

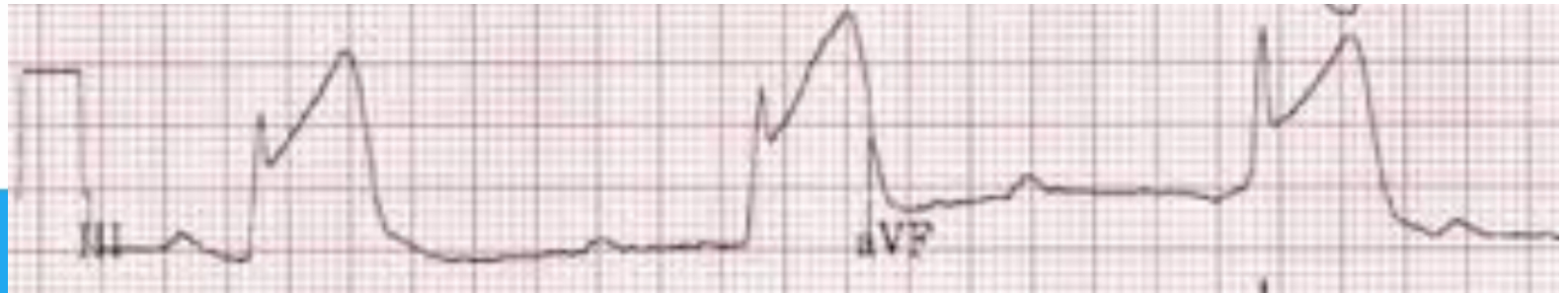
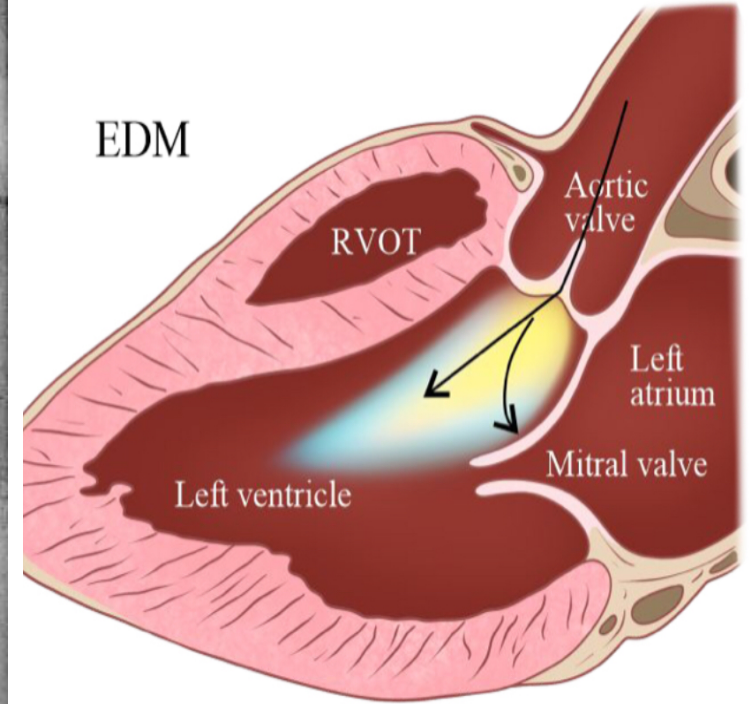
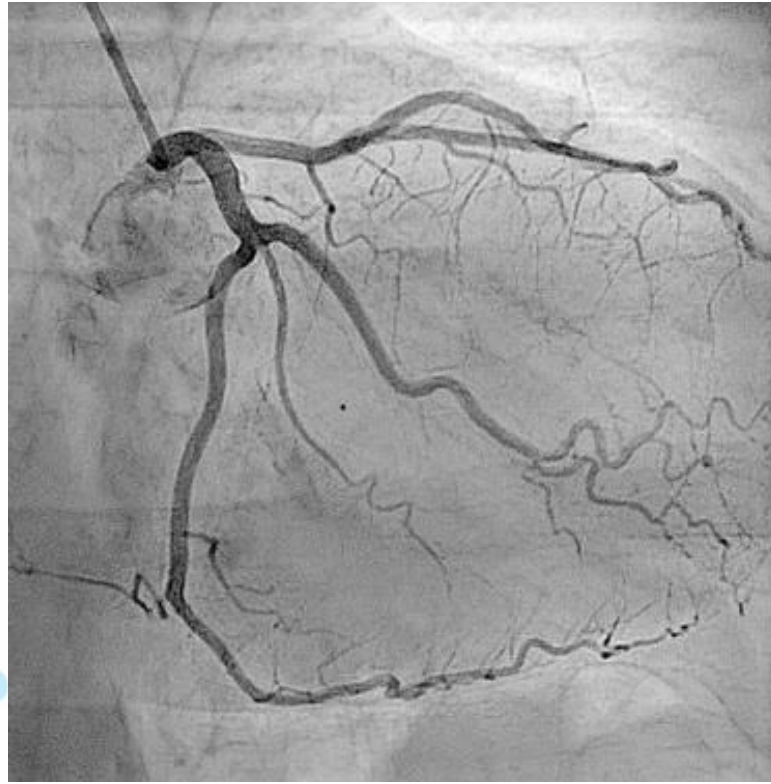


Watch our **Medicine Part-1 Session** by **Dr. Deepak Marwah**

Today, 30th September 12:00 pm

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LAST RESORT REVISION : GENERAL MEDICINE

PART 1

Prep AI

- 02 Instant 24×7 doubt resolution through AI.
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High Yield topics for NEET PG



Video Learning Based on Pattern

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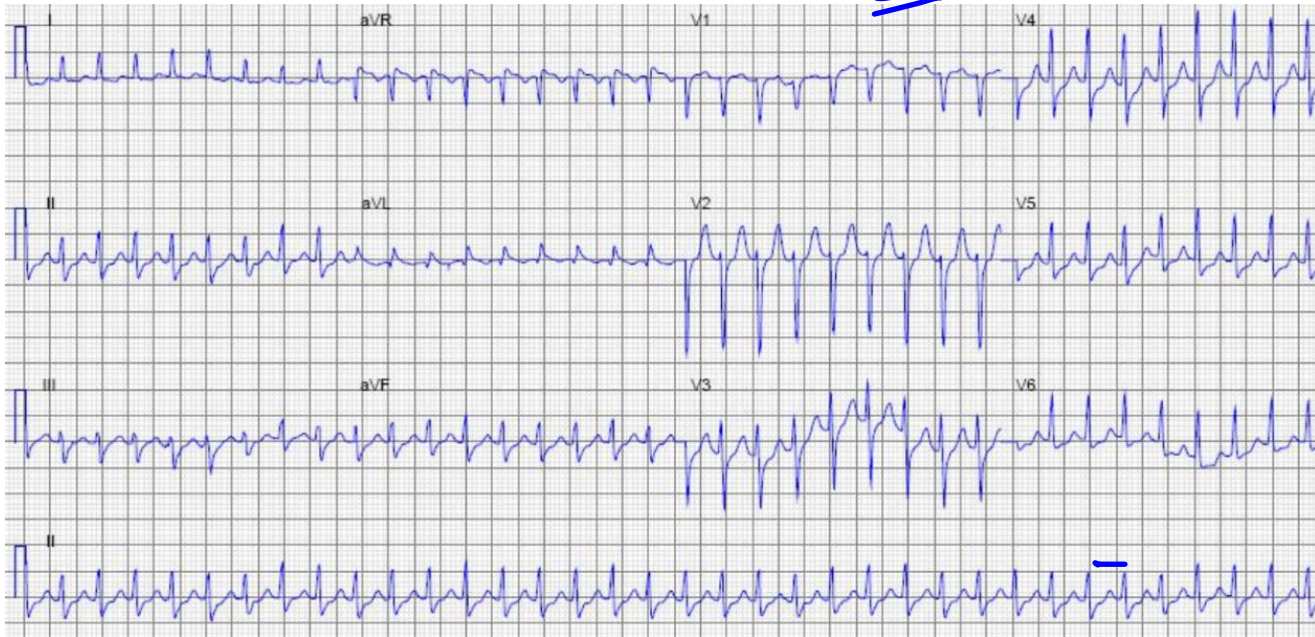


PrepAI

Your Intelligent, Adaptive Learning Tool for a Tailored Study Experience



1. Young female comes with complaints of recurrent episodes of palpitations and syncopal events. ECG was done. Which of the following is treatment of choice for this patient to prevent recurrence of these episodes?



PSVT

HR = 200/min



a. IV adenosine 6 mg followed by saline push

b. IV Verapamil

c. Perform catheter ablation

d. Put defibrillator paddles and perform synchronized cardioversion

ACUTE episode

ACUTE episode

Arrhythmia	Interventions
------------	---------------

PSVT with SBP > 90 mm Hg CSM →	ADENOSINE ↓ fails SYN. DC SHOCK 1° PSVT Cath ablation Verapamil
-----------------------------------	--

PSVT with hemodynamic compromise = SBP < 90	SYN. DC SHOCK Cath ablation Verapamil
--	---

Ventricular Tachycardia with structural heart disease SBP > 90 = I.C.M	Amiodarone <div style="border: 1px solid blue; padding: 5px; display: inline-block;"> PVT ↓ defibrill N </div>
---	---

Ventricular tachycardia without structural heart disease =	Metoprolol
---	------------

Multifocal atrial tachycardia COPD > 3P wave morphology	VERAPAMIL
--	-----------

WPW acute episode Bundle of KENT 1°	Procainamide Flecainide
--	----------------------------



2. 70-year-old patient presents with palpitations and shortness of breath. On examination JVP is elevated, bilateral crepitations are heard with S3 gallop rhythm. ECG was done. Which of the following will be used for management of this patient?



A-FIB +
acute HF

- a. Digoxin
- b. Esmolol
- c. Amiodarone for enabling rhythm control
- d. Urgent direct cardioversion

R → A → C → E

↳ RISK OF EMBOLIC STROKE ↑

Atrial Fibrillation



Rate control

ESMOLOL

Rate control in Acute HF

DIGOXIN

Rate control in asthma / COPD

VERAPAMIL

Rhythm control

AMIODARONE

Acute onset atrial fibrillation

< 48 HOURS

SYN. DC SHOCK

Persistent atrial fibrillation with LAA clots

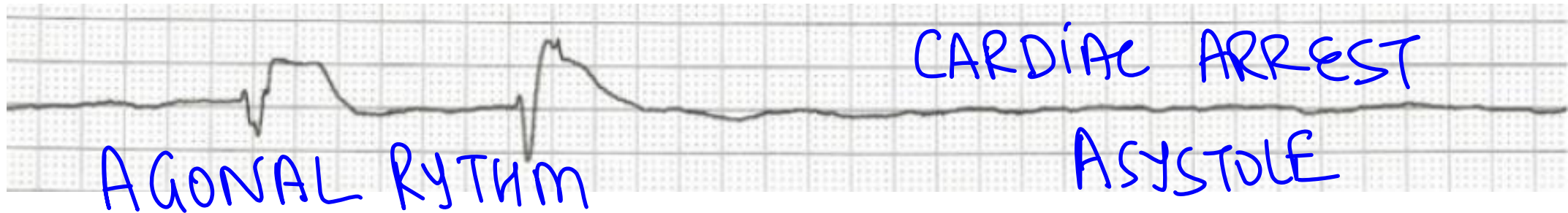
NVAF

VAF (MS)

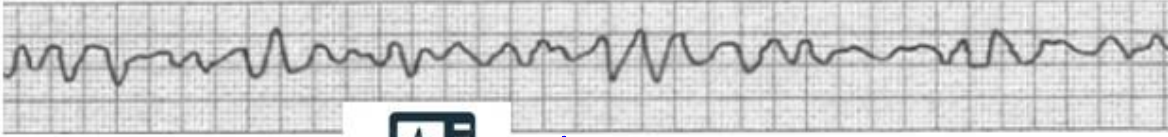
RIVOROXABAN
WARFARIN



3. Patient admitted with diagnosis of STEMI develops crashing of BP and becomes pulseless. His ECG is shown below. Which of the following is the next best step in management of this patient?



- a. Attach defibrillator paddles and deliver synchronized DC shock
- b. Attach defibrillator paddles and deliver ^{NON}synchronized DC shock
- c. Secure IV access and give amiodarone 300 mg diluted in 5% Dextrose
- d. Secure IV access and give epinephrine 1 mg diluted to 1:10,000



1

CPR @ 30:2
iv/10



2

CPR @ 30:2
iv Epinephrine, E-T



3

CPR @ 30:2
iv amiodarone / lidocaine

VFIB

PVT ↙

* 10 access

Post mi
VT

JAMSHIDI needle

AMIODARONE

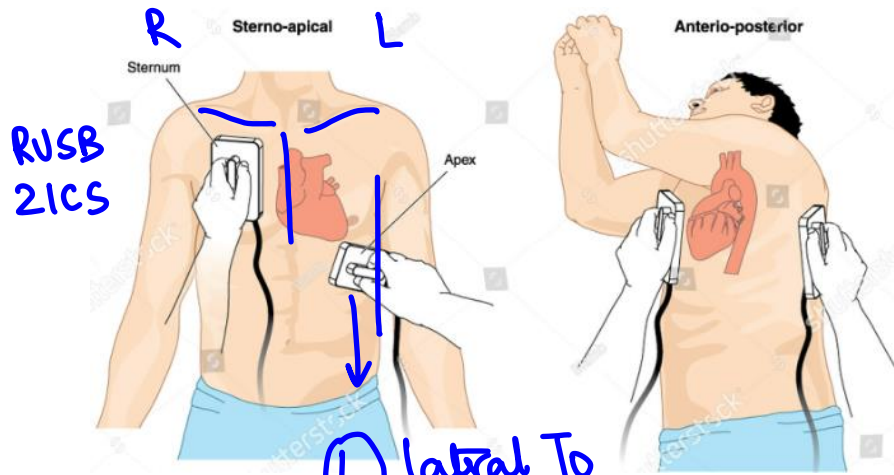
TIBIAL TUBEROSITY

lignocaine

SHOCKABLE RHYTHM

V-bigeminy

lignocaine



① lateral To nipple 5-6 ICS
middle: MAL



- [5 cm]] and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
 - If PETCO₂ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- Monophasic:** 360 J

Drug Therapy

- Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.
- or
- Lidocaine IV/IO dose:** First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in PETCO₂ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary



4. Hypokalemia leads to

- a. Polyuria
- ~~b. ST segment elevation~~
- ~~c. Carpopedal spasm~~
- ~~d. Increased gut motility~~

- ✓ 1. a
- 2. a,b
- 3. a,c
- 4. a,c,d

* $K \downarrow$: ST \downarrow depression

Tetany: $\downarrow Ca^{++}$
PARALYTIC ILEUS

$K \downarrow$: nephrogenic DI ← lithium
ampho B

* V_2 Receptor
malfunction

\uparrow CALCIUM



5. A patient with a history of hypertension presents with shortness of breath and palpitations. Which physical finding is expected in this patient?



- a. Fast pulse with irregular rhythm and prominent a waves
- b. Fast pulse with regular rhythm with absent a waves
- c. Fast pulse with irregular rhythm and absent a waves
- d. False pulse with regular rhythm and prominent a waves

irregularly
irregular pulse



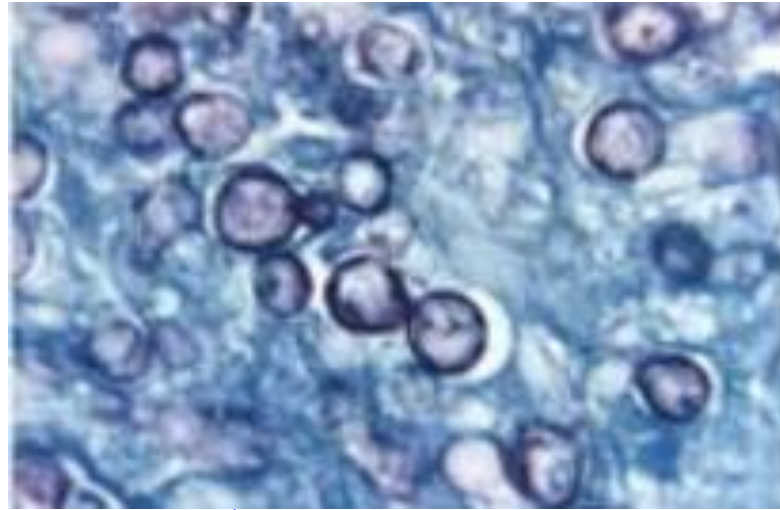
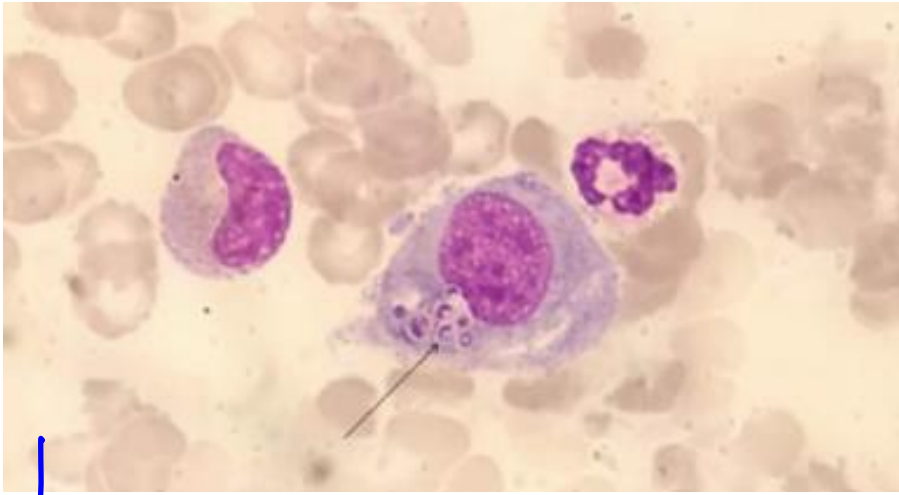
6. 30-year-old HIV positive patient presents with unexplained weight loss and night sweats with coughing. He sells chickens for living. CT chest shows cavity in both lung apices. PPD test is negative. **CBNAAT sputum is negative.** Sputum sample shows 2-4 um ovoid yeast forms. Which of the following tests will confirm diagnosis in this case?


Mx: false ⊖ : HIV ⊕

- a. Urine histoplasma ✓
- b. India ink stain sputum X
- c. Galactomannan **ASPERGILLUS**
- d. Beta 1,3 glucan test ✓

I.F.I X MUGOR
 Candide
 Aspergillus
 P. JIROVECI
 HISTOPLASMA

- 1. a
- 2. a, b
- 3. a, c
- ④ 4. a, d



The fungus grows in soil that has a lot of bird droppings or bat guano. It's common in areas such as old chicken houses, caves, and around starling and blackbird roosts. 

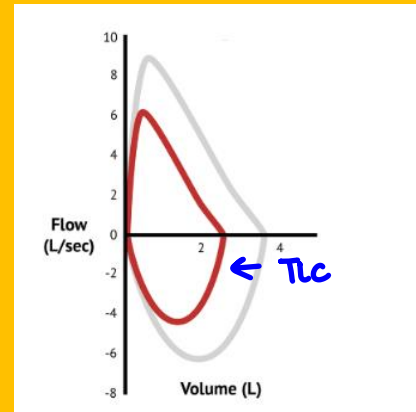
*B.M.A sample
*BAL sample





7. Smoker presents with complaints of breathing difficulty and exercise intolerance. Pulmonary function testing results are shown below.

	Pre-bronchodilator	Post bronchodilator
FEV1	60%	65%
FEV1/FVC ratio	0.9 0.7	0.9 0.7



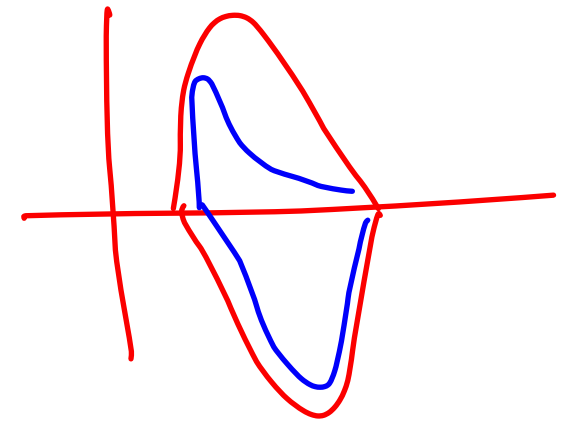
Comment on the diagnosis

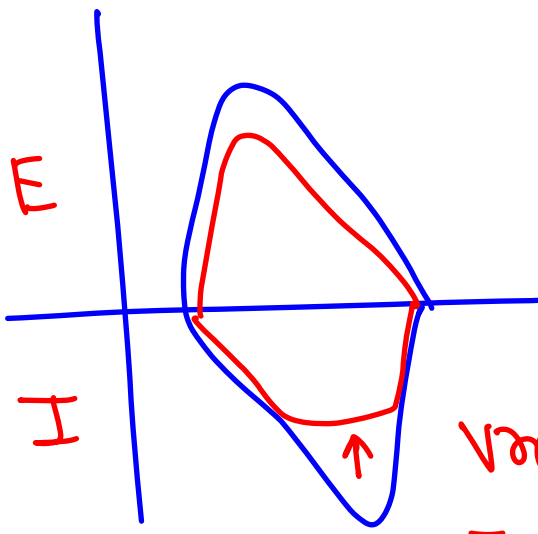
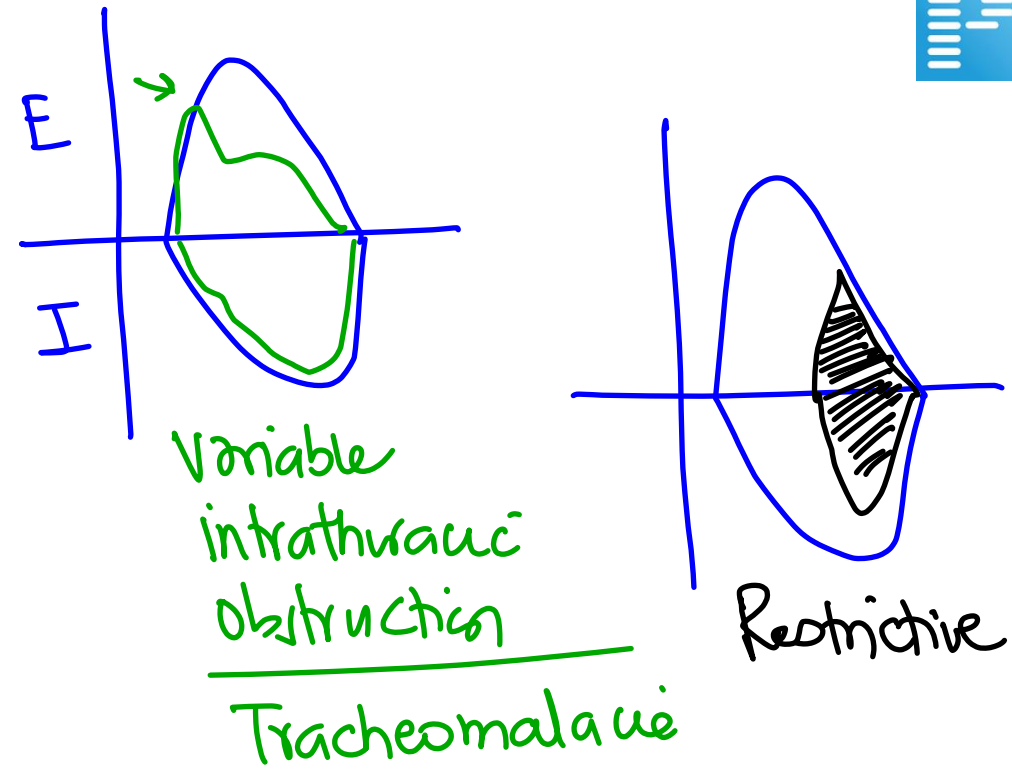
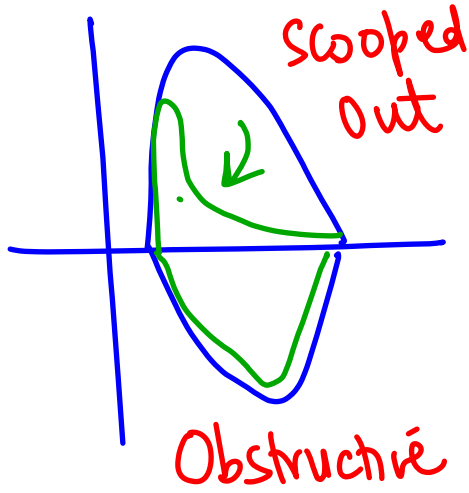
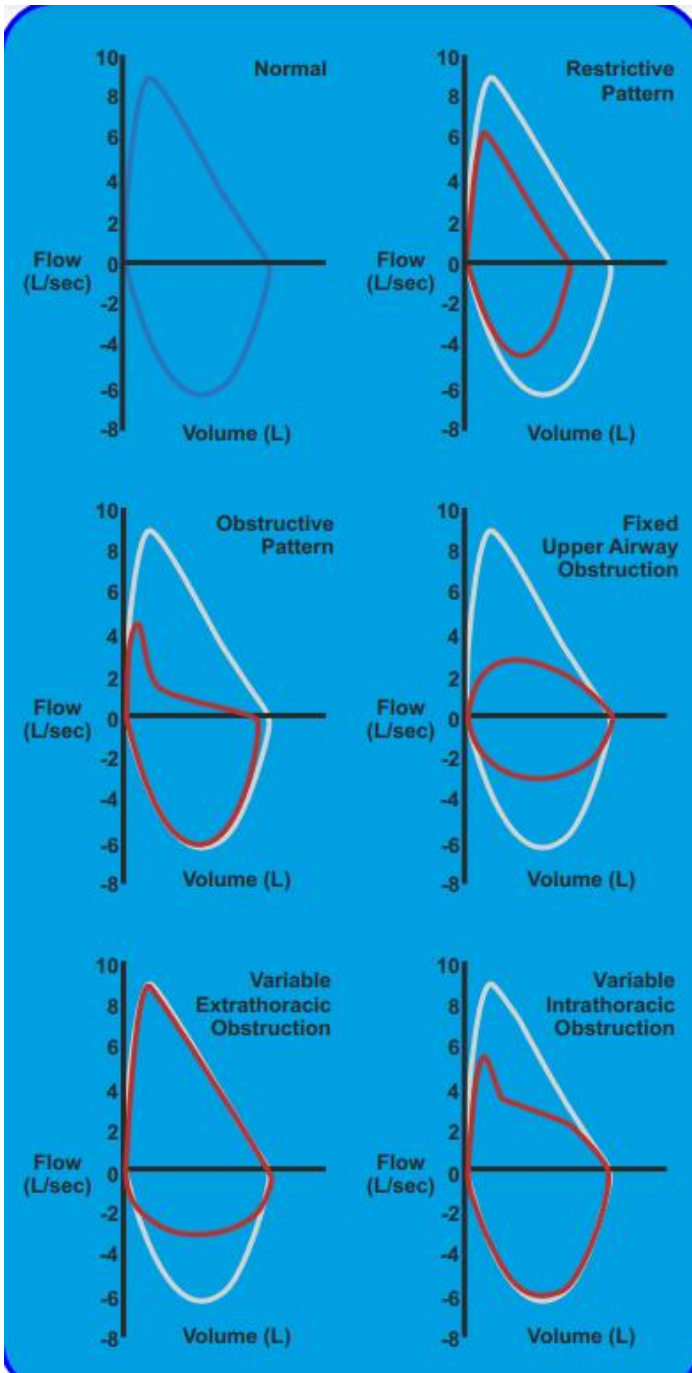
- a. Centriacinar emphysema
- b. Asthma
- c. Desquamative interstitial pneumonitis**
- d. Pan-acinar emphysema

$$\frac{FEV1}{FVC}$$

Obstr^N
 < 0.7

Restrictive
 > 0.8



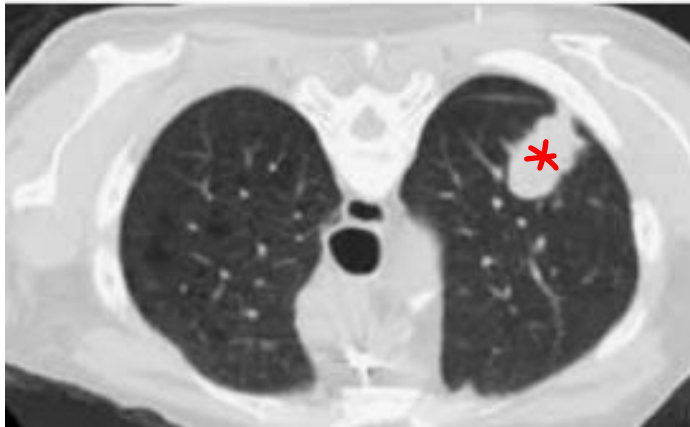


Variable Extrathoracic obs
 - vocal cord paralysis



8. Chronic smoker presents with hemoptysis and lesions on hands and abdomen. CT Chest is shown. Mid night salivary cortisol levels are elevated and Cushing syndrome was diagnosed. Which of the following is the cause of this presentation?

Hyperpigmen^N



VIOLET/PURPLE
STRIAE
==

- a. Pituitary adenoma
- b. Carcinoid tumor
- c. Non-small cell lung cancer
- d. Adrenal Adenoma

ECTOPIC ACTH production

1. CARCINOID TUMOR =>

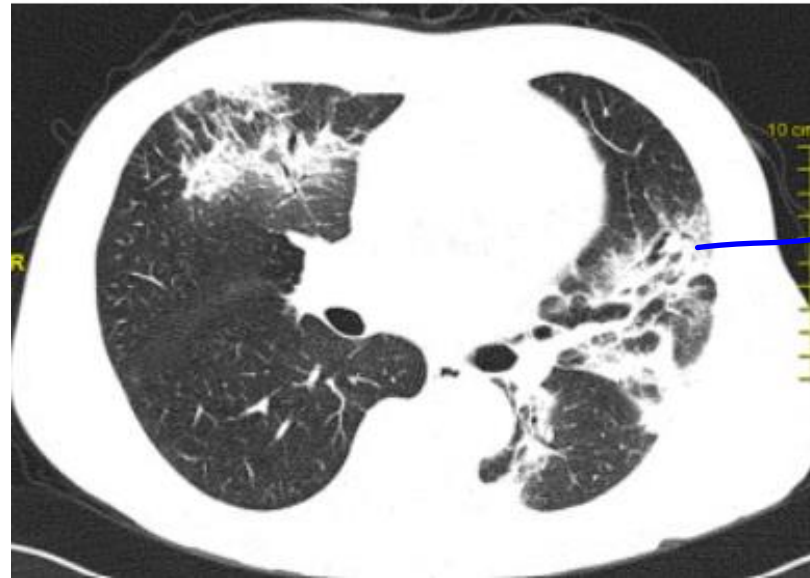
2. SMALL CELL CA lung

* PANCREATIC NEUROENDOCRINE TUMOR



9. Young woman developed PNET and underwent surgery with chemotherapy. She currently has shortness of breath and spirometry shows FEV₁/FVC ratio of 0.8. CT chest is shown below. Which of the following drugs is responsible for this presentation?

- a. Bleomycin
 - b. Everolimus
 - c. Carboplatin
 - d. Cisplatin
- ↓ ↓
Kidney BM



PULM
FIBROSIS

FEV₁ : 0.8
FVC

↳ Normal

ABVD ⇒ HL
↳ Ge Testis

Drug-induced interstitial lung disease (DIILD) is a form of interstitial lung disease resulting from exposure to drugs causing inflammation and possibly interstitial fibrosis. Antineoplastic drugs are the primary cause of DIILD, accounting for 23%-51% of cases, with bleomycin, everolimus, erlotinib, trastuzumab-deruxtecan and immune checkpoint inhibitors being the most common causative agents. DIILD can be difficult to identify and manage, and there are currently no specific guidelines on the diagnosis and treatment of DIILD caused by anticancer drugs.

AMIODARONE

* Concomitant Skin Pigmentation



10. 70-year-old man is having light headedness and presyncope after passing blood in stool. He did not have any vomiting. He is on metformin, low dose aspirin and ramipril. BP on admission is 70/50 mm Hg and pulse is 120/min with spO2 on room air 90%. He is given 2L saline on admission. What is next step in management?

- a. UGI endoscopy ✓
- b. Colonoscopy ✗
- c. Nasogastric lavage ✗
- d. Angiography ✗

- ✓ 1. a
- 2. a, b
- 3. a, c
- 4. a, b, c, d

UGI Bleeding

HEMATOCHEZIA

* EROSIIVE GASTRITIS

* UGI Bleeding + BP ↓ = UGIE



SKIRROW, MULLER
HINTON

11. 30-year-old woman presents with 3 days history of abdominal pain and diarrhea. Today she is having blood in stool. Her symptoms started after eating chicken at dinner party. Other people who ate the same food are having same symptoms. Her vitals are stable and physical examination reveals slight periumbilical tenderness. Which organism is responsible?

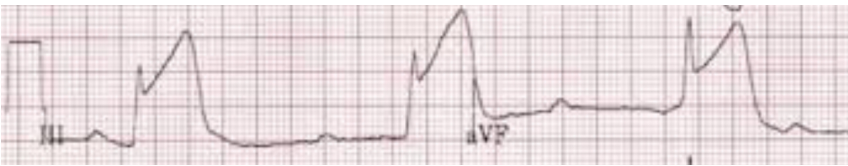
- ~~a.~~ Clostridium difficile : PMC: Post Antibiotic diarrhea
 - b.** Campylobacter
 - ~~c.~~ Vibrio cholerae : RICE WATER STOOL
 - d. E. Coli 0157: H7
- FOOD POISONING
dysentery.

child dysentery |

↳ EHEC: Shiga Toxin: H.U.S * — HEUMET cells

↳ * ANAEMIA, SCHISTOCYTES: P. smear

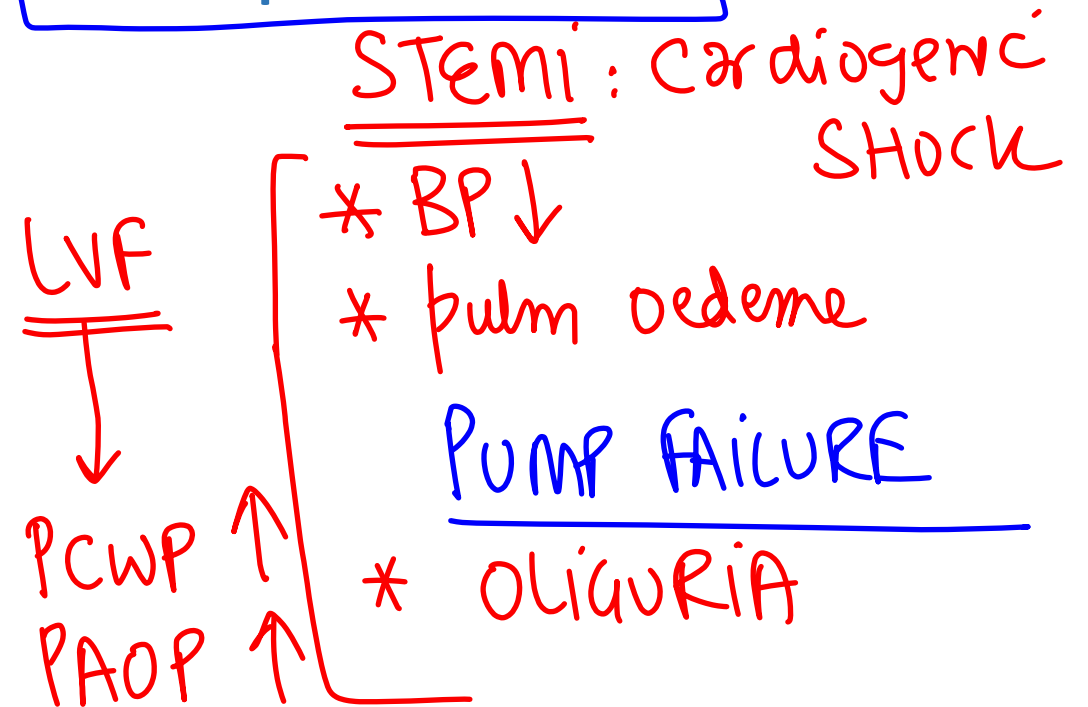
* RENAL FAILURE: URAEMIA



12. 60-year-old man develops chest pain with diaphoresis for 6 hours. ECG is shown below. He is thrombolysed with alteplase within 30 minutes of admission. During monitoring of patient, you notice his BP is 80/60 mm Hg with bilateral crepitations and urine output is 60ml in previous 6 hours. Which parameter will explain this derangement?

- ✓ a. PAOP
- ~~b. MVO₂ : affected in all Shock~~
- ~~c. Filtration fraction : KIDNEY~~
- d. Peripheral vascular resistance

① $4.0 = 1 \text{ ml/kg/hr}$
 $60 \text{ kg} = \underline{\underline{60 \text{ ml/hr}}}$





13. Which of the following causes SIADH?

- a. Amphotericin B : $K \downarrow$: NDI
 - (b) Legionnaire disease** $\xrightarrow{\text{Legionelle pneumophila}}$ DAMAGE KIDNEY TUBULES : $V_2 \#$: DI
 - c. Sjogren syndrome
 - d. Lithium : NDI
- SIADH :
- CNS INF^N : CEREBRAL Toxoplasma
 - lung \rightarrow Carcinoid Tumor, oat cell Ca
 - Legionelle pneumophila



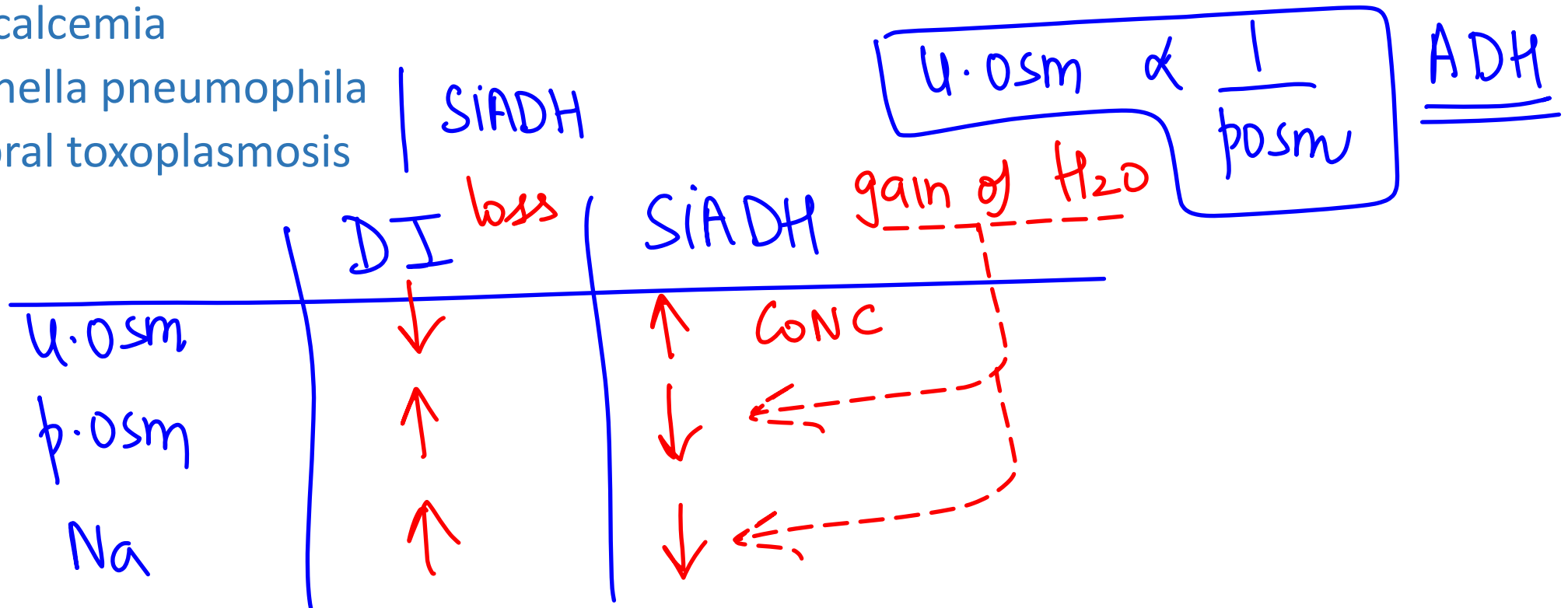
* amphotericin B, lithium

14. Which of the following causes Nephrogenic diabetes insipidus?

* ↓K, ↑Ca, SJOGREN

NDI

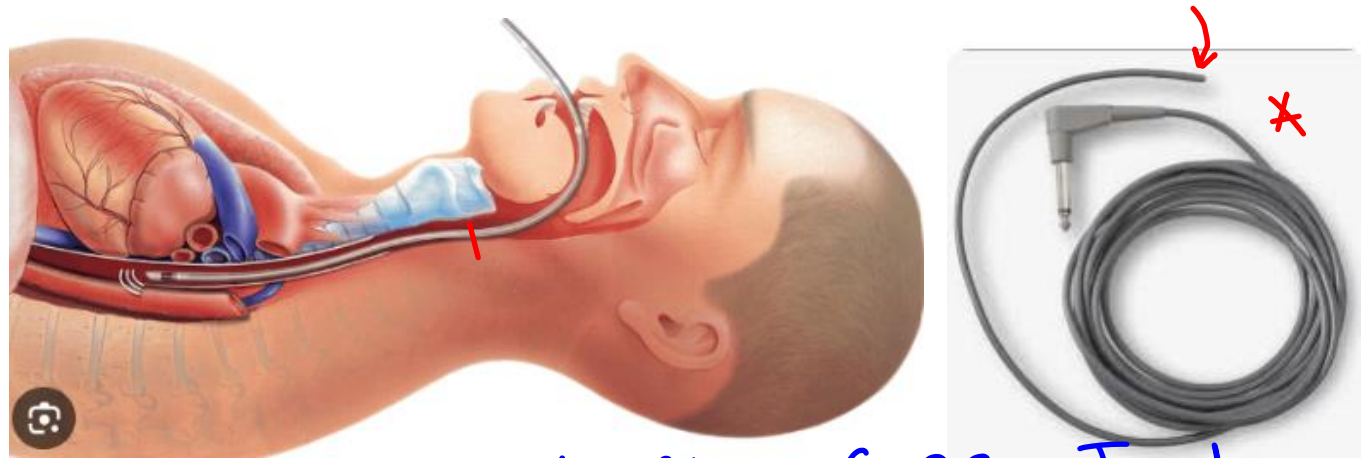
- ✓ a. Hypercalcemia
- b. Hypocalcemia
- c. Legionella pneumophila
- d. Cerebral toxoplasmosis



< 35°C : Core TEMP

15. For hypothermia esophageal temperature probe is positioned ___ cm from incisors

- ~~a.~~ 15
- b. 25
- c. 40
- ~~d.~~ 50



Pulm A : Ideal site Core Temp
Lower Esophagus : preferred site

RECTUM

inline warmer: WARM SALINE iv

Rx: cardiopulm bypass machine, Peritoneal dialysis

* ALTEPLASE + HEPARIN

IMMOBILIZATION

16. After orthopedic surgery for fractured neck of femur, 60-year-old patient develops respiratory distress on third post-operative day. On examination pulse is 120/min with BP 90/60 mm Hg and elevated JVP. CXR is shown. Diagnosis is?

DVT
PA #

~~~~~  
\*

Rt CHF

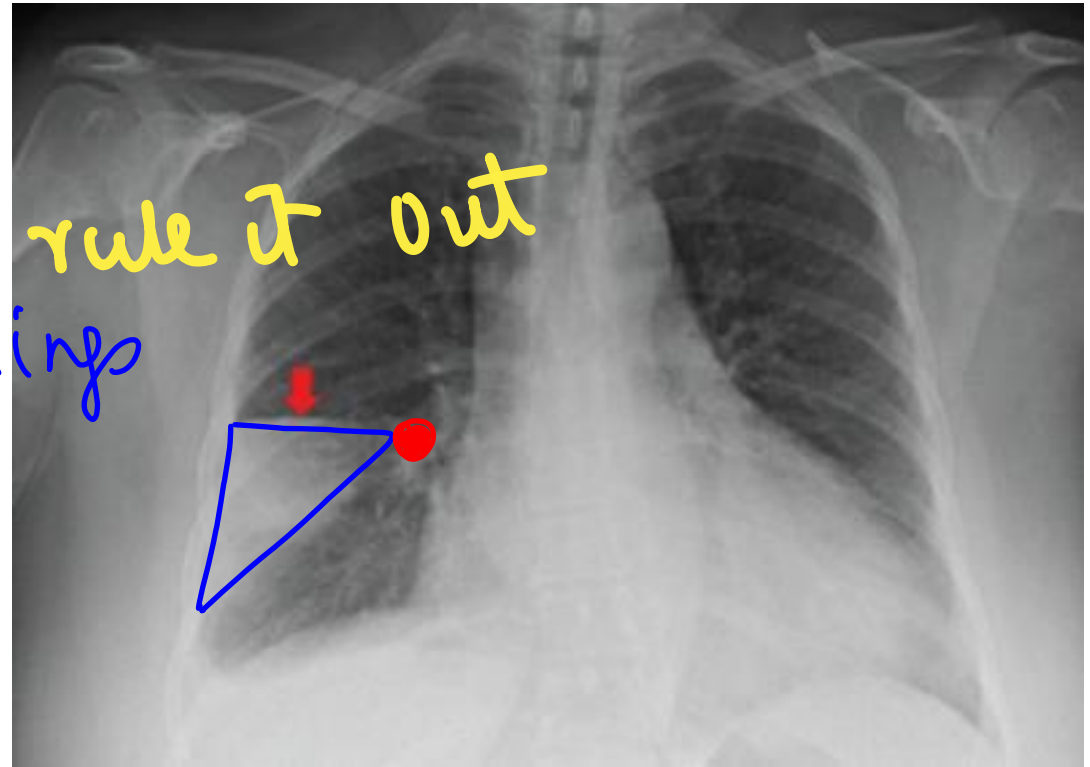


(a) Pulmonary embolism

~~b.~~ Lobar pneumonia — FEVER

c. Atelectasis of right lower lobe : CHF findings

~~d.~~ Fat embolism syndrome



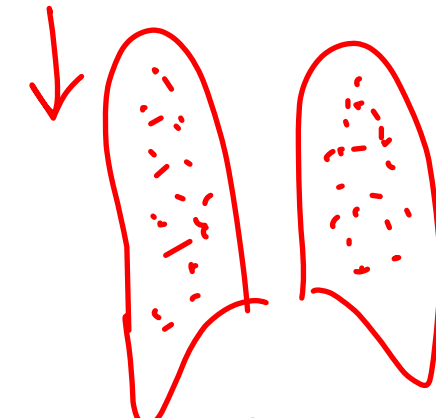
rule it out

HAMPTON HUMPS

MAJOR

\* lung #

\* CNS # : CoMA



GURD  
CRITERIA

\* petechiae  
axilla



17. 25-year-old man presents with fever, headache and projectile vomiting for last 3 days and inability to recognize parents since last night. On examination nuchal rigidity is noted with GCS 8/15. Fundus examination shows papilledema. Which of the following is the first investigation that should be done in this patient?

- a. NCCT head
- b. Lumbar puncture
- c. Lateral flow assay
- d. Blood counts

CI

? Meningitis

RAISED ICP

1. draw blood CULTURE
2. r/o Raised ICP
3. guarded LP +

empirical Ab: < 1hr of admission

Pneumococcus

CEFTRIAZONE  
+ VANCOMYCIN



# Indications for head CT scan before LP *in suspected meningitis*

|          | Risk factors                                                                         |
|----------|--------------------------------------------------------------------------------------|
| <b>P</b> | <b>P</b> apilledema ✓                                                                |
| <b>U</b> | <b>U</b> nconsciousness/abnormal level of consciousness ✓                            |
| <b>N</b> | <b>N</b> eurologic deficit (focal)                                                   |
| <b>I</b> | <b>I</b> mmunocompromised state (eg, HIV, immunosuppressive Tx, solid organ or HCT*) |
| <b>S</b> | <b>S</b> eizure (new onset; within one week of presentation)                         |
| <b>H</b> | <b>H</b> istory of CNS disease (mass lesion, stroke, or focal infection)             |





Quincke's  
cutting  
Needle



Whitcare  
↓  
it care's about  
patient's headache

Pencil  
point  
= splitting  
of  
= Non-cutting



ATRAUMATIC

DOC POST DURAL PUNCTURE HEADACHE :  
CAFFEINE



18. Person is brought to emergency after bee stings. He has hives all over his body, pulse is low volume 110/min, cold clammy extremities with BP of 70/50 mm Hg and peripheral cyanosis. Auscultation shows bilateral conducted \* sounds with rattling of secretions. GCS is 12/15. Which of the following is correct about this patient?

**ANAPHYLACTIC SHOCK**

a. Adrenaline 1 mg intramuscular 1:10000 every 5 minutes with high flow oxygen

b. Adrenaline 0.5 mg intramuscular 1:1000 every 5 minutes with ~~intubation~~

c. Adrenaline 1 mg intramuscular 1:10000 every 5 minutes with cricothyroidotomy

**d.** Adrenaline 0.5 mg intramuscular 1:1000 every 5 minutes with 2 L saline

**\* LARYNGEAL EDEMA**



**Table 1. Traditional Management V.S. New recommendation**

|                                                        | <b>WAO 2020 recommendation</b>                                                                                             | <b>Recommendation based on "Evidence update for the treatment of anaphylaxis"</b>                                                                                                                             |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>First-line treatment</b>                            | IM epinephrine                                                                                                             | IM epinephrine                                                                                                                                                                                                |
| <b>Epinephrine IM dose</b>                             | 0.01 mg/kg of a 1:1,000<br>• Max 0.5 mg in adults<br>• Max 0.3 mg in children                                              | • 0.5 mg in adults<br>• 0.01 mg/kg titrated to clinical response in children                                                                                                                                  |
| <b>Repeated IM epinephrine injection time interval</b> | Every 5-15 min                                                                                                             | Every 5 min, titrated to clinical response                                                                                                                                                                    |
| <b>IV fluids</b>                                       | Consider 1-2 L of 0.9% normal saline rapidly<br>• 5-10 mL/kg in first 5-10 min in adults<br>• 10 mL/kg in children         | IV crystalloid fluids should be infused in the presence of hemodynamic compromise as an adjunct to improve drug distribution in refractory cases                                                              |
| <b>Antihistamines</b>                                  | • Second-line medication<br>• Can be helpful in relieving cutaneous symptoms but have limited role in treating anaphylaxis | • Against the use of antihistamines as part of the initial emergency treatment<br>• Only use antihistamines in treating cutaneous symptoms without delaying management of respiratory/cardiovascular symptoms |

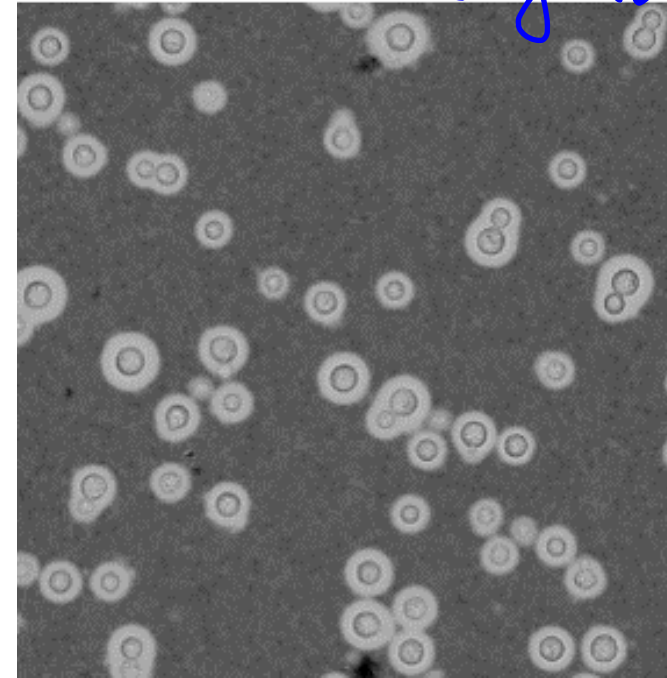


19. HIV positive patient presents with fever and neck rigidity. LP was done and CSF examination shows lymphocytosis, normal sugar, increased protein and special study shown below is done. Which test is done to confirm the diagnosis?

LAMB + 5-fluorocytosine \*  
oral fluconazole

- a. CSF ELISA for cryptococcal antigen
- b. Lateral flow assay
- c. India ink stain : FALSE ⊖: low
- d. Beta 1,3 glucan test

Q CAPSOLE of *Cryptococcus* FUNGUS  
Stain: MUCICARMINE





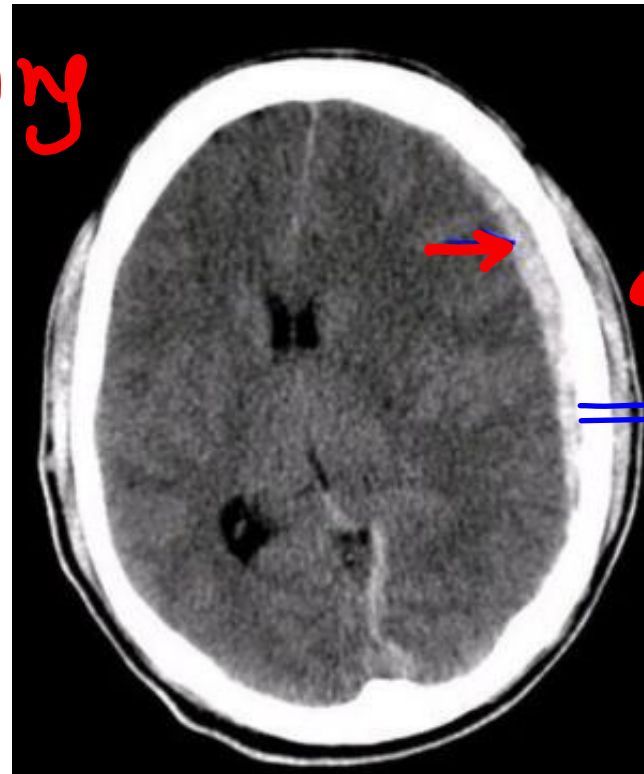


20. Diabetic patient sustains a fall. Since he is not able to talk properly NCCT head was done. What is best step in management of this patient?

- a. Mannitol **CI active CNS bleeding**
- ~~b. Vitamin K and FFP~~
- ~~c. Thrombolyse with streptokinase~~
- d. Stabilize and do neurosurgery consult**

**S.D. HEMORRHAGE**

**BURR HOLE Sx**



**subperiosteal bleed**



21. 25-year-old young woman comes with weight loss, palpitations, heat intolerance, and tremors. She has the following look on examination. Work up shows decreased TSH levels, free T3, T4 elevated. Which of the following statements is not true about this condition?

GRAVE : CARBIMAZOLE

- a. Retraction of muller muscle ✓ ✓
- b. Myxedema will involve pre-tibial area
- c. Start levothyroxine and monitor TSH after one month
- d. Start steroids to prevent visual loss ✓





| Score | Finding                                                           |
|-------|-------------------------------------------------------------------|
| 0     | No signs or symptoms                                              |
| 1     | Only signs <u>STARE SIGN: MULLER MUSCLE, lid LAG SIGN</u>         |
| 2     | Soft tissue involvement with symptoms and signs                   |
| 3     | Proptosis ( $\geq 20$ mm)                                         |
| 4     | Extraocular muscle involvement $\rightarrow$ Diplopia: INF RECTUS |
| 5     | Corneal involvement                                               |
| 6     | Sight loss (visual acuity $\leq 0.67$ )                           |

Exophthalmos  
M/C

L RETROBULAR NEURITIS

GRAVE Ophthalmopathy: NO SPECS

Methylsteroids



22. 18-year-old girl presents with left wrist joint swelling causing difficulty in working on lap top. On examination she has pan-systolic murmur. ECG shows PR interval prolongation and positive CRP. Which drug will be started in this case?

- a. Aspirin
- b. Indomethacin
- c. Methotrexate
- d. Methotrexate with hydroxychloroquine and sulfasalazine

RF  
\* Carditis  
\* PR ↑  
\* CRP +

Rheumatoid A



23. 65-year-old smoker with hypertension patient presents with pain in foot and firm nodular swellings on ankle and right fifth digit in foot. MTP joint \*  
 Aspiration reveals increased Leucocytes > 2000 cell/cu mm. There is no history of travel, dysuria, dysentery, sexual contact in patient. BUN and serum uric acid level is normal. Clinical Diagnosis is?

- ~~a. Septic arthritis~~
- b. Gouty Arthritis**
- c. Rheumatoid arthritis
- d. Baker cyst

REDNESS, THR/TKR

acute gout flare



MTP  
 Joint  
 aspir<sup>N</sup>

TOPHI

↓  
 S. uric  
 Acid (N)

✓  
 Knee

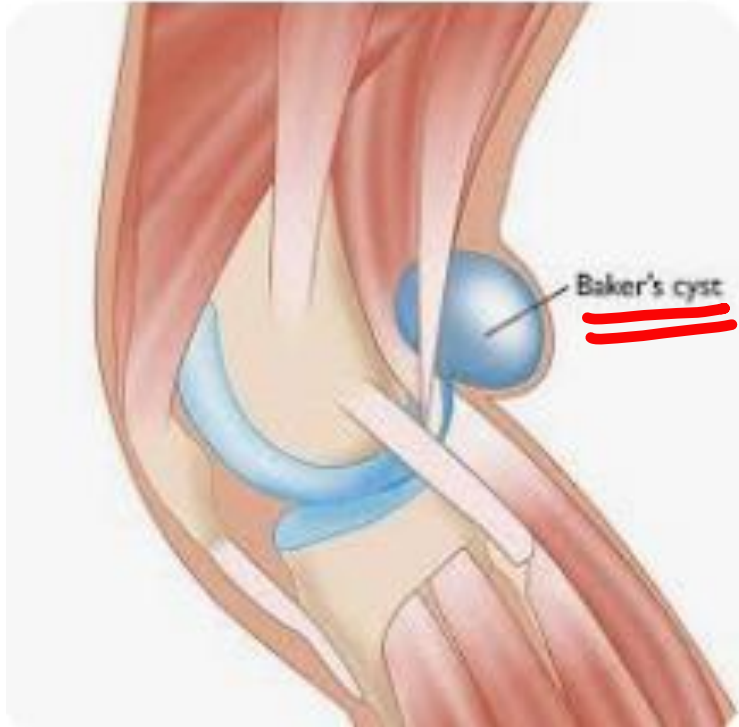
♀

PIP, MCP, WRIST

BIL

morning stiffness

Rheumatoid Nodules





24. 20-year asthmatic presents with wheezing and chest tightness and cannot sleep at night for three days per week. He is on Formoterol with high dose budesonide. What is next step in management of this patient?

- a. Replace formoterol with salmeterol twice daily
- b. Start Tab prednisolone → AV necrosis, Cushing, D.M
- c. Add inhaled Fluticasone twice daily
- d. Add LAMA

# Step Therapy for the Treatment of Asthma

Omalizumab  
Mepolizumab

|                                    | Confirm inhaler technique and optimize adherence<br>Move up or down steps based on control |                                                       |                                 |                               |                                                          |                                             |
|------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------|-------------------------------|----------------------------------------------------------|---------------------------------------------|
|                                    | STEP 1                                                                                     | STEP 2                                                | STEP 3                          | STEP 4                        | STEP 5                                                   | STEP 6                                      |
| <b>Preferred regular therapy</b>   | None                                                                                       | None or low dose ICS<br><u>    </u>                   | Low-dose ICS<br>formoterol      | Medium dose ICS<br>Formoterol | Medium to high dose *<br>ICS/LABA,<br>+ add-on LAMA<br>→ | Anti- IgE<br>or anti-IL-5<br>or anti-IL4 Rα |
| <b>Alternative regular therapy</b> | None                                                                                       | LTRA                                                  | Medium - dose ICS               | High -dose ICS                | Anti-IgE<br>or anti-IL-5<br>or anti-IL4-Rα               | OCS                                         |
| <b>As-needed reliever therapy</b>  | ICS/formoterol (low dose) or SABA                                                          | ICS/formoterol (low dose), or PRN concomitant ICS and | ICS / formoterol low (low dose) |                               |                                                          |                                             |







25. Farmer presents with fever, retro orbital pain and severe myalgia for last 5 days. NS-1 antigen is positive. Which of the following test should be done to evaluate for Dengue shock syndrome?

↳ Capillaritis: Hemo conc  
: Hematocrit  $\uparrow$  20%  
baseline value

- a. Platelet count
- b. Hematocrit
- c. Tourniquet test
- d. IgM antibody to Dengue virus 1,2,3,4

\* Platelet Tx: platelet count  $<$  10k

26. A patient presents with the following laboratory values: pH 7.20, pCO<sub>2</sub> 30 mmHg, HCO<sub>3</sub><sup>-</sup> 5 mEq/L, Na<sup>+</sup> 136 mEq/L, Cl<sup>-</sup> 110 mEq/L. which of the following is correct about this condition?

actual pCO<sub>2</sub>

pCO<sub>2</sub>  
20

$$\begin{aligned} \text{Expected } p\text{CO}_2 &= \text{HCO}_3 + 15 \\ &= 5 + 15 \end{aligned}$$

$$= 20 \text{ mm Hg}$$

mixed disorder

(a)

- a. High anion gap metabolic acidosis with respiratory alkalosis
- b. High anion gap metabolic acidosis with respiratory acidosis
- c. Normal anion gap metabolic acidosis with respiratory acidosis
- d. Normal anion gap metabolic acidosis with respiratory alkalosis

$$\underline{(1.5 \times \text{HCO}_3) + 8 \pm 2}$$

$$\begin{aligned} \text{AG} &= 136 - (110 + 5) \\ &= 136 - 115 = 21 \end{aligned}$$

LAST RESORT REVISION : GENERAL MEDICINE

PART 2



27. A patient presents with hypotension, hyponatremia and alabaster pale skin. Which of the following is most likely associated with these symptoms?

- ~~a. Conn syndrome~~
- ~~b. Vitamin B12 deficiency~~
- c. Primary adrenal insufficiency
- d. Secondary adrenal insufficiency**

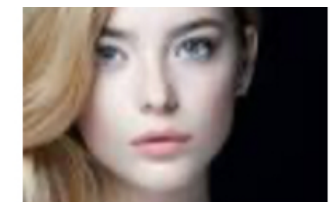
HTN

→ ACTH ↑ : Hyperpigmentation

K<sup>+</sup> = normal

**ALDOSTERONE**  
**RAAS**

↳ ACTH ↓  
CORTISOL ↓  
ADH +++  
\* dilutional Na ↓



Alabaster is a very basic, very white skin with a very pale and ivory complexion. It is very beautiful, clean, and healthy skin tone. 23 Dec 2019



28. 50-year-old patient presents with ptosis and muscle weakness that improves with activity. On physical examination engorged veins are noted chest wall with hyperpigmentation of knuckles. CT scan reveals a mass in the thoracic region. What is the most likely diagnosis?

- a. Thymoma
- b. Vitamin B12 deficiency
- c. Small cell lung carcinoma
- d. Neurofibroma

M. GRAVIS: WORSENS  $\bar{c}$  ACTIVITY \*

ANEMIA, SENSORY ATAXIA

engorged veins chest

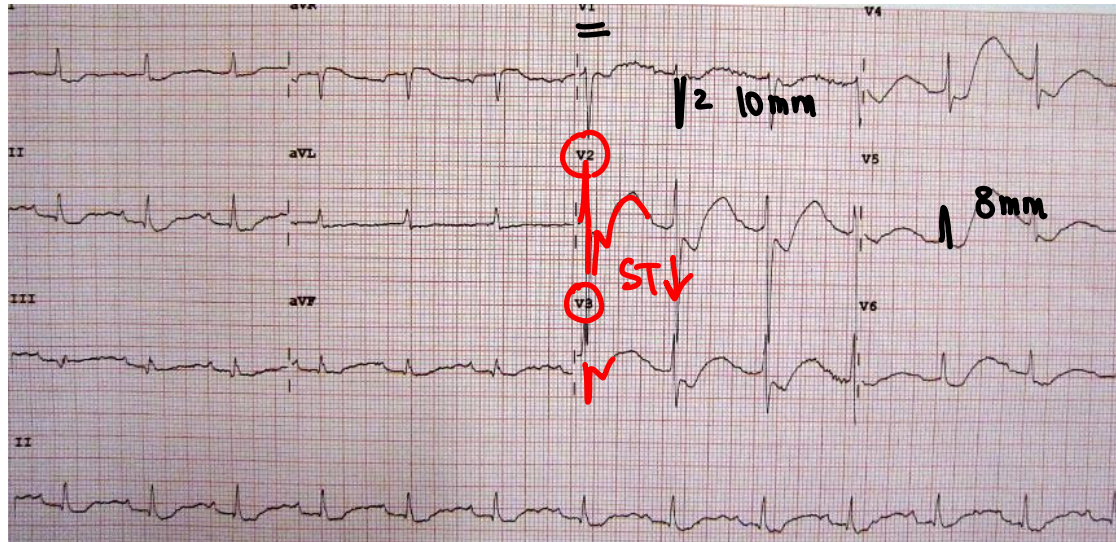
Oat cell  $\rightarrow$  SVC syndrome

Ca lung  $\rightarrow$  ACTH  $\uparrow$   $\rightarrow$  Hyperpigment

$\rightarrow$  NMJ #:  $\downarrow$   $Ca^{2+}$  release at NMJ  
 $\downarrow$  Ach: Lambert Eaton syn



29. Patient with CKD is admitted due to complains of vomiting episodes and severe headache. His BP is 220/120 mm Hg, pulse rate 80/min, temp 37C and GCS 15/15. ECG is done. What's the most likely diagnosis?



THIAZIDES

- a. Uremic encephalopathy → GCS ≤ 8
- ⓑ. Hypokalemia C.K.D → K↑ → KⓂ → K↓
- c. Hypertensive encephalopathy → GCS ≤ 8
- ~~d.~~ Left ventricular hypertrophy →  $SV_1 + RV_5 > \underline{\underline{35mm}}$



30. A patient presents with oral mucosa and palmar crease pigmentation,  $ACTH \uparrow$   
 $BP=90/60$  mm Hg,  $Na^+=125$  mEq/L  $\downarrow$  and  $K^+ 6.0$  mEq/L  $\uparrow$  and Blood sugar = 70  $\downarrow$   
mg/dl . What is the most appropriate treatment?

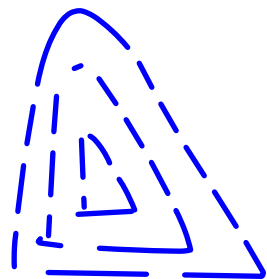
a. ACTH

b. Hydrocortisone

c. Dexamethasone

d. Sodium chloride infusion

$\downarrow$  GLUCOCORTICOID  
ACTIVITY



$Na \propto \frac{1}{K^+}$  : aldosterone

ADDISON DISEASE

aldosterone  $\downarrow$  (M) BP  $\downarrow$

Na  $\downarrow$  K  $\uparrow$

cortisol  $\downarrow$  (G) Hypo glycaemia

# AUTOIMMUNE

1°  
Addison



++



HYDROCORTISONE

# SHEEHAN

2°  
Addison



PALE SKIN

DEXAMETHASONE

CONN adenoma

Saline infusion

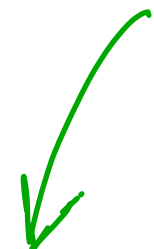
(N) / TBS ++

↓ alkalemia

(N)

-  
Spirinolactone

ARR  
Screening



-

BP  
Na  
K<sup>+</sup>  
Sugar

Hyperpig



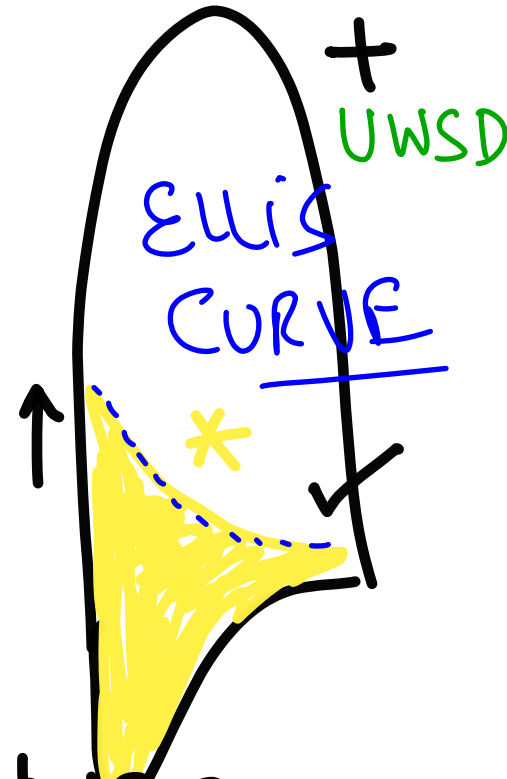
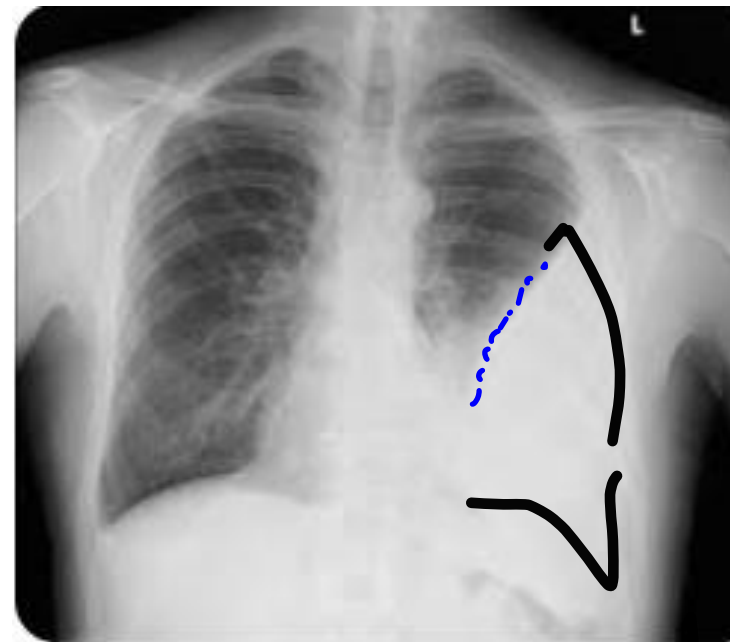
# PURULENT Bronchitis

31. A patient presents with fever of 102 F with cough, foul smelling sputum and digital clubbing. CXR is given. What is the most likely diagnosis?

- a. Lung abscess
- b. Pneumatocele
- c. Empyema: Pneumococcus > S. Aureus
- d. Pleural effusion



TOC empyema: 5th ICS I.C.D + UWSD



LIGHT CRITERIA

PF protein > 0.5 lung abscess  
// LDH > 0.6 Empyema

diagnostic Thoracentesis → 8 ICS midway between post axillary line & scapular line



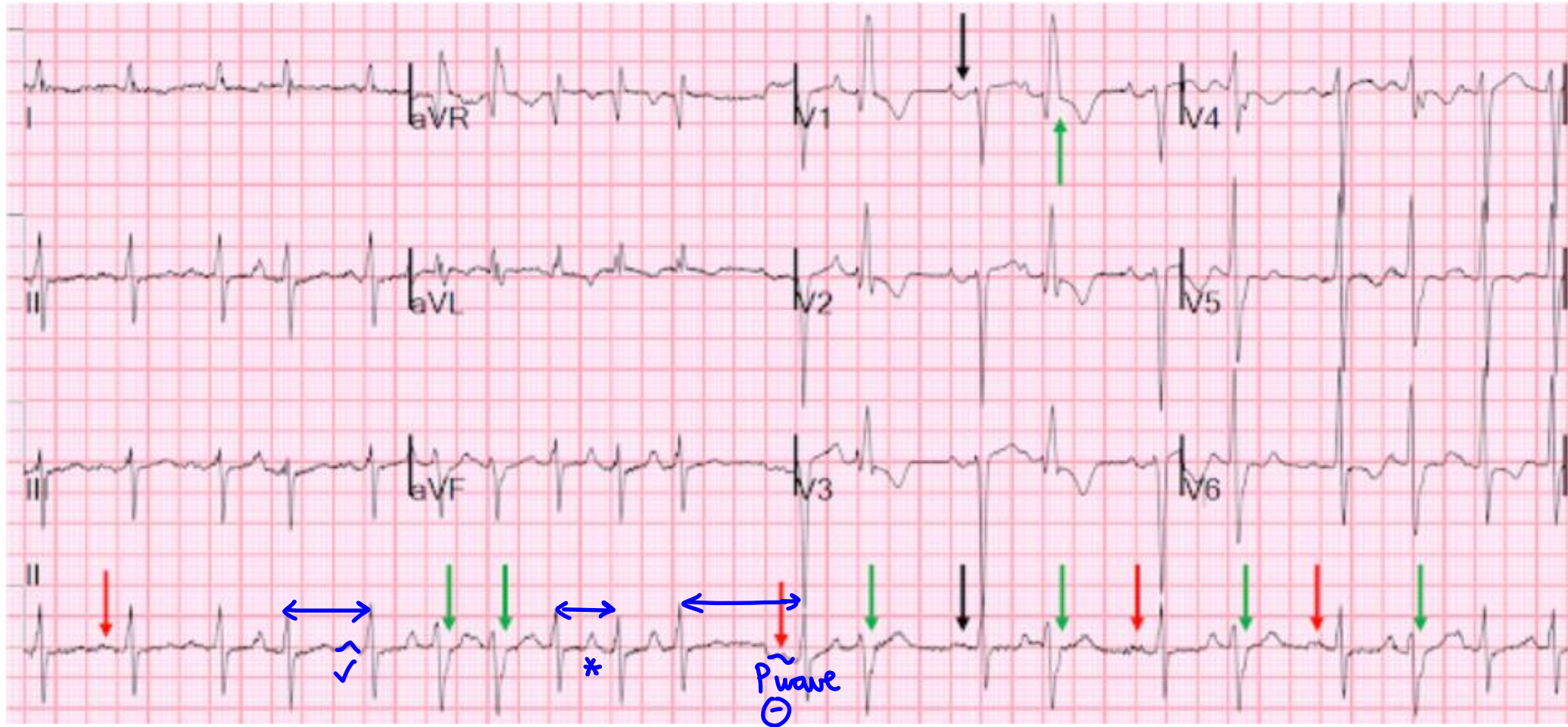
### 32. Match the following

|                                        |    |
|----------------------------------------|----|
| A. <u>Brugada syndrome</u>             | 1- |
| B. MAT                                 | 2- |
| C. ARVD                                | 3- |
| D. Polymorphic Ventricular tachycardia | 4- |

- a. A-2, B-1, C-4. D-3
- b. A-2, B-1, C-3. D-4
- c. A-4, B-2, C-4. D-3
- **d. A-4, B-3, C-2. D-1**

Handwritten notes and diagrams:

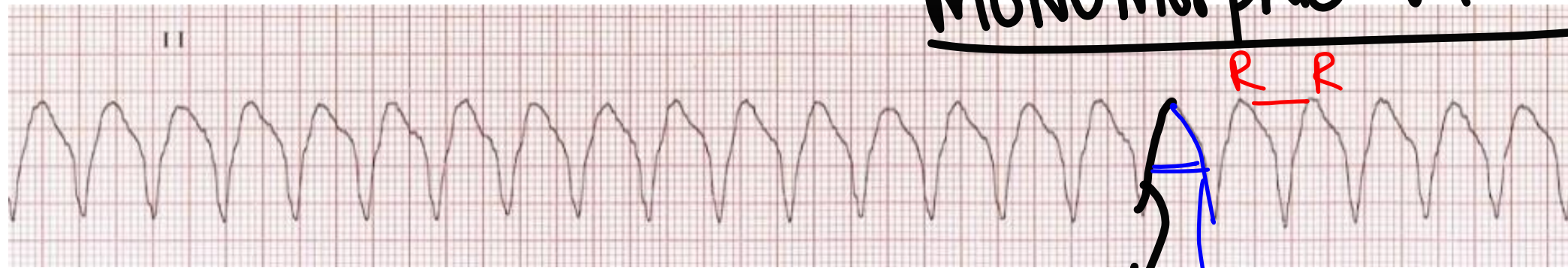
- Blue waveform:  $\frac{TTCM}{IABP}$
- Green waveform: (LW)
- Black waveform: Rx: I.C.D
- Blue waveform with arrows: COVE PATTERN \*
- Blue waveform: Saddle back
- Text: BRUGADA: SCNSA # T.D.P



irregular R-R interval  
 Varying P wave morphology  
 COPD c/o Palpitations  
 DC SHOCK: Not recommended



33. What is next best step in management of pulseless patient with following rhythm?



- a. Defibrillate and continue chest compression
- b. Defibrillate and check pulse
- c. Check pulse and give synchronized DC
- d. Give synchronized DC and continue chest compressions

Broad RS = 200 msec  
R-R interval = 300/min



34. Patient presents with daily headaches and visual disturbances. On examination large sweaty hands and feet with thick palm and soles. He has macroglossia and gap in central incisors. Select the best test for confirmation of diagnosis?

IOC



Prognathism

SPADE like Hand

ACROMEGALY : pituitary Adenoma

- a. Early morning fasting GH levels
- b. Age specific IGF-1 levels ← Screening Test
- c. Age specific IGF-2 levels
- d. GH levels to less than 0.4 ug/L after glucose suppression

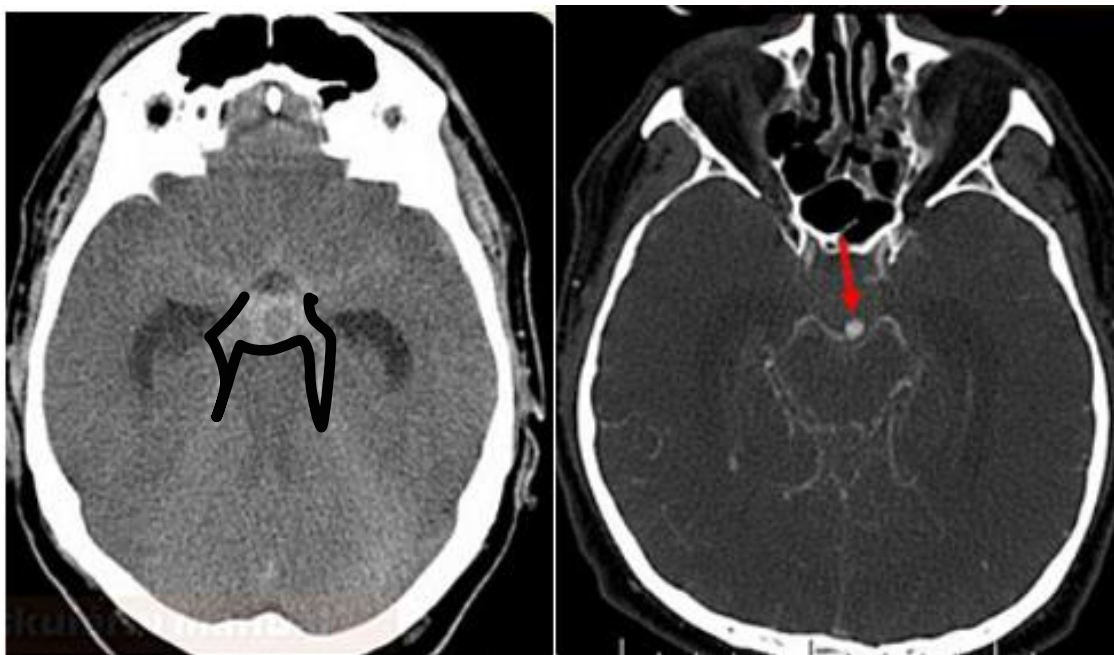
75gm glucose

① LANRQOTIDE → T.S.S



35. Patient is brought to the emergency with loss of consciousness. NCCT head and CTA is shown below. Best for management of this case?

- a. Endovascular therapy
- b. Endovascular coiling
- c. Nimodipine
- d. Nicardipine

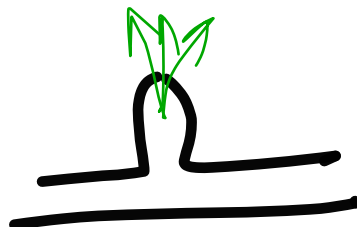


Aneurysmal  
Bleed  

---

SAH

1°: vasospasm  
1° delayed cerebral ischemia



CEREBRAL INFARCTION

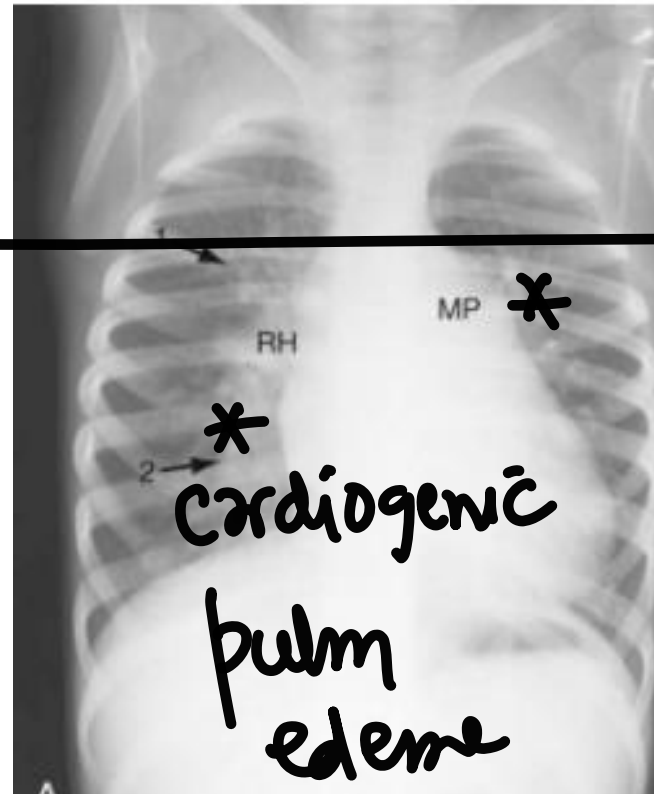


36. Child presents with recurrent lung infections and congenital heart disease ASD. His milestones are delayed. Chest X ray given below. What is the most likely diagnosis?

- a. Kartagener syndrome
- b. Cystic fibrosis
- c. Digeorge syndrome
- d. Down syndrome**

R. pneumonia  
Malabsorption syn  
Meconium ileus

DEXTRO CARDIA



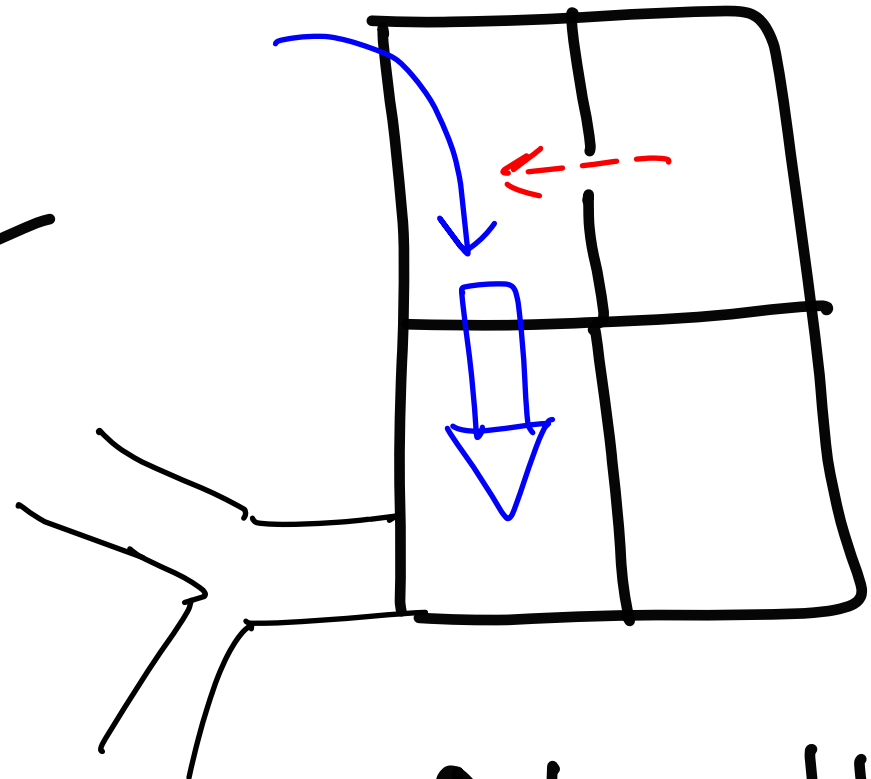
CMI ↓

Thymus #

parathyroid

~~delayed~~  
~~dentition~~

PULM.  
PLETHORA



ASD →

↑ pulm blood flow: wet lungs

R. pneumonia(s)

R. pneumoniae

1. CHD: VSD, ASD

2. Duchenne's

3. CF

4. Kartagener

\* 5. Digeorge

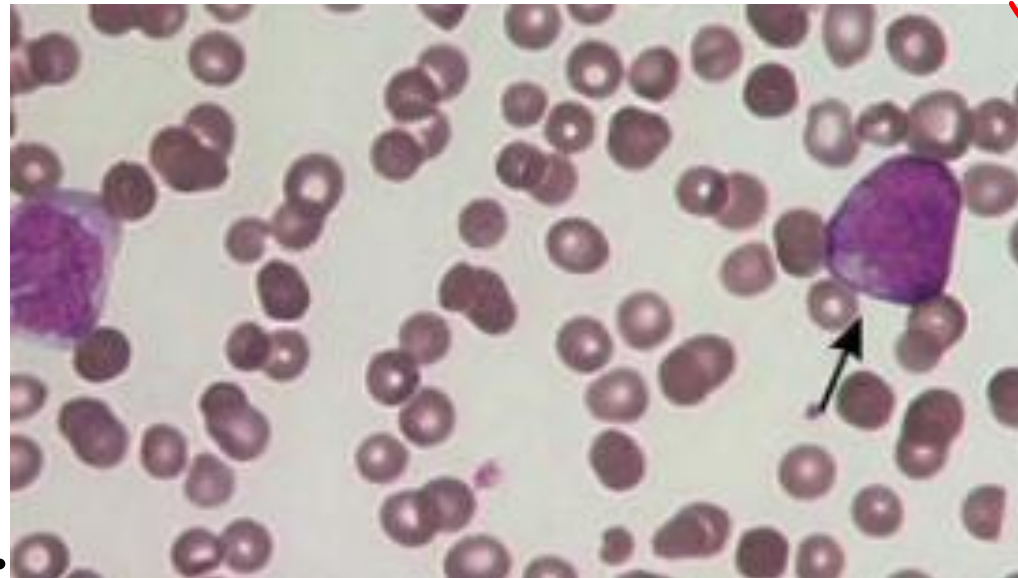




37. 34-year-old female presented with progressive pallor and organomegaly. Work up shows low Hb, platelet count of 25000/mm<sup>3</sup>. raised PT and aPTT. Peripheral smear is given. Which of the following fusion gene is affected?

plat count ↓ PT ↑ aPTT ↑ : DIC

- ✓ a. PML RARA
- b. RUNX1 RUNX1T1
- c. IGH NSD2
- d. BCR ABL



M<sub>3</sub> AML  
t(15:17)  
ATRA  
ARSENIC  
TRIOXIDE

M<sub>3</sub> AML: Sterile  
vegetations  
in heart  
L

NBTE / MARANTIC Endocarditis



38. A patient presented with early satiety and abdominal pain. On examination grossly enlarged spleen and liver is palpable Work up shows low Hb with WBC-50000/mm<sup>3</sup> and platelet count of 5 lac/cu.mm. P. Smear shows increased basophils with shift to left. Which of the following will cause this presentation?

- a. CML
  - b. CLL → PB flow cytometry
  - c. ALL || BMA: flow cytometry
  - d. AML → t(15:17) inv16 Trisomy 21
- Hb ↓ TLC ↑ plat ↑  
 Basophils  
 Shift To left
- IOC: FISH on bone marrow > PCR for bcr-abl 1
- Rx: T.K.I : Imatinib, nilotinib
- \* T3151 mutation → Ponatinib



39. Which of the following is major mortality reducing agent in heart failure with reduced ejection fraction?

- a. Ramipril
- b. Bisoprolol
- c. Spironolactone
- d. Empagliflozin

HF<sub>r</sub>EF = 50%

\* ARNI <sup>ARB</sup>  
\* AA <sub>nephrolysis in ⊖</sub>

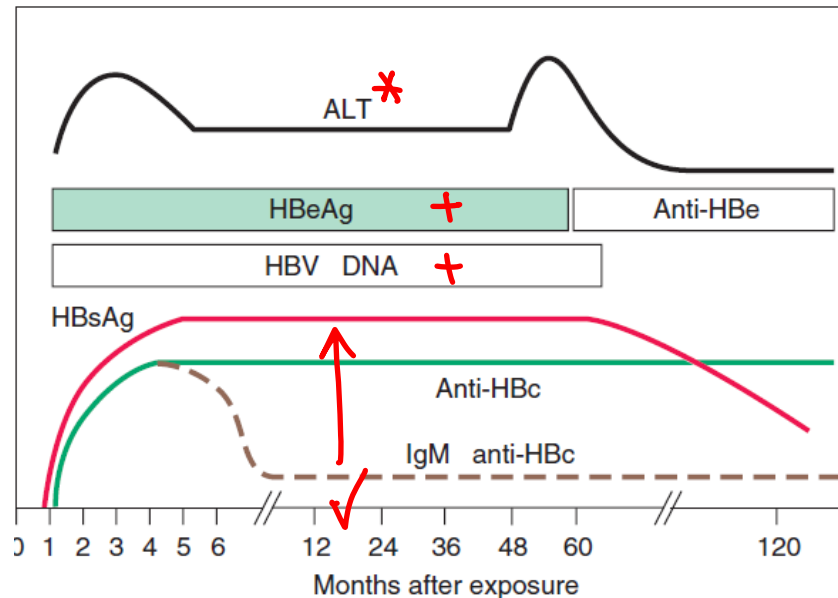
HF<sub>r</sub>EF : ≤ 40%

↓

1. ACEi : RAMIPRIL
2. β blocker : Metoprolol, bisoprolol, carvedilol
3. AA : Spironolactone
4. SGLT2i : CANAGLIFLOZIN  
Salt loss
5. 4 ACEi : not Tolerated : ARNI



40 .A young man had a history of jaundice and HBsAg positive status a year back. On follow up now, he has normal levels of liver enzymes. His current profile is shown in this image. What is the diagnosis for this current condition?



- a. Chronic Hep B with HBe Ag negative
- b. Chronic Hep B with HBe Ag positive
- c. Resolved infection
- d. Acute Hepatitis B

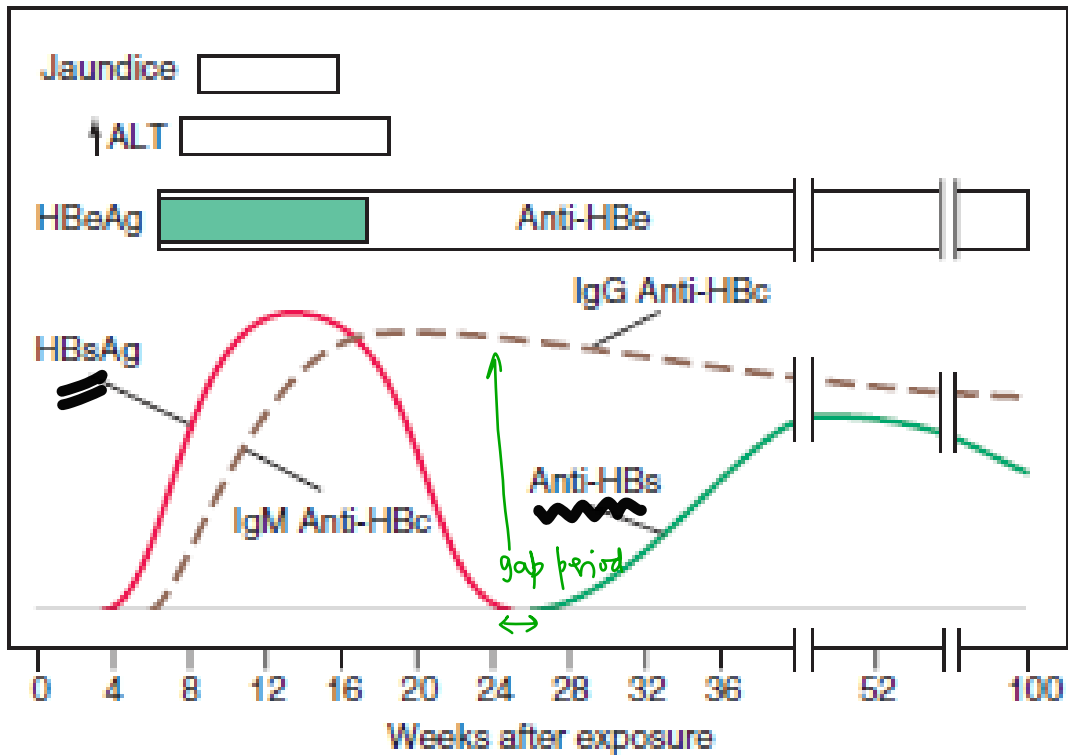


FIGURE 339-4 Scheme of typical clinical and laboratory features of acute hepatitis B. ALT, alanine aminotransferase.

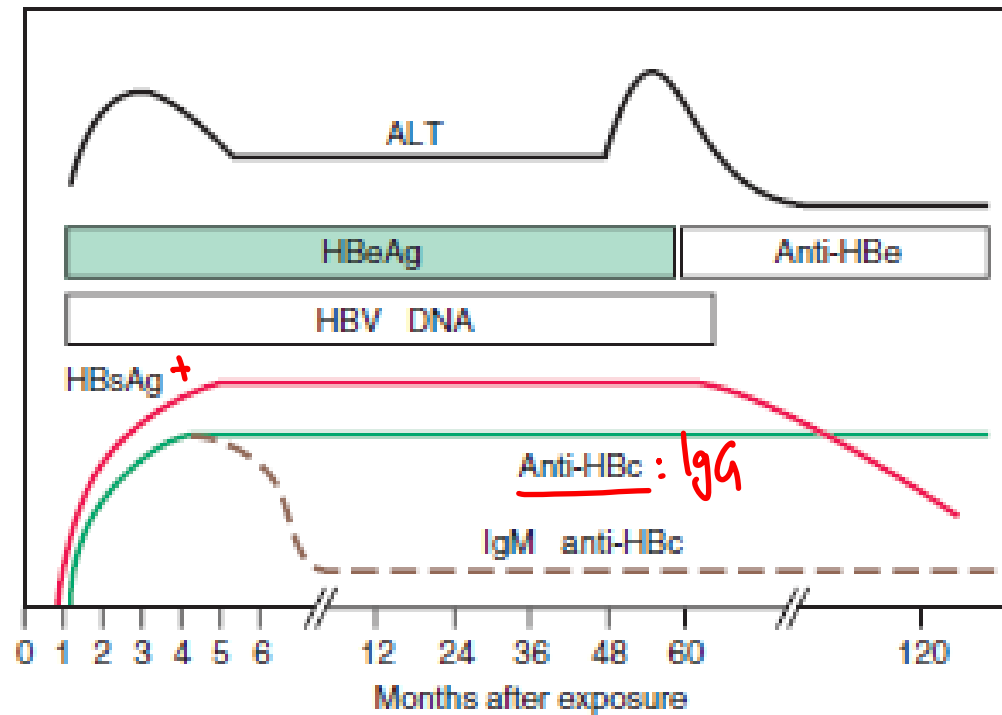


FIGURE 339-5 Scheme of typical laboratory features of wild-type chronic hepatitis B. HBeAg and hepatitis B virus (HBV) DNA can be detected in serum during the relatively replicative phase of chronic infection, which is associated

**TABLE 339-5 Commonly Encountered Serologic Patterns of Hepatitis B Infection**

| HBsAg | ANTI-HBs | ANTI-HBc | HBeAg | ANTI-HBe | INTERPRETATION                                                                                                                        |
|-------|----------|----------|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------|
| + ✓   | -        | IgM      | +     | -        | Acute hepatitis B, high infectivity <sup>a</sup>                                                                                      |
| + ✓   | -        | IgG      | +     | -        | Chronic hepatitis B, high infectivity                                                                                                 |
| + ✓   | -        | IgG      | -     | +        | 1. Late acute or chronic hepatitis B, low infectivity<br>2. HBeAg-negative ("precore-mutant") hepatitis B (chronic or, rarely, acute) |
| + ✓   | +        | +        | +/-   | +/-      | 1. HBsAg of one subtype and heterotypic anti-HBs (common)<br>2. Process of seroconversion from HBsAg to anti-HBs (rare)               |
| -     | -        | IgM      | +/-   | +/-      | 1. Acute hepatitis B <sup>a</sup><br>2. Anti-HBc "window"                                                                             |
| -     | -        | IgG      | -     | +/-      | 1. Low-level hepatitis B carrier<br>2. Hepatitis B in remote past                                                                     |
| -     | +        | IgG      | -     | +/-      | Recovery from hepatitis B                                                                                                             |
| -     | +        | -        | -     | -        | 1. Immunization with HBsAg (after vaccination)<br>2. Hepatitis B in the remote past (?)<br>3. False-positive                          |

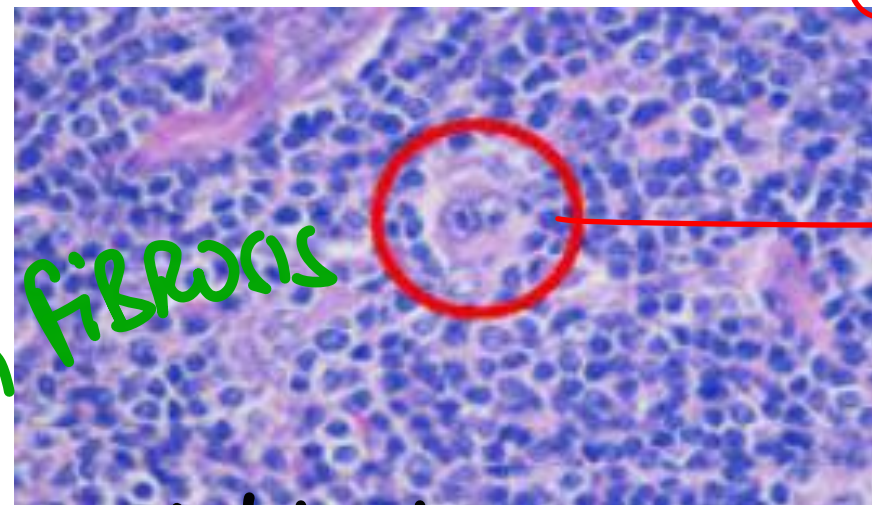
| HbsAg         | <u>Anti-Hbs</u> | Anti-Hbc    | HbeAg    | Interpretation                                            |
|---------------|-----------------|-------------|----------|-----------------------------------------------------------|
| Negative      | Negative        | Ig M        | Negative | GAP PERIOD                                                |
| Negative<br>* | Negative        | <u>Ig G</u> | Negative | Low level carrier<br>HBV infection in<br>REMOTE infection |
| Negative      | (+)             | Ig G        | Negative | CURED / recovery                                          |
| Negative      | (+)             | Negative    | Negative | Vaccinated                                                |



41. 40-year-old woman came with the complaints of fever, night sweats, generalized itching and unintentional weight loss of 10% in the last 3 months. On examination she has enlarged cervical and axillary lymph nodes. Histopathological examination of excision lymph node biopsy is shown below. What would the likely diagnosis and treatment option be?

\* Category B  
 \* Cxal Wt  
 RS cells

- a. NHL- RCHOP
- b. HL- ABVD regimen**
- c. Multiple myeloma: dexamethasone with lenalidomide
- d. Sarcoidosis: Prednisolone



RCM  
 pulm fibrosis

\* Adriamycin - bleomycin - vinblastine  
 L pneumo  
 DACARBAZINE





42. Which of the following is most likely based on the lab values given in a CKD patient presenting with vomiting?

|             |           |     |
|-------------|-----------|-----|
| Blood pH:   | 7.40      | (N) |
| Na+:        | 140mEq/L  |     |
| K+:         | 2.8 mEq/L |     |
| Cl:         | 100 mEq/L |     |
| HCO3:       | 23 mEq/L  | (N) |
| Urea:       | 25 mg/dL  |     |
| Creatinine: | 0.6 mg/dL |     |
| pCO2:       | 40 mm Hg  | (N) |

↳ Metabolic ALKALOSIS + M. acidosis

$$AG = 140 - (100 + 23) = 140 - 123 = 17 \uparrow$$

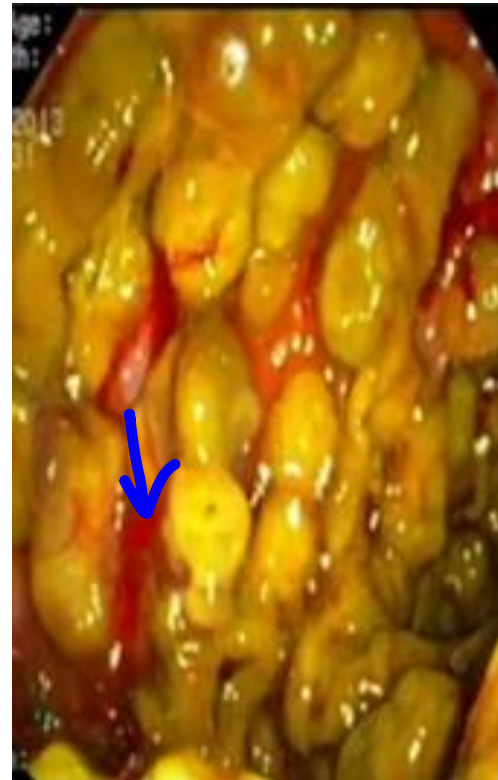
$$* \text{ DELTA RATIO} = \frac{\Delta AG}{\Delta HCO_3} = \frac{17 - 12}{24 - 23}$$

- a. Normal report
- b. High anion gap metabolic acidosis with metabolic alkalosis
- c. Normal Anion gap metabolic acidosis with metabolic alkalosis
- d. High anion gap Metabolic acidosis with respiratory acidosis



43. Lady has compound tibial fracture and was admitted for surgery and started on broad spectrum antibiotics. Post discharge she had severe diarrhea which persisted with oral metronidazole. Hence for further work up of which colonoscopy was done which is shown below. Treatment is?

- a. Ceftriaxone
- b. Tetracycline
- c. Probiotics
- d. Fidaxomicin



recurrence PMC  
Vancomycin

P.M.C  
Cl. difficile

mv:

Stool ICR for Toxin A  
Toxin B



44. Patient with lung cancer has breathing difficulty. On examination he has distant heart sounds with low BP. CXR is shown. Select the correct JVP finding for the case

Cardiac Tamponade: malignant pericardial effus

- a. Steep x descent and steep Y descent
- b. Steep x and Absent y descent
- c. Blunted x and blunted y descent
- d. Blunted x descent and steep y descent



C-PERICARDITIS

Penetrating Trauma: Hemopericardium  
Emergency Resuscitative THORACOTOMY



45. AIDS positive patient presents with new onset headache, seizures, monoparesis and raised ICP. CSF examination shows increased mononuclear cells with CSF glucose/ plasma glucose of 0.4 and protein of 1gm/L. Which is correct intervention for management of this case?

- ~~a.~~ Liposomal amphotericin B with 5 flucytosine
- b. Anti-tubercular medication
- ~~c.~~ Ceftriaxone with Vancomycin *PmN*
- d. Albendazole with Steroids

MONONUCLEAR cells

- \* CSF lymphocytosis
- \* protein: 1gm/dL
- \* glucose: ↓

TBM



↓ 1

↑ 1

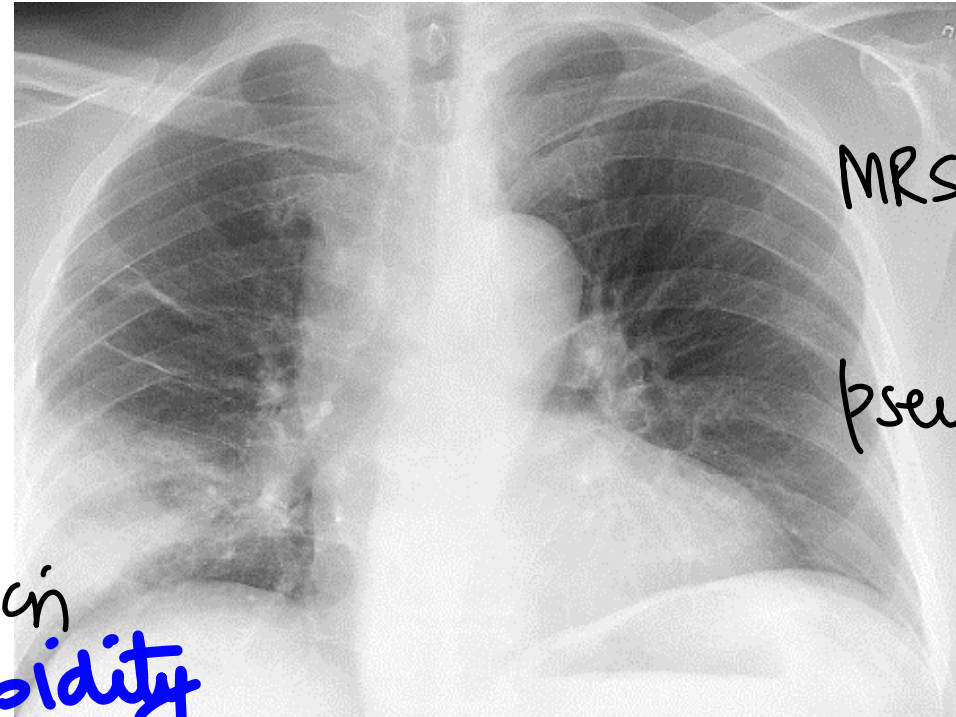
↑ 1

Pneumococcus

46. 72-year-old patient has fever with SOB and rusty sputum. On examination he appears confused with RR is 40/ min. Labs show serum creatinine= 1.9 mg/dl BUN :10 mmol/L Which is correct about its management?

L 1

- a. OPD management with oral drugs
- b. IPD management with IV drugs
- c. ICU management with IV drugs
- d. ICU management with oral drugs



2  
L.M.G iv

MRSA

linezolid

pseudomonas

Meropenem

CURB 0-1: → age > 65 yr

oral amoxicillin + oral azithromycin  
**NEVER Hospitalized, NO comorbidity**  
**Previous Hospitalized, Comorbidity**

→ oral amoxicillin + clavulanic acid + azithromycin

In patient Pneumonia

→ requiring ventilation \*  
→ septic shock \*  
→ Confusion, Multi lobar infiltrates  
Severe

Non severe

No Risk factors:

Respi FO

or

ampicillin - sulbactam + azithromycin

ampicillin - sulbactam + Respi FO

or

ampicillin - sulbactam + azithromycin

Prior Respi isolation

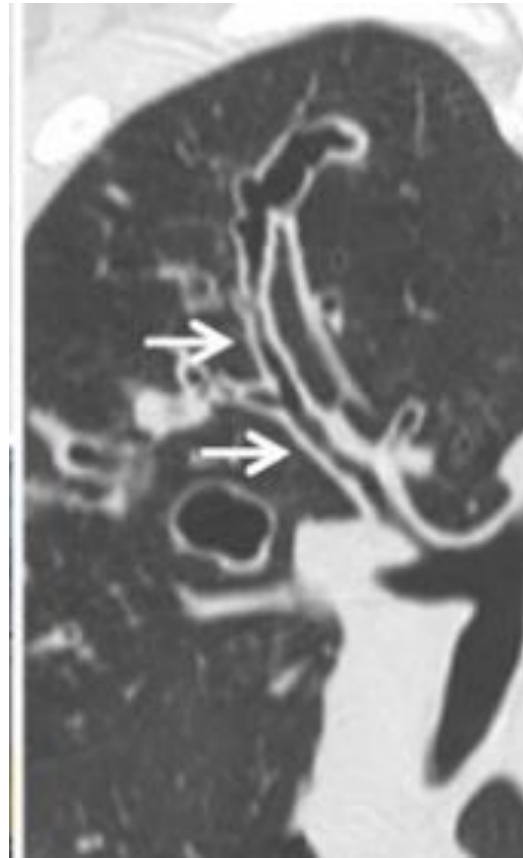
Add coverage MRSA or P. aeruginosa

Add coverage for MRSA or P. aeruginosa



47. 48-year-old smoker presents with copious foul-smelling yellow sputum that increases significantly on postural change and has this problem for few years. HRCT chest inset is shown

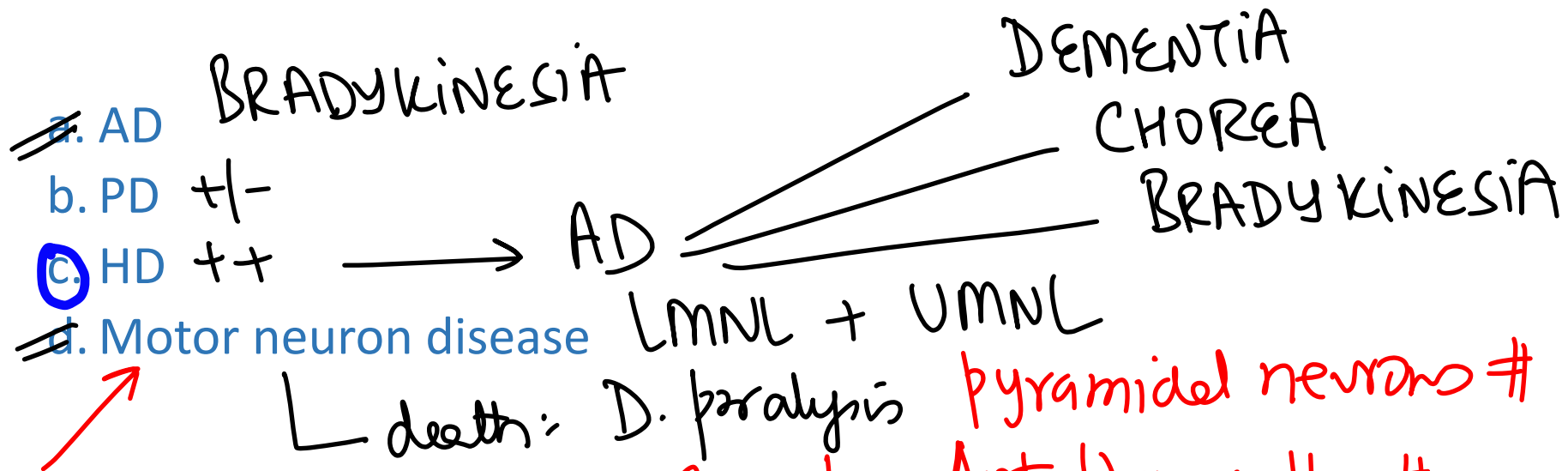
- a. Asthma
- b. Pneumonia
- c. Bronchiectasis
- d. Cancer



TRAM TRACK



48. A patient has features of involuntary hand movements with dementia and bradykinesia. His father also had the same illness and died due to pneumonia 20 years ago. Diagnosis?



HEXANUCLEOTIDE Repeats: SOD ↓ : Ant Horn cells #

[LBD]

AD, HD, PD = death: Aspiration pneumonia



PD

\* Rigidity: Bradykinesia  
Akinesic MUTISM

\* TREMORS: HYPERKINETIC Movt

---

\* CHOREA : FAST distal

\* ATHEGOTOSIS : Slow distal

\* HEMIBALISMUS : wide flinging Movt  
proximal + distal

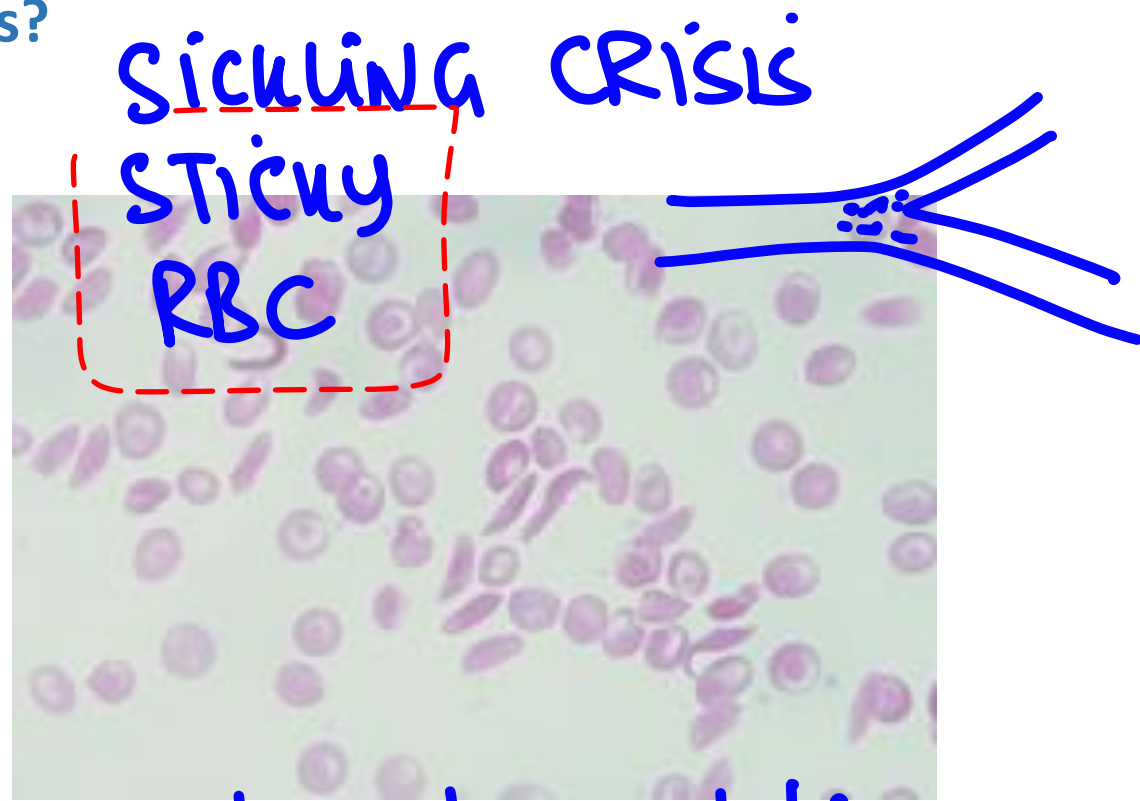
B-G #



49. Patient presents with excruciating finger pain /dactylitis and chest pain. Work up shows Hb= 6 gm%, elevated unconjugated bilirubin. Diagnosis of sickling crisis is made. Treatment is?

- a. Packed RBC
  - b. Whole blood transfusion
  - c. Voxelotor
  - d. Crizanlizumab
- | SCA

Rx: 1. Opioids  
2. IVF  
3. Whole blood Tx



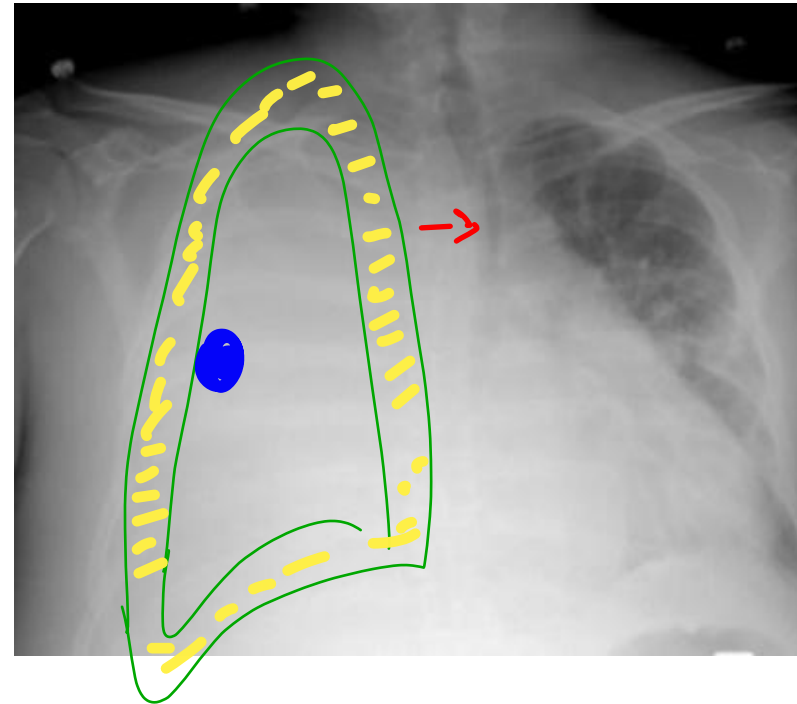
\* Sluggish circulation



50. Man presents with shortness of breath for a week. Comment on diagnosis based on C.X.R

- a. Pneumothorax
- b. Consolidation
- c. Collapse
- d. Thoracic mass**

HEMITHORAX CL SHIFT  
TRACHEA





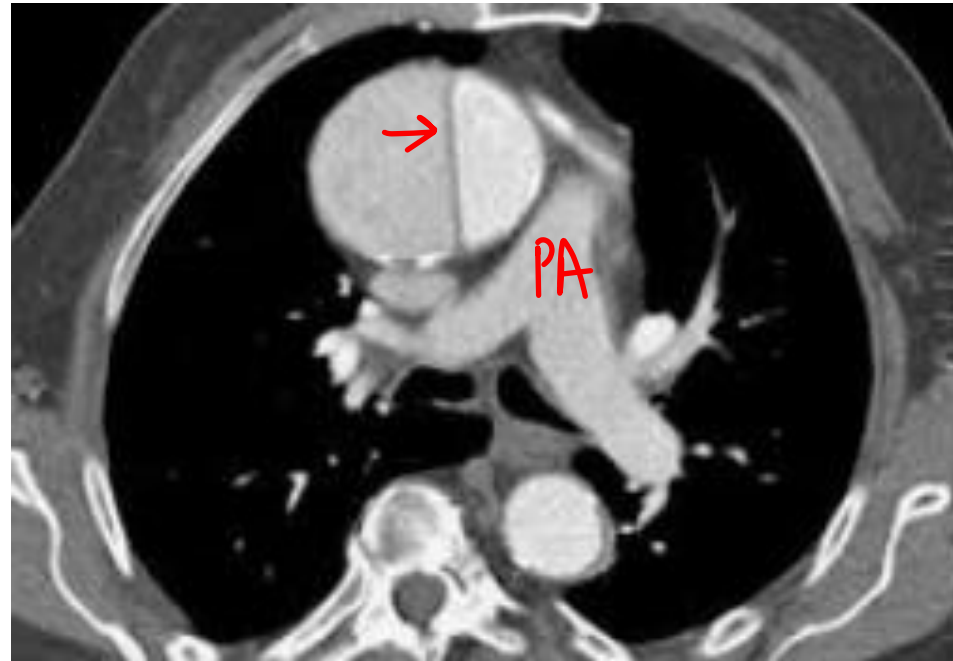
CXR shows tracheal shift to left side which is seen in massive pleural effusion due to thoracic mass like lung cancer.

# INTERSCAPULAR AREA

52. 60-year-old **hypertensive patient** presents with excruciating chest pain with unequal radial pulses. Which is correct about management of this patient?

- a. Emergency Surgical repair
- b. BP control and monitoring
- c. Stenting of aorta
- d. Balloon dilatation

Type A: Aortic dissection



CATS

CoA preductal  
AORTIC DISSN  
TAKAYASU  
SVAS



Reduce propagation of Tear



53. 50-year-old Laborer becomes unconscious and is brought to ER with temp of 105 F with decreased skin turgor. Which of the following will not be seen?

HEAT STROKE

- a. Sweating
- b. Hypotension
- c. Tachypnea
- d. Red and Hot skin **FLUSHING**

TUMOR DOUBLING TIME → 24 HOURS \*

54. You are starting chemotherapy in a patient with Burkitt lymphoma. Which of the following baseline investigation is useful monitor this patient during chemo session?

- ✓ a. Uric acid level
- b. pH and HCO<sub>3</sub> levels
- c. Serum sodium levels
- d. TLC and DLC

DNA ## TUMOR LYSIS SYN  
PURINES ## \* PUKE - CALCIUM

1. PO<sub>4</sub> ↑
2. URIC ACID ↑ : U :  $\frac{ATN}{BUN} \uparrow$
3. K ↑
4. CALCIUM ↓

Rx: RASBURICASE  
IVF





55. 30-year-old lady presents with recurrent episodes of pulsatile hemicrania with nausea which leads to difficulty in doing tasks like going to college. She says her mother also suffers from same types of headaches. Which drug is used for preventing such episodes in future?

- a. Diclofenac sodium ✓
  - b. Sumatriptan ✓
  - c. Rizatriptan ✓
  - d. Flunarizine
- ACUTE

1<sup>o</sup> migraine

- \* PRPNL
- \* ICB: flunarizine
- \* TCA: amitryptiline
- \* gabapentin



✓  
56. 70-year-old man is having progressive decline in kidney function. Work up shows massive non-selective proteinuria Which of the following antibodies can explain this presentation?

- a. ASO antibodies RF
- b. Anti-phospholipase A2 receptor antibody
- c. Anti Hyaluronidase antibody
- d. Anti DNAase B antibody

Nephrotic syn  
MAN primary

PSGN : HEMATURIA +  
SUBNEPHROTIC  
PROTEINURIA