure / problem | • Craniotomy and debulk tumour |
| Background | * Recent LRTI – sent hoe with abx * Now inappropriate behaviour |
| Drugs | • Dexamethasone |
| Investigations | * Neutrophilia * CXR – LLZ consolidation * CT head – large parietotemporal lesion |
| Questions |  |
|  |  |
| Patient | • 24, male |
| Procedure / problem | • Found collapsed |
| Background | * Depression * IVDU * Alcoholism |
| Drugs |  |
| Investigations | * CK 49000 * Creatinine 231 * K 7.5 * CXR – possible aspiration |
| Questions | * Principles of management * Hyperkalaemia * Components of GCS * Metabolic acidosis |
|  |  |
| Patient | • 70, female |
| Procedure / problem | • Extended hemicolectomy adenocarcinoma colon |
| Background | • MI 5 years ago |
| Drugs | * Co-amilofruse * Aspirin * Atenolol * Enalapril |
| Investigations | * Stenosis left circumflex * Mitral regurgitation * Anaemia |
| Questions | * What is an extended hemi colectomy * Indications for pre-op angio * Cardiovascular risk * Non-surgical options * Induction in event of perforation * TIVA vs volatile * Treatment of pulmonary oedema postop |
|  |  |
| Patient | • 86, female |
| Procedure / problem | • Open cholecystectomy |

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| Background | * Arthritis * Thoracolumbar kyphosis * Jaundice |
| Drugs |  |
| Investigations | * Fast AF * Cardiomegaly * Restrictive PFTs |
| Questions | * Causes of jaundice * AF management |
|  |  |
| Patient | • 66,male |
| Procedure / problem | • Cervical laminectomy |
| Background | * 1 year radicular symptoms * Hypertensive * AF, failed ablation x2 * Obese * COPD * 40 units / week |
| Drugs | * Perindopril * Bendrofluazide * Diltiazemr * Aspirin * Warfarin * PPI * Salbutamol, beclomethasone |
| Investigations | * C-spine Xrs * ECG * Na 129 * K 5 * MCV 100 * INR 1.5 |
| Questions | * Periop ACEi * Causes of chronic cough (inc. ACEi) * Periop anticoagulation * Anaesthesia fo laminectomy * Spinal cord monitoring * Periop alcohol withdrawal |
|  |  |
| Patient | • 81, female |
| Procedure / problem | • C3-5 decompression |
| Background | * RA * Fixed neck deformity |
| Drugs | * Sulphasalazine * Steroids * Diclofenac * Ranitidine |

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| Investigations | * Restrictive PFTs * Macrocytic anaemia * CXR – fibrosis, deviated trachea |
| Questions | * Rheumatoid * Causes of macrocytic anaemia * Causes of tracheal deviation * Airway assessment * Rheumatoid neck – assessment and value • Failed intubation |
|  |  |
| Patient | • 54, female |
| Procedure / problem | • Oesophagogastrectomy for cancer |
| Background | * Obese * Scleroderma * Raynaud's * Hypertension * Hypothyroid * Previous pulmonary valvotomy * Corneal grafts |
| Drugs | * Co-amilofruse * Aspirin * Irbesartan * Seretide * Sildenafil * Iloprost * Poor compliance with thyroxine |
| Investigations | * Pulmonary stenosis, biventricular dilatation * Pulmonary hypertension * Mildy elevated calcium |
| Questions | * Scleroderma implications, CREST * Raynaud's and arterial lines * OLV, management of hypoxia * Thyroid hormone synthesis and treatment * Common complications oesophagectomy * Pulmonary hypertension – treatment, anaesthesia |
|  |  |
| Patient | • 76, female |
| Procedure / problem | Abdominal pain, nausea, vomiting – laparotomy for caecal perf |
| Background | • Previous sub-total thyroidectomy, goitre |
| Drugs | * Digoxin * Aspirin |
| Investigations | * AF, rate controlled * Polycythaemia * WCC 18 |

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| Questions | * Pre-optimisation * Airway management * Cardiac output monitoring * Intraop fast AF * Post op extubation * Polycythaemia causes |
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| Patient | • 63, female |
| Procedure / problem | • Malginant melanoma excision from back and skin graft |
| Background | * Smoker * Hypertension * Multiple LRTIs |
| Drugs |  |
| Investigations | * Obtructive PFTs with reversibility * Elevated creatinine * Right basal opacity CXR * LVH on ECG |
| Questions | * Prone positioning * Wheeze in recovery |
|  |  |
| Patient | • 74, female, West African |
| Procedure / problem | Cervical laminectomy – reduced limb power |
| Background | * Hypertension * Diabetes |
| Drugs | * Insulin * Atenolol * Prazosin * Acei * Aspirin * Dipyridamole |
| Investigations | * Murmur * Creat 190 * 1st degree HB |
| Questions | * Aortic stenosis * naemias * Sickle cell * Renal failure * Causes of heart block, sinus arrhythmia * Periop diabetes |
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| Patient | • 76 female |
| Procedure / problem | • Mastectomy and axillary clearance |
| Background | * COPD, limited ET * AVR 3 years ago |

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| Drugs | * Warfarin * Inhalers * Theophylline tabs * Frusemide |
| Investigations | * Severe obstructive PFT * Normocytic anaemia * ECG – left axis deviation * PaO2 9.5 |
| Questions | * Respiratory optimisation * Balancing risk of delay * Causes of LAD * Anticoagulation management * Management of post op respiratory distress * Indications / CIs to NIV |
|  |  |
| Patient | • 68, male |
| Procedure / problem | T8-10 decompression via thoracotomy – cauda equina |
| Background | * Nephrectomy for RCC * Spinal metastases - previous decompression with postop respiratory failure (HDU) * Hypertension * TIA previously |
| Drugs | * Amlodipine * Bendrofluazide * Simvastatin * MST |
| Investigations | * Creatinine 190 • Glucose 17 * Lactic acidosis * 1st degree HB * Abnormal CXR |
| Questions | * OLV and hypoxia including artefact near spine * Analgesia * Effects of smoking * Post op care |
|  |  |
| Patient | • 70, male |
| Procedure / problem | Elective AAA 4 days previously – severe SOB on ITU |
| Background | * Hypertension * IHD * Diabetes * Hiatus hernia * Cerebrovascular disease * Limited ET |
| Drugs |  |
| Investigations | * Bilateral hilar shadowing * Basal creps * PaO2 11 on 70%, metabolic acidosis • Fast AF |

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| Questions | * Differential * Management of LVF * Management of AF |
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| Patient | • 78, male |
| Procedure / problem | • Freeflap maxilla (cancer) |
| Background | • IHD • Diabetes |
| Drugs |  |
| Investigations | * Hb 11, MCV 83 * Creatinine 145 * Glucose 10.3 * LBBB, LAD, LVH * Triple vessel disease on angio * Echo – anterior hypokinesia, EF 40% |
| Questions | * Cardiovascular risk * Microcirculatory flow * Free-flaps |
|  |  |
| Patient | • 21, female |
| Procedure / problem | * 32/40 pregnant * SOB, dizzy, exertional chest pain – congenital bicuspid valve |
| Background | • Lost to cardiology follow-up |
| Drugs |  |
| Investigations | Echo – peak radient 78mmHg, valve area 1cm2, EF 60% |
| Questions | * Physiological changes in pregnancy * Pathophysiology and anaesthetic management AS * Early delivery? * Intra-uterine transfer to tertiary centre? * Plan for LSCS * Uterotonics and aortic stenosis * Breastfeeding and anaesthesia * ITU management |
|  |  |
| Patient | • Elderly, female |
| Procedure / problem | • Elective clipping of aneurysm 2 weeks post SAH |
| Background | * COPD, limited ET * PPM for complete heart block |
| Drugs |  |
| Investigations | * Obstructive PFTs * CXR hyperinflated with PPM * CT angiogram |

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| Questions | * Pacemaker management * COPD optimisation and anaesthesia * Isofluorane and neurosurgery * Monitoring * Intra-operative ICP management * Post-operative seizure |
|  |  |
| Patient | • 20 yr old female |
| Procedure / problem | 30/40 pregnant – abdo pain, nausea, vomiting, tender swollen wrist |
| Background | * T1 DM * Asthma * Social issues |
| Drugs | * Insulin (novrapid, glargine) * Inhalers |
| Investigations | * Acidotic * Ketones in urine * Glucose 22 |
| Questions | * Anion gap * Treatment of DKA * Needs washout of septic arthritis – when, options for anaesthesia, blocks • Intraoperative seizure |
|  |  |
| Patient | • 35 year old male |
| Procedure / problem | • ORIF ankle |
| Background | • Ex-IVDU |
| Drugs | * Buprenorphine * Diazepam |
| Investigations | • 1st degree HB, p-mitrale |
| Questions | * Anaesthetic problems in IVDU * Opioids and tolerance * IV access issues * Post-op analgesia |
|  |  |
| Patient | • 76 year old male |
| Procedure / problem | • Laryngectomy, recent stridor and sleeping upright |
| Background | • COPD |
| Drugs | * Amlodipine * Inhalers * Diuretic |
| Investigations |  |
| Questions | * How would change the ETT for a tracheostomy interoperatively * Critical incident: on ITU, becomes hypoxic, agitated, tachycardic. What are the differentials? Showed ECG with ischaemic changes. How would you manage acute cardiac event? * Is he likely to have cardiac problems? * What tests? |

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| Patient | • 65 year old female |
| Procedure / problem | • THR NOF fracture |
| Background | • CLL |
| Drugs |  |
| Investigations | * Pancytopaenia * Anaemia * eGFR 58 * Hypoxic on ABG |
| Questions | * Hypoxia with LMA * Bone cement * Chremotherapy agents * Analgesia |
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| Patient | • 52 year old female |
| Procedure / problem | • Lung resection |
| Background | * COPD * Hiatus hernia |
| Drugs | * Salmeterol * Budesonide |
| Investigations | * PFTs FEV1 1.4 Pred 2.3, * FVC reduced * FEV1/FVC reduced, DLCO reduced, FRC + TLC increased |
| Questions | * Features of lung CA – including extra pulmonary manifestations * Criteria for lung resection – how will this affect this lady? PPOFEV1 calculation * What can we do to optimize her lung function prior to surgery? Effects of smoking? * Why is HH important? * Indications for one lung ventilation? Ventilatory parameters in OLV? Managing hypoxia. DLT sizes. Bronchial blocker indications. * Postop management esp pain – what options? Compare and contrast thoracic epidural vs paravertebral block for this operation * Paravertebral space anatomy, how to do a paravertebral block |
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| Patient | • 14 week old |
| Procedure / problem | • Vomiting, FTT - pyloric stenosis |
| Background | • Murmur, recent echo moderate ASD under surveillance |
| Drugs | * Salmeterol * Budesonide |
| Investigations | * Na 129, K 2.4, U 10, Cr 79, Cl low. * Hb 141, PCH, MCV, MCH all low. * WCC & platelets normal. * CXR appeared largely normal, but ?upper right zone shadowing. * ECG sinus tachycardia at 150, with borderline RBBB, T-wave inversions v4-v6 |

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| Questions | * pertinent issues in this case? * Why do you say he’s dehydrated? * How do you assess dehydration in a paediatric patient? What percentage dehydration? * Comment on the blood results. Why is he hyponatraemic/hypokalaemic/ hypochloraemic? What happens to his urine? (acidic/alkalotic?) Why is his Hb high?   How would you correct his dehydration & electrolyte abnormalities?  (wanted a precise fluid type, and regime)   * Comment on his CXR. What can be other causes of the upper zone shadowing in a paediatric patient? (thymus) * Comment on his ECG. What do you think of these changes? (said some normal for paeds, but also changes can be due to his ASD) * How would you assess him, and what would you do pre-operatively? * How would you anaesthetise this child? (classic RSI vs real-life inhalational) * What monitoring would you use? * If you were doing an RSI, what drugs & doses would you use at induction? * What would be the difficulties of performing an RSI in a 14-week old? * What are the airway differences between a paediatric patient, and an adult patient? * What agents would you use for inhalational induction? Would you use nitrous oxide? * What size ETT would you use? What formula? * What else can you use his NGT for? Would you put anything down his NGT prior to aspirating? * What would you use for analgesia? Would you use opioids? (it is an open procedure) * Where will this patient go to post-op? * Critical incident part - post extibation hypoxia, laryngospasm |
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| 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 | * ABG - hypoxia, compensated metabolic acidosis * Bloods – Hb 110, WCC 10.5, Plt 22, Urea 6.9, creat 70?, Bil 100, ALP increased) * ECG – Sinus tachy * CXR – CVP in situ |

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| Questions | * Differential diagnosis * Pre op optimisation – fluid resus and clotting, what parameters I would expect for surgery * 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)   * Sepsis management * Post op ICU Management * ARDS - Diagnosis, ventilator strategies, and other management including   ECMO   * Criteria for ECMO |
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| Patient | • 78, male |
| Procedure / problem | * Fempop for ischaemic limb * Failed management radiologically. Recent episode of chest pain |
| Background | * CABG * PVD * L3-5 decompression, back pain * Angina |
| Drugs | * ACEi * Beta blocker * Nitrates * Diuretic * High dose MST * Aspirin * Statin |
| Investigations | * ABG - hypoxia, compensated metabolic acidosis * Bloods – Hb 110, creat 96, eGF 64 * ECG – LAD, LBBB * CXR – CVP in situ |
| Questions | * Risks, scoring * Optimisation * Troponins * NSTEMI management * Surgical options * Induction * On table VF * Extubation crtieria * Analgesia * Ensuring graft survival |
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| Patient | Female |
| Procedure / problem | * Laparoscopy, exploration of biliary tree * Vomiting, pain, jaundice, fatigue, septic |
| Background | * Hypothyroid * BMI 46 |
| Drugs | • Levothyroxine |
| Investigations | * Bloods – anaemia, elevated WBC, TSH 200, T4 unrecordable, raised ALT and LP, prolonged PT * ECG – sinus brady |

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| Questions | * What do the blood tests show? Why is she anaemic? * 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. * What is the biggest issue? Sepsis or Hypothyroidism? * How will hypothyroidism affect your anaesthetic? * What do you need to do to optimise her pre-operatively? * What is the dose of IV thyroxine, and what other medications will you give her peri-operatively? How would you  optimise her coagulopathy? * How would you give her an anaesthetic? What monitoring do you need? * What antibiotics would you give her and why?   What are the physiological changes associated with capnoperitoneum?   * They convert to open on the table, what incision are they likely to make, what are the analgesic options now the  case is open? * Will you extubate this patient? * I said bearing in mind all other parameters –cardiac, respiratory pattern and effort etc. I said I would, they  seemed happy with that. * Where does she need to go post-operatively? * You arrive in ITU and the patient’s GCS drops, what is your approach? * Have you heard of NELA? What is it? |