1) IMED. ESSAY (2018)

(a) Acute decompensation (of) failure.

(b) F - Non-compliance to medication
A - Anaemia
I - Infxn / infarction
L - lifestyle - (salt)
U - up-reg of CO (Pg preg, thyrotoxicosis)
R - Renal failure
E - Embolism

(C) ECHO: MS - valvular

ECG - LAE, Mitrale (P-mitrale)

Chest x-ray - pulmonary oedema, Kerley lines, left atrial dilation
Double shadow.

d) 4 - long term complication of cardiac lesion
✓ Cardio-embolic stroke
✓ AKI
✓ ~~Congestive HF~~ Infxn.
✓ Endocarditis

✓ PAH
✓ Pulmonary Infxn.

(e) Principle of Mngment
(a) Fluid retention
(b) Oxygenation
(c) Thromboprophylaxis
(d) Rhythm control. AF
(e) Preload & After-load.

2) a) PCP
(b) Stage 4 cause of PCP

(C) Inuex: $CD4^+$ count - <200 cells
viral load - High
LFT - Any Derangement for drug therapy

Chest-x-ray - Bilat infiltrates

FBC -
BGA - PO_2

(d) PR & RR. ✓ O_2
✓ HAART
✓ septrin
✓ corticosteroid ✓ Nutrition

(e) Principle of Mngment

<10% (arterial PO2, pressure diff 735)

P - Pons
T - Thalamus
P - Pontine

HTN + stroke.

- Mngment for 3/12: $CD4^+$ > 200 cells

PCP - Mngment - within 2wk if pt initial dx. of HIV (Newly diagnosed)

3) a) Ischaemic stroke
(b) Middle cerebral a (MCA) - left
(upper limb & facial structures)

(c) Risk factor

Non Modified	Modified
Male	DM
↑ age	HTN
Prev stroke	Hyperlipidemia
	Smoking / Alcohol
	cardiac dx
	SCD
	Trombo emboli
	Combined OCP
	Antiphospholipid Ab
	Anti-... PR

IMRD 2018

(d) Invx.

DM - HBA1C - control >6.5%.

HTN - Bp

Hyperlipidemia - Lipid profile HDL(↓)

Cardiac dx - Echo, ECG

Coagulopathy - coagulation profile

e) Bp control.

✓ Thrombolysis < 3-4hr.

✓ Anti coagulation/plt.

✓ O_2

✓ optimize sugar

(4) A Goitre with c/p.
(a) Hyperthyroidism ←

(b) P/E. Hands: Sweating
Moisture / clammy.
Warm
HR ↑ (HR) Bounding
Fine tremors

Reflex ↑.

Bp = Narrow pulse pressure
= Proximal muscle weakness

Head: Alopecia.

Face: Exophthalmos, lid lag, Retraction
Sup oblique & lat rectus - Eye muscle myopathy

Neck: Ant neck mass, NO lymph node - 3n Hypert.

Skin: Dermopathy.

Legs - Low limb edema.

Pemberton sign: Flush & cyanosis

(c) Invx. TFT =
u/s.
FNA cytology
Biopsy
Anti-body test (Anti-TPO, thyroglobulin

(d) Tx - Drugs (medical)
Radioiodide radiation
Surgery

(e) Complication: Thyroid storm
cardiac failure
Arrhythmia
myopathy

(8) (a) Portal HTN > 12 mmHg ... > 12 mmHg

(b) causes of portal HTN: congestive hepatic
Intra hepatic cirrhosis, schistosomiasis, hepatic fibrosis
Post hepatic — cardiac failure (Right @ Fail.)
Constrictive
Sclerosing cholangitis < pericarditis
Infxn

Post hepatic - Budd chiari syndrom

Post hepatic - veno-occlusive dx

Pre hepatic - Thrombosis

(c) Complication | - sequelae & c/p
✓ Splenomegaly - 80% of PH
✓ Portal systemic collateral

① At lower end of oesophagus
(P) ✓ Oesophageal trib of left gastric
(S) ✓ " " .. of Hemiazygos vein

② Around umbilicus
(P) para-umbilical vein (portal)
(S) sup & inf epigas. vein

③ lower rectum & Anal canal
✓ Sup rectal vein (P)
✓ Midd & inf. vein

④ At the back of colon
✓ Rt & lf colic veins
Renal vein

⑤ Retroperitoneum
✓ Sup & inf mesenteric vein
✓ Lumbar & subdiaphragmatic vein

⑤ HTN
✓ Varices
✓ GIT Congestion
✓ Ascites

(d) SAAG > 1.1g/dl
Microscopy culture & sensitivity
Biochemist / specific gravity > 1.0
~~SAAG~~
Macroscopic Test.

(e) Mngment
(1) ↓ fluid overload
(2) Prev / Tx. complication
③ Find & Tx underlying cause

(9) (a) CML. (WBC ↑↑, Hg ↓ Plt (↔)
Granulocyte.

(b) Cytogenetic Test FISH
t (9;22)

Molecular - Bcr.

BMA - Hypercellular

U/E/C - ↑ urea.

PBF - Nucleated RBC.
Hypernucleated (N)

Neutrophil Alkaline Phosphatase
low / Absent

Serum B_{12} ↑.

(c) Phase: chronic <10% → Accelerated 10-19%

blast > 20%

IMED 2018

① (a) - superior vena cava obs. Met (MC) Adrenal

Small cell ca. (Oats (20) & intermediate
- Highly malignant : Ass smoking : M:F = 2:1

Non small cell ca. Squamous (smokers, male)
Adenocarcinoma (non smoker F)
Large cell ca. - on periphery of lung

C/p - cough (80%) : Haemoptysis (70) : Dyspnea (60%
(b) chest pain, recurrent & shortness, recurrent, malaise, Anorexia
P/E cachexia, Anaemia, Clubbing, Hypertrophic pul. osteoarthropathy
= worst pain : supraclavicular & Axillary node, B/B

(c). local effect: P/E - Mass / consolidation, collapse, pleural effusion
Atelectasis
- Focal emphysema (partial obstruction)
Age
Suppuration = Abscess
Horner's syndrome (Pancoast tumor - Apex of lung tumor
- Enophthalmos
- lid lag.
- Miosis
- Anhidrosis

Invx - ① chest-x-ray - opacity, effusion, Atelectasis
HRCT. - Staging (CT chest, Abd, Bone scan, BMA, PFT)
cytology - sputum / pleural fluid
FNA / Biopsy ② - peripheral lesion / Lat.
Bronchoscopy

Paraneoplastic syndrome in lung ca.
(a) ADH secretion (Hypo Na^+
ACTH s - Cushing syndrome
Parathyroid Parathyroid peptide like hormone = Hyper Ca^{2+}
calcitonin - Hypo Ca^{2+}
Gonadotropin - Gynaecomastia.
Serotonin + Bk - carcinoid syndrome

2 - Definitive management:
✓ Surgical resection
✓ Radio / chemotherapy

Principle - Multidisciplinary
✓ Nutrition
✓ Pain
✓ Paraneoplastic syndrome
✓ Pleurodesis with steroid agent

SVC →

IMED.

5marks (a) Causes of Portal Hypertension ? > 12mmHg (N) 5-7mmHg / 8-12cmH2O

• ↑ resistance flow ?do/

Pre-hepatic. - Congenital malformations : Thrombosis of portal vein & splenic vein

Intra-hepatic. - liver cirrhosis, schistosomiasis - pipe stem fibrosis.

Post hepatic - Budd Chiari syndrome, veno-occlusive dx.

Cardiac dx. ✓ Constrictive pericarditis

✓ Valvular heart dx

✓ Rt ven failure.

• ↑ed portal blood flow

✓ Arterial portal venous fistula

✓ ↑ed splenic flow

5marks (b) Modalities of management of acute variceal bleeding 8-10 old boy

(i) Resuscitation: (shock management) - crystalloids → packed blood Hg < 7.

Medical (ii) Control bleeding: octreotide, vasopression. (↘ variceal bleeding; ↓ portal ps; by ↓ gut ~~motility~~ motility)

~~(iv) Infxn prophylaxis~~

Surgical (iii) Control bleeding - Endoscopy, vessel embolization

(iv) Infxn prophylaxis - PO Norfloxacin : IV/PO ciprofloxacin / IV ceftriaxone

(v) Correct coagulopathy - vit K.

(c) How to prevent re-bleeding in pt.

Thinning & brittle hair ↓ Hypothyroidism & 1/3 of thyroid

β blockers prophylaxis eg Propranolol.

- Tx cause. ie schistosomiasis eg praziquantel (All species) oxamniquine (S. mansoni)

Metrifonate.

2i) 27yr Anxiety, palpitation, wgt loss, heat intolerance & ant neck mass

Hyperthyroidism probable due to

Diffused (D)Dx Toxic goiter

↓ Graves

Hashimoto with hypo / Hypo

• Nodules - solitary lesion,

• Drugs.

• Inflam,

(i) TFT · ↓TSH ↑T3 & T4.

U/S of goiter. - (TIR

FNA · cytology. - Sp. Benign tumor

ECG - Rule out AF.

Benign - Hyperechoic / Isoechoic, Macrocalcification, Reg shape, Halo.

Malignant - Hypoechoic, Microcalcification, Irreg shape, No Halo

Skin thyroid

Thy1 - Non-dx / Non-diagnostic

Thy2 - Non-neoplastic

Thy3 - Follicular

Thy4 - Suspicious of malignant

Thy5 - Malignant.

Mass (ii) 3 expected clinical signs

G/A - Anxious, sweating, Dehydrated

Hand - Fine tremor, Erythema, Sweaty palms

- Tachycardia, irreg, Bounding

- Narrowed pulse pressure

Hyperreflexia. Proximal myopathy

• lid lag, lid retraction, exophthalmos / ptosis, ophthalmoplegia

H → Abducens & trochlear N

SUFE — Growth plate — Vrasting (?) — Re-alignment — Hyperplasia (SUFE) — Mechanical / Obesity

TMED

- Neck - Inspection • protrusion of tongue not necessary if Mass inf
- Palpation
- Percuss - if retrosternal
- Ascultation
- Lower limb - Reflex, Oedema (gen), Myxoedema (Hypothyroid)
- Desmopathy

(d) Therapeutic option. Medical Carbimazole
Radioiodide I_{131} - Tx
Surgical

3a) Nrb resident goes to Kisumu for 3/52 ĉ Rigors, Headache, Abd pain & loose Motions

DDx: Malaria
Typhoid fever
Gastroenteritis
*Viral Meningitis

Investigations to make dx diagnosis

- ✓Thin film → species
- Thick film → parasitemia (malaria)
- ✓PBF - Trophozoites, gametocyte (malaria)
- ✓Stool - for microscopy, culture & sensitivity
- ✓FHG - Hb (Anaemia) WBC (infxn)
- ✓U/E/Cs - Electrolyte imbal, Dx D, for (?)
- LFT
- CSF - microscopy & culture & sensitivity - Rule out meningitis
- ✓RBS - Hypoglycemia in malaria
- ✓Drug screening

Margin: H- B- A- T- F- A- I- L- U- R- E (screening); CTPA; ECHO, ECG, CTPA, FHG, U/E/Cs, Drug screening, TFT, Preg test

4a) Risk factors for osteoarthritis (↑ age, F, excess...)

- Congenital malformation
- Trauma
- Obesity
- Metabolic (Estrogen def)
- Genetics
- Occupational

Mgmt of Arthritis: Conservative
- Physiotherapy
- Lifestyle, Diet, occupation
- Pain relief COX2, NSAID
- Walker/cane, Nutrition supplement (Condroitin sulphate)
- Inj - corticosteroids
- Viscosupplement
- Surgery: Joint preserve - cartilage trans(plant) - Arthroscopy
- Joint Replacement - Arthroplasty
- Total joint arthroplasty, High tibial osteotomy, ...

Mo Tu We Th Fr Sa Su Date :

Intro

60yr F. c/p with features of Peptic ulcer

Def - Brk in epithelial lining by > 5mm

c/p - Abd pain, burning & gnawing radiates to the back, worse by Hunger, 1-2hr after meal, relieved with milk/Antacids

N & wgt loss.

Causes: H. pylori

NSAID & Aspirin, Steroids, SSRI

Gastric acid Hypersecretory state

✓ Zollinger Ellison Syndrome (Serum gastrin levels measured)

✓ Gastrinoma

✓ Idiopathic

✓ Psychological stress

✓ Infxn; CMV

✓ Diet - Eg Alcohol, Tomato

Risk factors: Smoking, Genetic/Blood grp O, Chronic dx c RF, liver cirrhosis, ↑ gastric emptying

Test to confirm ulcer: Barium meal.

Endoscopy test.

Causative factor test: Hx of used of NSAIDs.

Non-invasive test

✓ Serology IgG Ab

✓ Urea breath test (stop NSAID to avoid false +ve) BEST

✓ Stool H. pylori Ag test

Invasive test

✓ Rapid urease test Yellow to red

✓ Histology H&E stain Special for H. pylori Giemsa - stain

✓ Culture for sensitivity

- Biopsy - To exclude Malignancy

Mo Tu We Th Fr Sa Su

Date:

ALARMS - SYMS in PUD - onset of s-jm after 45yrs.

A Anaemia (IDA:

L. IDA loss of wgt.

A Anorexia / Recurrent v.

R Recent onset / prog. s-jm Family hx of malignancy

M. Melena / Hematemesis Poor response to medical

S - Swallowing diff. Other: odynophagia, palpable

Mass jaundice pulse

ext malignancy

(b) Gastritis / Meningitis

Tx: Principle. Relieve sym - Antacids, STOP NSAIDs

Heal ulcer - H. pylori Tx, PPI, H_2 blocker

Prev Complication;

Prev Recurrence eg, lifestyle modification

(b) Connecting Meningitis

Common CA bact meningitis Adults

✓ Neisseria Meningitidis (1)

✓ Streptococcus pne (2).

✓ Group B streptococcus

✓ Haemophilus Influenzae (6).

✓ Listeria Monocytogenes (3)

✓ Gram -ve bacilli (E.coli & Salmonella.

✓ Staphylococcus (5)

✓ Mycobacterium. (4)

Mo Tu We Th Fr Sa Su

Date: / /

(b) Investigation.

CSF - Biochemistry, Microbiology (culture sensitivity & stains)

CT - Exclude ↑ ICP before LP done.

PCR - Blood & CSF → To detect bact DNA.

Blood culture

CRP, ESR, PROCALCITONIN (↑ ABNT)

(c) Tx of Meningitis Admit - 14-21 days

Ceftriaxone 2g IV 12hrly (MRSA) Add Vancomycin

Antibiotics dep on culture Ag.

- Supportive for ICP, shock, ARDS (as indicated)
  - ✓ Fluid (may need restriction) & Electrolyte
  - ✓ Glucose.
- Coagulation
- Anticonvulsant therapy (Diazepam / lorazepam, phenytoin)
- ↑ ICP - Elevate pt, intubate, Hyperventilation IV mans

Mo Tu We Th Fr Sa Su Date :

IMED ESSAY (1)

(1). c/p - Cough, Ryt sided chest pain, SOB & fever
Sputum Rusty Brown.

(a) DDx -> Pneumonia. -confusion, -urea >7, -RR >30, -HTN, CURB 65yr

(b). Invex

Lab: FBC - ↑WBC leukocytosis
U/E/C - urea >7mmol
Sputum - M/C/S & Rule out TB - sputum gram stain

Imaging.
Chest x-ray.

(c) Management.
Support mngment: O_2.
Analgesics
IV fluids <DeH2O/shock
Chest tube if effusion.

Definitive: Amoxyclav 5-7/7.
Post 3/12 Augmentin + Clarythromycin

Dermatomyositis
Mechanical
heliotropic rash
✓

Heberden (DIP) Psoriatic (DDx)
O.A.
PIP - RA, O.A (DDx)

Mo Tu We Th Fr Sa Su Date:

*Polymyositis
Malignancy
predispo

Essay 1

(8) 65 yrs Bone pain, tenderness Hg 6.5 g/dl, Normocytic - Normochromic, ESR 90mm/Hr.

DDx - MM

Ca prostate (metastatic)
Chronic osteomyelitis
TB spine
Leukemia
RA.

Invex: Serum electrophoresis - β Microgl
FBC ↓
LDH & uric acid ↑
PBF - Rouleux formation
U/E/C - ↑ + Ca↑ Alkaline phos ↑
X-ray - Skull, long bone
TB spine - MRI.

(8) (a) Risk factor for 1° O.A.

✓ Obesity
✓ Age
✓ Gender - F.
✓ Hx of Trauma
✓ Family hx.
✓

(b) Management of arthritis
Definitive - Total / Partial Hip replacement
Conservative - NSAIDS
Steroids

Pleural effusion Investigations: ✓Chest X-ray ✓Pleural effusion Analysis

Mo Tu We Th Fr Sa Su Date:

(4) Acute decompensated HF @ failure

F - Failure to take med

A - Anaemia / Arrhythmia

I - Infxn, Infarct

L - lifestyle Δ

U - Underlying UpRes: Thyrotoxicosis, PE

R - Renal failure

E - Embolism / Electrolyte imbs

S - AS / MS / Stenosis

Invx: Lab: FHG - Hst WBC ↑↓.
U/E/C - urea ↑.
Uptd profile
Thyroid panel.
D Dimer - PE

Imaging: Chest - X-ray
ECHO.
ECG.

(5.) Kusumu Sign: a/p fever, HPOT, headache, chest pain & loose motion: GPT Confused & neck pain

✓ Meningitis
✓ Bpupil Malang.
✓ GE.

Invs: FHG - Hst, WBC ↑
✓ HIV TBT ✓ PBP.
✓ Retinoscopy.
✓ Glucose (MUST DO for emergency)
✓ Thick / thin film
✓ Lumbar puncture
✓ CT scan b4 LP.
↳ Stool - M/C/S

1° Hyper T : ↓ TSH ↑ T_4 & T_3
Hyper 2° " : ↑ TSH ↑ T_4 & T_3

Mo Tu We Th Fr Sa Su Date

(8) DDx : Goitre with features of Hyperthyroidism likely Graves 's dx.

Hashimoto ; TSH rec Ab (↓) Anti - Thyroglobulin (↑)
(Hypothyro.) & Anti - TPO (↑) Thyroperoxidase

Graves — · Anti TSH rec (↑) (Main in Graves
Pre-tibial Myoedema woody hard & swelling. Hyperthyroidism
Ass Autoimmune DM, vitiligo, ,

Others Invx U/S - Echogenicity
FNA cytology
Graves
Nerves affect < Inferior rectus. & Sup. rector Medial
0 - No S/S
I - Only sign
2 - Periorbital oedema, Exophthalmos
3 -
4 - EX+
5
6

(9) Portal HTN
(1) ↑ resistance to flow
(A) Pre hepatic - Congenital atresia / stenosis
- Thrombosis of portal vein
- Thrombosis of splenic vein
- Extrinsic compression < tumor

Mo Tu We Th Fr Sa Su

Date : / /

Intra hepatic - liver cirrhosis

- Schistosomal peri portal fibrosis

Post-hepatic - Budd-chiari syndrome

Veno-occlusive dx.

Cardiac dx.

② Ped portal blood flow

ⓐ Arterio-portal venous fistula.

ⓑ Ped splenic flow: