لجنة الطب و الجراحة

RS

INTERNAL MEDICINE

Archive

CONTANT

PNEUMONIA

1. In lobar pneumonia, which is NOT true?
a. Trachea deviated to the opposite side
b. Dullness on percussion
c. Bronchial breath sound is heard
d. Presence of whispering pectoriloquy
e. Late inspiratory crepitations are present

Answer: a

2. A 67-year-old patient diagnosed with lobar pneumonia, in the ED. The patient has a respiratory rate of 32/min, no confusion, a systolic blood pressure of 100 mmHg, and a urea nitrogen of 9 mmol/L. Which of the following is TRUE in arterial blood gases?
a. Hypoxemia and hypercapnia
b. Hypoxemia and hypocapnia
c. Hypoxemia and normal $PaCO_2$
d. Normal PaO_2 and hypercapnia
e. Normal ABG

Answer: b

3. One of the following is a feature of community-acquired pneumonia (CAP)?
a. B-lactam antibiotics are effective in all pneumonias irrespective of causative organism.
b. Most cases caused by Pseudomonas aeruginosa.
c. Typical pneumonia usually shows nodular opacity in chest X-ray.
d. Its clinical signs include a hyperresonant note on percussion and bronchial breath sounds.
e. Affects a patient not hospitalized for more than 14 days before onset of symptoms.

Answer: e

4. Consequences of immobility include which one of the following?
a. Diarrhea
b. Maintenance of muscle mass
c. Urinary retention
d. Pneumonia
e. Hastened wound healing

Answer: d

5. Which is more often associated with hospital-acquired pneumonia than community-acquired pneumonia?
a. Streptococcus pneumoniae
b. Haemophilus influenzae
c. Legionella
d. Chlamydia pneumoniae
e. Mycoplasma pneumoniae

ANSWER: C

6. A 50-year-old patient presents with pneumonia, received standard treatment, and 4 days later developed diarrhea. Which of the following organisms is responsible for this diarrhea?
a. Campylobacter jejuni
b. Clostridium difficile
c. E. coli
d. Staph. aureus
e. Enterococcus

Answer: b

PNEUMONIA

7. Which of the following statements is not true concerning the management of pneumonia?
a. Chest X-ray is used to confirm diagnosis
b. Antibiotics therapy should only start once the infecting organism is identified after culture
c. WBC count of 4000 cells/mm3 is a criterion for severe community-acquired pneumonia
d. O2 therapy is commonly used to maintain SaO2 90%
e. Streptococcus pneumoniae is the most common cause of community-acquired pneumonia

Answer: b

8. An adult female presents with a sore throat and dry cough. She has had a low-grade fever for 3 days. She says her colleagues at work have had similar symptoms. The CXR is unremarkable. She has a WBC of 14.6/mm3. The provider thinks she has community-acquired pneumonia. Which of the following would be the best first choice?
a) Azithromycin
b) Ampicillin
c) Trimethoprim-sulfa
d) Tetracycline
e) 3rd generation cephalosporin

Answer: a

9. 80-year-old patient in hospital develops pneumonia 3 days after hospitalization. What is the treatment?
Answer: Anti-pseudomonal beta-lactam + anti-pseudomonal quinolone + vancomycin
10. Fever, myalgia, headache, dry cough, the causative organism is?
Answer: Mycoplasma pneumoniae

11. Patient with a history of cough and sputum with fever and SOB, X-ray reveals non-homogeneous opacity at the middle lung. After a few days, complained of spontaneous pneumothorax. What is the most likely organism?
Answer: Staphylococcus aureus

12. Wrong regarding high-risk patient with pneumonia:
Answer: Respiratory rate is 22

13. Most common cause of CAP?
Answer: Streptococcus pneumoniae
14. Common organism causing community-acquired pneumonia?
Answer: Streptococcus pneumoniae

15. Common organism causing pneumonia in alcoholic patients?
Answer: Klebsiella

16. Not a complication of mycoplasma pneumonia:
a. Erythema multiforme
b. Diarrhea and vomiting
c. Thrombocytopenia
d. Leukocytosis
e. Pericarditis

Answer: d

17. MRSA treated by:
Answer: Vancomycin

PNEUMONIA

18. All are risk factors for Legionella pneumonia, except:
a. Surgery
b. Tobacco use
c. Hospital stay
d. HIV
e. Steroids

Answer: a

19. All indicate severity in community-acquired pneumonia, except:
A. Mental score 6/10
B. WBC 22,000
C. Age 75 years

Answer: A

20. Which one of the following is LEAST useful in assessing a patient with poor prognosis in community-acquired pneumonia?
a. Mental confusion
b. Urea of 11.4 mmol/l
c. Positive C-reactive protein
d. Respiratory rate of 35/min
e. Age 75 years old

Answer: c

21. One of the following drugs is most appropriate in the treatment of Pneumocystis carinii pneumonia:
a. Clarithromycin
b. Ethambutol
c. Azithromycin
d. Trimethoprim-Sulfamethoxazole
e. INH and Rifampicin

Answer: d

22. All of the following are true combinations between a risk factor and pathogens causing pneumonia EXCEPT:
a. Alcoholism and Klebsiella pneumoniae
b. Old age and Mycoplasma pneumoniae
c. Cigarette smoking and H. influenzae
d. Mechanical ventilation and Pseudomonal pneumonia
e. Abnormal level of consciousness and anaerobic bacteria

Answer: b

23. Pneumocystis carinii pneumonia is caused by:
a. Protozoa
b. Rickettsia
c. Virus
d. Bacteria
e. None of the above

Answer: a

24. Long-term outcome in healthy children who survive staphylococcal pneumonia is usually:
a. Recurrent spontaneous pneumothorax
b. Chronic respiratory failure
c. Chronic lung abscess and empyema
d. Persistent pneumatoceles
e. Complete resolution

Answer: e

PNEUMONIA

25. The most common organism responsible for severe community pneumonia needing ICU care is:

a. Streptococcus pneumoniae
b. Legionella
c. H. influenzae
d. Gram-negative bacilli
e. Mycoplasma pneumoniae

Answer: a

MINI OSCE

12-This 35 year old librarian came to the outpatient clinic complaining of Fever and cough since 5 days. Your diagnosis is?

a. Lung abscess

b. Lung tumor

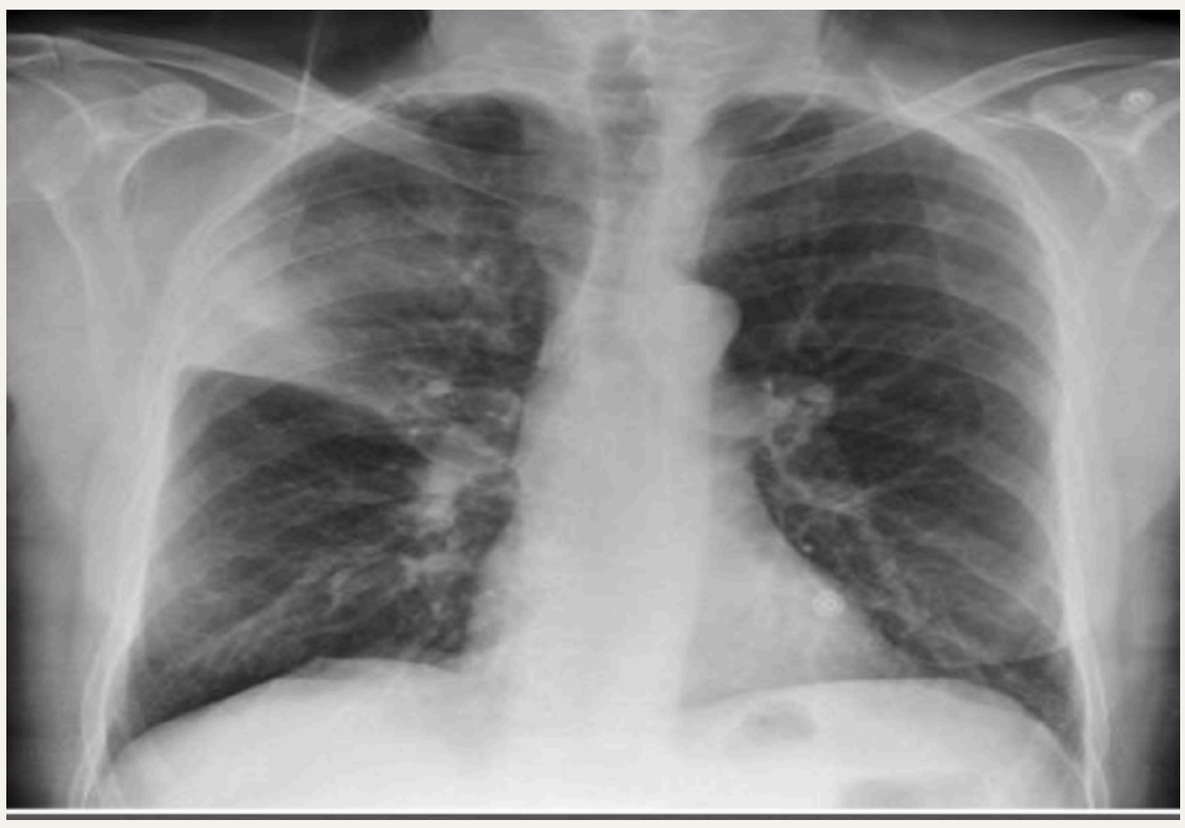
C. Old tuberculosis

d. Lobar pneumonia

e. ARDS

Answer: d

Q16: interpretation for x-ray?



A)Right middle lobe pneumonia
B)Right upper lobe pneumonia
C)Right upper lobe collapse
D)Right middle lobe collapse

Answer:B

PNEUMONIA

Q8) a 24 year old patient complaining of high fever and dry cough for 9 days, 2 days ago he developed dyspnea and hypoxia. a CXR was done for him and gave the following appearance.

what is your diagnosis?

The image from Google !!

a) Covid19 pneumonia
b) Aspiration pneumonia
c) Lobar Pneumonia

Answer:A

What is presentation of patient?
a) Low PH, High PCO2, High HCO3, 88% 02
b) High PH, Low PCO2, Low HCO3, 88% 02
c) High PH, Low PCO2, Low HCO3, 92% 02

Answer:B

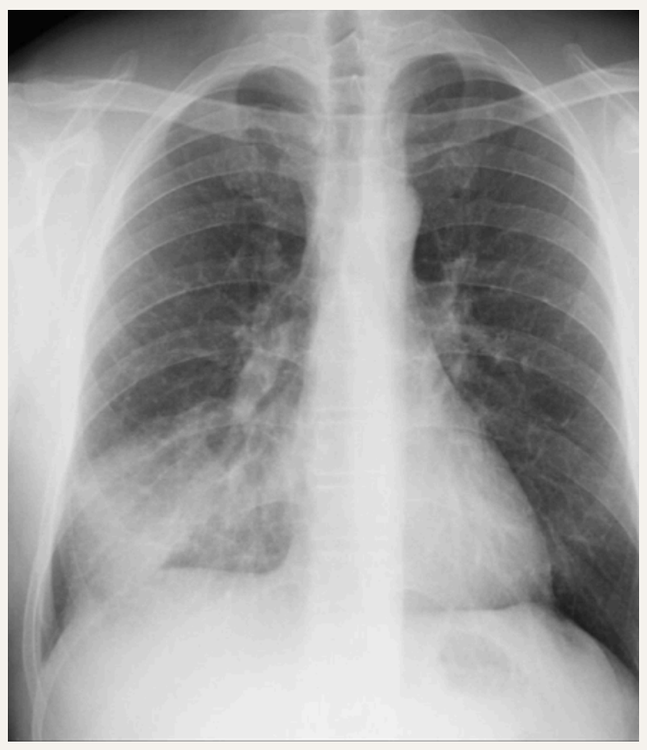
A 60 years patient came with shortness of breath and fever 38.2

Q1 what is the diagnosis?
Right lower & middle lobar pneumonia
Q2 mention 4 investigations you should order?
1- gram stain
2- sputum culture
3- CBC with differential
4- blood culture

كانت الصورة right and middle

1) What is your diagnosis?
Pleural Effusion
1) List three causes of this condition?
CHF – pneumonia – malignancy – pulmonary embolism
1) What are other possible findings on the physical exam?
Dullness to percussion – decreased tactile fremitus – decreased breath sound

Pneumonia"
1) What is your diagnosis?
pneumonia
1) List two possible causes?
S.pneumonia,H.influenza
1) What is the line of treatment?
Amoxicillin ,fluroquinolone,azithromycin,oxyg



PNEUMOTHORAX

Patient came with SOB and cough, trachea shifted to the right with hyper-resonance percussion note on the right side. Diagnosis is: **Left-sided pneumothorax**

• Findings in a patient with pneumothorax include :
a. A dull percussion note.
b. Decreased to absent breath sounds.
c. Increased tactile fremitus.
d. Late inspiratory crackles.
e. Shift of mediastinum to the involved site.

Answer : b

• All of the following regarding pneumothorax are true except:
A) Expiratory chest radiograph is not necessary for the routine diagnosis of pneumothorax
B) A patient with normal PA radiograph,alateral chest or lateral decubitus radiograph should be performed if clinical suspicion of pneumothorax is high
C) CT scanning is not recommended when differentiating a pneumothorax from complex bullous lung disease.
D) The clinical history is not a reliable indicator of pneumothorax
E) On a plain chest radiograph, a surgical emphysema may obscure simple pneumothorax.

Answer:c

• All of the following regarding intercostals tube drainage for pneumothorax are true except:
A) It is done in cases of unsuccessful simple aspiration or catheter aspiration drainage
B) It is especially recommended in secondary spontaneous pneumthorax
C) A non-bubbling chest tube should not usually be clamped
D) Bubbling chest tube should never be clamped
E) A patient with a non-bubbling and clamped chest tube for pneumothorax can leave the ward environment.

Answer :e

• All of the following regarding spontaneous pneumothorax are absolute indications for operative interventions except:
A) Second ipsilateral pneumothorax
B) First contra lateral pneumothorax
C) Bilateral pneumohoraces
D) First ipsilateral of pneumothorax in individuals living in remote area.
E) Persistent air leak (>7days)

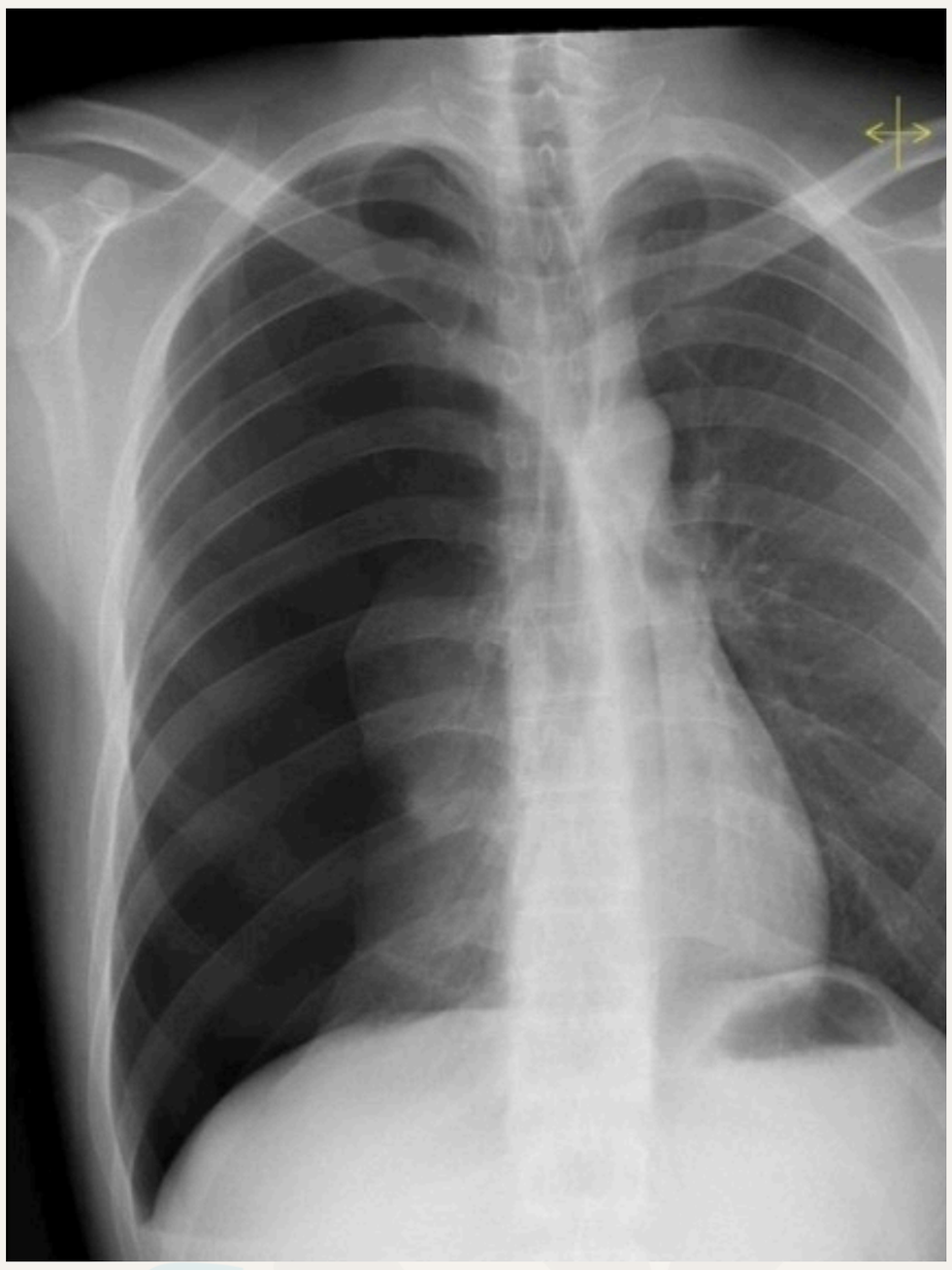
Answer: b

• Which of the following is the least cause of iatrogenic pneumothorax?
A) Transthoracic needle aspiration
B) Subclavian vessel puncture
C) Thoracocentesis
D) Pleural biopsy
E) Intercostal nerve block.

Answer: e

• tension pneumothorax: false: collapsed neck veins

PNEUMOTHORAX



Q1: what the radiological abnormalities found in this X -ray?

Absent bronchovascular marking at right side with collapsed right lung & shifting of mediastinum

Q2 :your radiological Dx

Tension pneumothorax

PULMONARY FUNCTION TEST

1)A 73 year-old man presents with progressive dyspnea on exertion over the past one year. He reports a dry cough but no wheezes. He is a non-smoker. His pulmonary function testing is as follows: Which one of the followings is a WRONG diagnosis?

Pre-Bronchodilator (BD)			
Test	Actual	Predicted	% Predicted
FVC(L)	1.57	4.46	35
FEV, (L)	1.28	3.39	38
FEV,/FVC (%)	82	76	
FRC	1.73	3.80	45
RV(L)	1.12	2.59	43
TLC(L)	2.70	6.45	42

- **Select one:**

A.kyphoscoliosis
B.Idiopathic pulmonary fibrosis
C.Pulmonary infarction
D.Sarcoidosis
E.Asbestosis

Ans:c

2)Which is not a feature of asbestosis?
A.Increased risk of cancer
B.Pleural thickening and effusion
C.Interstitial fibrosis
D.Obstructive pattern on pulmonary function tests
E.Pleural fibrosis.

Ans:D

3)Which of the following pulmonary function tests most reliably discriminates "pure" chronic bronchitis from emphysema?
A.Total lung capacity
B.Functional residual capacity
C.Residual volume
D.Single breath diffusing capacity
E.Flow at 50% vital capacity.

Ans:D

4)All the following are causes of low Total gas transfer (TLCO) in respiratory function test Except:
A.Pulmonary fibrosis
B.Pulmonary oedema
C.Emphysema
D.Pulmonary emboli
E.Asthma.

Ans:E

5)In interstitial lung diseases, lung function tests most often show:
A.Reduced FEV1 and VC .
B.Increased total lung capacity (TLC)
C.Airflow obstruction.
D.Elevated arterial PCO2.

Ans:A

PULMONARY FUNCTION TEST

6)Which one of the following pulmonary function values indicates airflow limitat:
a.FEV1 of 60% of predicted .
b.FVC of 60% of predicted.
c.FEV1/FVC of 60% of predicted.
d.DLCO of 60% of predicted .
eResidual volume of 60% of predicted.

Answer: C. FEV1/FVC of 60%. Total lung capacity (TLC) is used to assess interstitial lung disease. Expiratory flow rate (FEV1/ FVC is used to assess obstructinve lung disease. Airway obstruction is diagnosed when the FEV1/FVC is <0.7 (70%0). (Source: MedStudy Pulmonology 2013, p. 6)

7)Man with spondylosis, ratio of fev1|fvc is 95% what is the diagnosis?
Restrictive lung disease

8)In patients with idiopathic pulmonary fibrosis (usual interstitial pneumonia) all of the followings are expected patho physiological changes EXCEPT :
a.Low DLCO .
b.Decreased FEV1/FVC .
c.Severe 02 desaturation on exercise.
d.Reduced vital capacity and total lung capacity .
e.Increased pulmonary artery pressure .

Ans:b

MINI OSCE

1)What test best investigates this finding initially?

1. **PFT's**
2. **ABG's**
3. **Bronchoscpy with biopsy**
4. **High resolution CT**
5. **sputum cultures**

Ans:b

2)Smoking patient for long time ,ABGs result: Respiratory acidosis (from Table)
What is presentation of patient in PFTs is wronge?

1. **FEV1/FVC≥ 70%**
2. **FVC1 changes less than 12%**
3. **FEV1/FVC ≤ 70%**
4. **Irreversible condition.**

Answer:a

ABGS نص السؤال غير دقيق ولكن معطيات السؤال ونتائج ال
irreversible changes و COPD تدل على إنه مريض

ABGs

1. **one is a cuase of anion gab metabolic acidosis?**

Salicylate poisoning

Aspirin poisoning (Salicylates are a type of drug found in many over-the-counter and prescription medicines. Aspirin is the most common type of salicylate)

2.All are causes of high anion gap metabolic acidosis except:

Renal tubular acidosis

3.Wide -high- anion gap except :

a.Ethanol

b.sepsis

c.renal tubular acidosis

ans:c

4.An 84-year-old female nursing home resident is brought to the emergency department due to lethargy. Atthe nursing home,she was found to have a blood pressureof 85/60 mmHg, heart rate 101 beats/min, temperature 37.8°C. Laboratory data are obtained: sodium 137 meq/L, potassium 2.8 meq/L, HC03 - 8 meq/L, chloride 117 meq/L, BUN 17 mg/dL, creatinine 0.9 mg/dL. An arterial blood gas shows Pa02 80 mmHg, PC02 24 mmHg, pH 7.29. Her urine analysis is clear and has a pH of 4.5.
What is the acid-base disorder?
a. Anion-gap metabolic acidosis
b. Non-anion gap metabolic acidosis
c. Non-anion-gap metabolic acidosis and respiratory alkalosis d. Respiratory acidosis
e. Respiratory alkalosis

, ans:B

anion gap = 137 - 125 = 12 , within normal range , non-anion gap
Low PH —> acidosis
Low PCO2 , low HCO3- —> metabolic acidosis
Then , B is true answer

5.**Apatient presents with a decreased level of consciousness and visual difficulties. Bloodwork reveals an anion gap of 22 and an osmolar gap of 24. Which of the following is most likely responsible?**
a. Ethanol
b. Salicylates
c. Renal tubular acidosis type I
d. Methanol
e. Diabetic ketoacidosis

ans:d

6.Which of the following is not associated with an anion gap metabolic acidosis?
a. Diabetic ketoacidosis
b. Tissue hypoxia
c. Renal failure
d. Diuretics therapy
e. Isoniazid toxicity

ans:d

ABGs

7.Not normal anion gap acidosis :
renal failure

8. Low co2 , Low Hco3 & ph= 7.1
Metabolic acidosis

9.Metformin
- lactic acidosis

10.All the following cause normal anion gap metabolic acidosis, except:
a. Spironolactone
b. Diarrhea
c. Vomiting
d. Acetazolamide
e. Primary hyperparathyroidism

ans:c

11.All of the following are associated with hypokalemia and alkalosis, except:
a. Bartter syndrome (???) [Yes Hypokaemia + alkalosis a disorder due to a defect in active chloride reabsorption in the loop of Henle; characterized by primary juxtaglomerular cell hyperplasia with secondary hyperaldosteronism, hypokalemic alkalosis, hypercalciuria, elevated renin or angiotensin levels, normal or low blood pressure, and growth retardation; edema is absent. Autosomal recessive inheritance, caused by mutation in either the Na-K-2Cl cotransporter gene (SLC12A1) on chromosome 15q or theK(+) channel gene (KCNJ1) on 11q.
b. Furosemide
c. Diabetes (If they are talking about DKA Hypokalemia and acidosis
d. Nasogastric tube suction Yes (loss through upper GI of K and Hydrogen)
e. Thiazides

ans:c

12.All of the following electrolyte and acid-base disturbances may be seen in a patient with diabetic ketoacidosis upon presentation, except:
a. Hyponatremia
b. Normal anion gap metabolic acidosis
c. Hyperkalemia
d. Hyperphosphatemia
e. Increased urea

Answer: B (DKA causes high anion gap metabolic acidosis)

13.49 year old female is evaluated in ER after being found lying in the street in a semiconscious state , she is known to have hypertension and a history of seizures. Lab : BUN 79 mg/dl , Cr 8.7 mg/dl , Na 138 meq/l , K 4.2 meq/l , Cl 60 meq/l , HCO3 54 meq/l . ABG PH 7.43 , PCO2 85 mmHg. Which of the following Acid Base disorder is most compatible with these lab findings
a) Metabolic Acidosis and Metabolic Alkalosis
b) Metabolic Acidosis and Respiratory Acidosis
c) Metabolic Acidosis and Metabolic Alkalosis and Respiratory Acidosis
d) Metabolic Alkalosis and Respiratory Acidosis
e) Metabolic Acidosis

ans:d

14.ABG respiratory alkalosis?
Asthma

ABGs

15. 35 year old man presented to ER after an episode of Grand mal seizure and by exam he was afebrile , Bp 130/95 and confused . Labs showed : Cr 1.0 mg/dl , BUN 12mg/dl , Na 140 meq/L , K 4.8 meq /L , Cl 100 meq/L , HCO3 12 meq/L . ABG : PH 7.25 , PCO2 28 mmHg , HCO3 12 meq/L .
Which of the following is the most appropriate initial treatment for the Metabolic Acidosis :
a. Observation and repeat ABG in 2 hours
b. NaHCO3 2 ampoules (100 meq) by Iv push
c. 1 L of 5 % dextrose in H2O & HCO3 3 ampoules (150 meq) infused over 3 hours
d. Hemodialysis Fomepizole

ans:a

16.The following statements about potassium balance is true except?
a- 85% of the daily potassium intake is excreted in urine
b- Intracellular potassium ion concentrations are about 150 mmol/l
c- Cellular uptake of potassium is enhanced by adrenaline and insulin
d- Alkalosis predispose to hyperkalemia
e- The normal dietary potassium is about 100 mmol/day

ans:d

17.Complications of chronic renal failure include all of the following except?
a. Normocytic or microcytic anemia
b. Peripheral neuropathy
c. Bone pain
d. Uremic pericarditis
e. Metabolic alkalosis and hypokalemia

ans:e

18.medical student while taking the internal medicine exam suffered from tachypnea and anxiety, in the emergency laboratory investigation Ph=7.52, co2=22 , HCO3=24, which of the following is correct ?
A. Acute Metabolic alkalosis
B. Chronic Respiratory alkalosis
C. chronic Metabolic alkalosis
D. Acute Respiratory alkalosis

ans:d

19.PH 7.51..PaCO2 : 24...caculated bicarb 24 , ABG :
respiratory alkalosis

20.adrenal insufficiy wrong >
metabolic alkalosis

21.A 20-year-old male presented to you with generalized weakness. Labs showed:
a. Diarrhea
b. Spironolactone
c. Recovery from DKA
d. Thiazide diurectic
e. Amiloride

Ans: D (Thiazide diuretic cause metabolic alkalosis)

22.Type II respiratory failure is likely to be present in a patient with the following ABGs:
a. Hypoxia, Hypercapnia, low pH

ABGs

23.Which of the following ABG parameters are CORRECT in chronic type II respiratory failure?
a. PH 7.25, paCO2 52.5 mmHg, paO2 56 mmHg, HCO3 30 mmol/L.
b. PH 7.10, paCO2 52.5 mmHg, paO2 62 mmHg, HCO3 24 mmol/L.
c. PH 7.30, paCO2 30 mmHg, paO2 63.7 mmHg, HCO3 15 mmol/L.
d. PH 7.36, paCO2 30 mmHg, paO2 50 mmHg, HCO3 22 mmol/L.
e. PH 7.54, paCO2 22.5 mmHg, paO2 90 mmHg, HCO3 24 mmol/L.

Chronic type II respiratory failure is characterized by long-term retention of carbon dioxide (CO2) with compensatory metabolic alkalosis. Therefore, the correct option should have a high paCO2 (partial pressure of carbon dioxide) and an elevated bicarbonate (HCO3) level. Among the options provided:
a. PH 7.25, paCO2 52.5 mmHg, paO2 56 mmHg, HCO3 30 mmol/L: pH is low, paCO2 is high, and HCO3 is high. This matches the criteria for chronic type II respiratory failure.
b. PH 7.10, paCO2 52.5 mmHg, paO2 62 mmHg, HCO3 24 mmol/L: pH is low, paCO2 is high, but HCO3 is normal.
c. PH 7.30, paCO2 30 mmHg, paO2 63.7 mmHg, HCO3 15 mmol/L: pH is normal, paCO2 is low, and HCO3 is low. This doesn't match the criteria for chronic type II respiratory failure.
d. PH 7.36, paCO2 30 mmHg, paO2 50 mmHg, HCO3 22 mmol/L: pH is normal, paCO2 is low, and HCO3 is normal.
e. PH 7.54, paCO2 22.5 mmHg, paO2 90 mmHg, HCO3 24 mmol/L: pH is high, paCO2 is low, and HCO3 is normal.
So, the correct option is:a. PH 7.25, paCO2 52.5 mmHg, paO2 56 mmHg, HCO3 30 mmol/L.

24.25 year old female was admitted to hospital with referred to OPD due to incidental finding of the following labs & ABG :
PH 7.32 , HCO3 15 Cr 1.0 mg/dl , urea 35 meq/l , Na 135 meq /L , Cl 110 meq/l All the following may cause the above except :
a) Acetazolamide treatment
b) Fanconi syndrome
c) Treatment with Thiazide
d) Primary hyper parathyroid
e) Diarrhea

ans:c

25.DKA all except..
No change in anion gap

26.Which one of the following arterial blood gas sets on room air is compatable with completely compensated metabolic acidosis?

	A	B	C	D	E
PH	7.44	7.38	7.60	7.36	7.56
PaC02 mmHg	26	25	25	95	40
Bicarb. mEq	18	15	24	49	34
B. Excess	-4.0	-10	+4	+15	+11

The pH must be normal. Therefore, exclude "E" and "C". The correction will be respiratory in the form of "washed-out" CO2 need to be low. Therefore, exclude D. Bicarbonate will be low. The remaining options are A & B.

ABGs

27.A patient came to the ER after he loss his consciousness, ABGs and electrolytes show pH of 7.23, PCO2 of 35, HCO3 of 12, Na 145, Cl 103, what is the acid-base disorder?
A) High anion-gap Metabolic acidosis with respiratory alkalosis
B) Normal anion-gap Metabolic acidosis with respiratory compensation
C) High anion-gap Metabolic acidosis with respiratory acidosis
D) Respiratory acidosis with metabolic compensated
E) High anion-gap Metabolic acidosis with respiratory compensated

ans:e

28.Patient with PH of 7.33, PCO2 47, HCO3 28, PaO2 87, he is on simple face mask, and O2 sat is 97%, what of the following statements is false about the case?
A) He has COPD
B) He needs ICU admission
C) It's chronic case, the patient is stable
D) He may needs NIV

ans:b

29.Patient with SOB, ABGs show PH 7.48, PCO2 23, HCO3 21, his PaO2 is 66, what is the most likely cause of this case?
A) Anxiety
B) PE
C) Salicylate toxicity

ans:b

30.Cause R alkalosis except?
PE (not complet question, PE can cause R alkalosis)

31.ABG Q?
Ph: 7.2
CO2 23
HCO3 12
Na 142
Cl 100
A -High anion gab metabolic acidosis
B -Non anion gab metabolic acidosis

Answer: A

32.

ABGs
Mini-OSCE

Staion 1

A 66 year old male smoker with exertional dyspnea and dry cough. What finding is expected in this patients' ABG's?

a. Low bicarbonates
b. Respiratory acidosis
c. Type 1 respiratory failure
d. Metabolic acidosis
e. Type II respiratory failure

ans:e/ b (Not sure)

Staion 2

the date given with two different units for each parameter , Note that we use the Unit mmHg for (PCO2 & PO2) and meq/L for (HCO3-) in the interpretation we used to !

The answer was :
(partialy compensated respiratory acidosis)
SO LOW PH / HIGH PCo2 / HIGH HCO3-

Station 3
calculate anion gap
ans:
AG=(NA+ + K) - (CL- + HCO3-)
= (150+5)- (110+25) = 20 * wide/high AG *

•ABG :
- Na : 150
- K : 5 ×🤔
- Cl : 110
- Hco3 :25

Station 4
ABG Case :
-Dx :
Partialy compansated respiratory acidosis with hypoxemia

-Mension one cause ?
COPD

Station 5
what is your interpretation of this ABG?
high anion gap metabolic acidosis with respiratory compensation

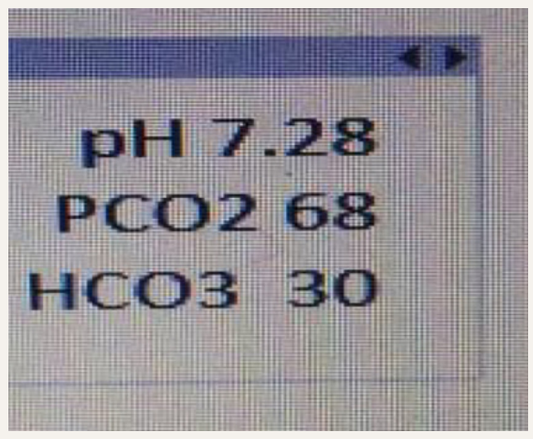
one of these can cause this disturbance:
lactic acidosis was the answer

ABG Case
Ph: 7.29
Co2: 22
hco3: 10
Cl: 100
Na: 145
+ other labs , normal values was given

ABGs
Mini-OSCE

Staion 6

Patient with this ABG Results :



The ABGs interpretation ?

-Partial compensated respiratory acidosis

***One of the following can't cause this case ?**

A . COPD

B. Pulmonary edema

C. guillain barre syndrome

D. Respiratoy muscle paralysis

E. Pulmonary Infarction

ans: e

Staion 7

This is result of ABGs test, which one of following is true :

PH	Low
PCO2	High
HCO3	High
O2 saturation	92%

سؤال الأمتحان كان معطي أرقام وكان موجود الـ normal بالجدول range

a) Partial compensated respiratory acidosis without hypoxemia

b) Partial compensated respiratory acidosis with hypoxemithea

Ans:a

Station 8

Smoking patient for long time ABGs result : Respiratory acidosis (from Table) What is presentation of patient in PFTs is wronge?

a) FEV1/FVC ≥ 70%

b) FVC1 changes less than 12%

c) FEV1/FVC ≤ 70%

d) Irreversible condition

نص السؤال غير دقيق ولكن معطيات السؤال ونتائج الـ ABGs كانت تدل على إنه مريض COPD و irreversible changes

Ans:a

Station 9

ABGs: pH= 7.2

pCO2 = 22 mmHg

HCO3 = 28 mEq/L

SpO2 = 99.8%

Q: ABGs interpretation:

- **Metabolic acidosis with hyperoxemia.**

Q:Next step to determine the cause:

- **Calculating anion gap**

Station 10

Heavy smoker patient presented with SOB

1) what is ABG finding you see

(paritly compensated respiratory acidosis)

2) give me 3 causes for this condition

(COPD,hypoventilation due drugs , guallin bare syndrom)

3) give 3 line of treatment

(steroid / SABA and LABA / ibratrobium)

- pH 7.34
- PO2 90
- PCO2 35
- Bicarb 18
- Na 136, Cl 100

ABGs

Mini-OSCE

Station 10

Medical student female came to ER

ANALYTE	Value
PH	7.50
PCO2	20mm Hg`
HCO3	24meq/L normal
SaO2	%88
PO2	70mm Hg`

Q1 : the oxygenation and acid base status ?

Respiratory Alkalosis with hypoxemia

Q2 : 2 causes for her condition ?

Panic attack ,

Station 11

a 24 year old patient complaining of high fever and dry cough for 9 days , 2 days ago he developed dyspnea and hypoxia . a CXR was done for him and gave the following appearance . what is your diagnosis ?

a) Covid19 pneumonia

b) Aspiration pneumonia

c) Lobar Pneumonia

ans:a

What is presentation of patient?

a) Low PH, High PCO2, High HCO3, 88% O2

b) High PH, Low PCO2, Low HCO3, 88% O2

c) High PH, Low PCO2, Low HCO3, 92% O2

(السؤال كان بأرقام)

ans:b

Station 12

smoker and DM patient

1. Interpretation of this ABG :

mixed metabolic and respiratory acidosis

The photo was ABG was mixed metabolic and respiratory acidosis

2. Mention 2 causes :

COPD / cardiogenic shock/ sever asthma attack

3. Mention 4 line of management of this case :

Stopping smoking / bronchodilator/inhaled corticosteroid / O2

ASTHMA

ABG in respiratory alkalosis is seen in:
a) Metabolic acidosis
b) Asthma
c) COPD
d) Pulmonary embolism

Answer: d

2. The initial investigation for asthma or COPD is:
a) ABG
b) Chest X-ray
c) Spirometry
d) Peak flow measurement

Answer: c

3. Which of the following is NOT in the list of bedside severity assessment of bronchial asthma?
a) Kussmaulâ€™s sign
b) Pulsus paradoxus
c) Silent chest
d) Central cyanosis
e) Confusion

Answer: a

4. Which of the following drugs is NOT used in acute severe asthma?
a) Long-acting anti-cholinergic
b) Salbutamol
c) Systemic corticosteroids
d) Ipratropium bromide
e) Magnesium sulfate IV infusion

Answer: a

5. A 46-year-old woman with persistent asthma presents with tachycardia (120 bpm), tachypnea (28 breaths/min), and inability to complete a sentence. Which of the following drugs is NOT used in this situation?
a) Leukotriene modifiers
b) Nebulized salbutamol
c) Systemic corticosteroids
d) Nebulized ipratropium bromide
e) Intravenous magnesium

Answer: a

6. A 30-year-old patient with asthma complains of daily wheezing and occasional nocturnal cough for three weeks. His usual medication is salbutamol. The next step in management is:
a) Add long-term theophylline
b) Increase salbutamol
c) Add ipratropium bromide
d) Add beclomethasone
e) Discontinue salbutamol and begin prednisone with tapering

Answer: d

7. Which of the following statements is incorrect?
a) Cough can be the only presenting complaint in asthma
b) Asthma control should be assessed at every clinic visit
c) Asthma should be suspected in recurrent wheezing after URTIs
d) Salbutamol tablets should not be prescribed to asthmatics
e) Patients with stable asthma do not need follow-up

Answer: e

ASTHMA

8. A patient on high-dose inhaled steroids and a short-acting beta-agonist continues to experience SOB and wheezing. What should be added?
a) Zafirlukast
b) Theophylline
c) Long-acting beta-agonist
d) Omalizumab (Anti-IgE)
e) Oral steroids

Answer: c

9. Regarding an asthma exacerbation, one of the following is true:
a) Flattening of the diaphragm on CXR
b) Normal peak flow
c) Decreased oxygen demand
d) Increased lung compliance

Answer: a

10. Which of the following is incorrect regarding severe asthma attacks?
a) PaOâ,, > 10 kPa
b) Silent chest may be present
c) Confusion may occur
d) Hypercapnia may be present
e) Pulsus paradoxus may be present

Answer: a

11. In asthma exacerbations, antibiotics are:
a) Routinely used
b) Not used in acute management
c) Used only in viral infections
d) First-line treatment
e) Used to prevent secondary infections

Answer: b

12. Regarding the pathogenesis of bronchial asthma, which is specific to the disease?
a) Airflow limitation
b) Airway hyper-responsiveness
c) Inflammation of the mucosa
d) Peak flow variability
e) Bronchoalveolar eosinophils

Answer: b

13. Which of the following drugs is LEAST used in acute severe asthma?
a) Nebulized Î²â,, agonist
b) IV hydrocortisone
c) Epinephrine (adrenaline)
d) Oxygen
e) IV aminophylline

Answer: c

14. All the following criteria indicate severe asthma EXCEPT:
a) Silent chest
b) Respiratory rate of 20/min
c) Hypercapnia
d) Thoracoabdominal respiration
e) Confusion

Answer: b

ASTHMA

15. All the following are useful in assessing the severity of an asthma attack EXCEPT:

a) Spirometry

b) Methacholine test

c) ABG

d) Peak expiratory flow rate

e) Physical examination

Answer: b

16. Atopic bronchial asthma is characterized by all of the following EXCEPT:

a) Positive family history

b) Positive immediate skin test to allergens

c) Elevated IgE level

d) Onset after age 40

e) Elevated serum eosinophils

Answer: d

17. Regarding home monitoring with PEFR, which statement is incorrect?

a) Useful in diagnosing asthma

b) Identifies environmental triggers

c) Detects early signs of deterioration

d) Long-term monitoring is useful in brittle asthma

e) Less effort-dependent than spirometry

Answer: e

18. Anti-inflammatory treatment of bronchial asthma causes all of the following EXCEPT:

a) Symptom reduction

b) Improved lung function

c) Decreased bronchial hyperreactivity

d) Improved quality of life

e) Cures the disease

Answer: e

19. Leukotriene pathway modifiers are most effective in:

a) Aspirin and exercise-induced asthma

b) Cough variant asthma

c) Elderly asthmatics

d) Nocturnal asthma

e) Female asthmatics

Answer: a

20. Which of the following is specific for asthma pathogenesis?

a) Airflow limitation

b) Airway hyper-responsiveness

c) Inflammation of the mucosa

d) Peak flow variability

e) Bronchoalveolar eosinophils

Answer: b

ASTHMA

MINI-OSCE

PFT of obstructive lung disease, non smoker and attacks of dyspea triggered by cold

- **Diagnosis?**

Asthma

- **X-ray findings?**

can be normal or hyperinflated and increase translucency

- **The patient also complained from scleroderma presented with dyspnea and Sat 81, Dx?**

Lung fibrosis

- **Management?**

CPAP, lung transplant

COPD

1. Initial investigation (Asthma or COPD one of them not sure): Spirometry?
Answer: Yes

2. Which is false in a predominant â€œblue bloaterâ€ COPD patient? Select one:

a. They are overweight and have a chronic cough with sputum.
b. They have an elevated carbon dioxide and low oxygen in the blood.
c. Pulmonary hypertension does not complicate the disease.
d. The patients have polycythemia and are cyanosed.
e. Patients usually respond very well to long-term oxygen therapy.

Answer: C

3. COPD differs from asthma in one of the following aspects? Select one:

a. COPD is characterized by irreversible airway obstruction.
b. Airway inflammation with many eosinophils renders COPD highly responsive to inhaled steroids.
c. COPD is NOT considered a preventable or treatable disease.
d. COPD usually presents with intermittent symptoms of wheezing, chest tightness, and coughing.
e. COPD is common at any age.

Answer: A

4. Each of the following is a correct statement about COPD except?

a. The type of emphysema associated with smoking is usually centriacinar.
b. Clubbing is not a clinical feature.
c. Long-term oral steroids should be avoided.
d. Smoking cessation does not lead to improvement of pulmonary function.
e. The aim of supplemental O2 therapy is to provide relief of shortness of breath.

Answer: d

5. In the treatment of COPD? Except?

a. Most patients require maintenance of oral corticosteroids.
b. The dosage of oral theophylline needs to be reduced in patients commenced on erythromycin.
c. Long-term oxygen therapy is indicated in a stable patient with a PaO2 of 63 mmHg.
d. Long-acting Î²2 agonists are a first-line treatment for breathlessness.
e. Non-invasive ventilation should be part of the first-line treatment of exacerbation.

Answer: a

6. Oxygen therapy does not affect life expectancy in COPD patients. True or False?
Answer: False

7. Increase life expectancy in COPD patients:

A. O2 therapy & smoking cessation
B. Only O2 therapy
C. Only smoking cessation

Answer: A

8. One of the following is NOT a cause of pericarditis?

COPD

8. One of the following is NOT a cause of pericarditis?

a. TB
b. SLE
c. Lymphoma
d. COPD
e. Uremia

Answer: D

9. One is true about COPD:

a. Prophylactic antibiotics reduce the incidence of exacerbations.
b. A patient with PaO2 <60 who wants to air travel, must have O2 therapy.

Answer: B

10. Correct about the exacerbation of COPD:

a. Mechanical ventilation may be helpful in management if pH is <7.15.
b. ?

Answer: A

11. Obesity is associated with an increased risk of, except:

A. Cancer
B. Diabetes
C. Hypertension
D. Biliary disease
E. COPD

Answer: E

16. Obstructive lung diseases, such as chronic obstructive pulmonary disease (COPD), asthma, and bronchiectasis, are characterized by airway inflammation, easily collapsible airways, expiratory flow obstruction, and air trapping that results in elevated RV relative to healthy lungs, decrease in restrictive lung diseases.

Answer: True

17. Which ONE of the following Arterial Blood Gases is most likely to be found in a 60-year-old heavy smoker man, who has chronic bronchitis, peripheral edema, and cyanosis?

a. PH 7.50, PO2 75, PCO2 28
b. PH 7.15, PO2 78, PCO2 92
c. PH 7.06, PO2 36, PCO2 95
d. PH 7.06, PO2 108, PCO2 13
e. PH 7.39, PO2 48, PCO2 54

Answer: C

COPD MINI-OSCE

18. Smoking patient for a long time. ABGs result: Respiratory acidosis (from Table). What is the presentation of the patient in PFTs is wrong?

a. FEV1/FVC >= 70%
b. FVC changes less than 12%
c. FEV1/FVC <= 70%
d. Irreversible condition

Answer: A

19.What is the best intervention to improve survival in COPD patients?
A) Oxygen therapy
B) Smoking cessation

Answer: B

20.A patient with pH 7.33, PCO2 47, HCO3 28, PaO2 87 is on a simple face mask, with O2 saturation of 97%. Which of the following statements is false?
A) He has COPD
B) He needs ICU admission
C) Itâ€™s a chronic case; the patient is stable
D) He may need non-invasive ventilation (NIV)

Answer: B

21.A 72-year-old male presents to the emergency department with progressive shortness of breath and a chronic productive cough. ABG analysis shows:
pH: 7.30
pO2: 55 mmHg
pCO2: 60 mmHg
HCO3: 30 mmol/L
Which of the following is the best next step?
A) Intubation
B) Non-invasive ventilation (NIV)
C) Oxygen therapy at 100% FiO2
D) Intravenous steroids
E) Bronchodilators only

Answer: B

Answer: B

ARDS

One of the following criteria about Acute Respiratory Distress Syndrome (ARDS) is INCORRECT?

a. Patients with an initial PaO2/FiO2 less than 300 mm Hg who were receiving continuous positive airway pressure (CPAP) of at least 5 cm H20.

b. Respiratory failure should have developed within 1 week of a known clinical insult.

c. Respiratory failure should not be fully explained by cardiac failure.

d. Chest imaging should include bilateral opacities not fully explained by effusions, atelectasis, or nodules.

e. A lower-tidal-volume ventilatory strategy and prone position have no rule in treatment.

Answer:e

What characterizes ARDS (adult respiratory distress syndrome)?

a. Pao2/fio2and > 200mmhg

b. Pao2/fio2and < 200 mmhg

c. Pao2/fio2 and > 300mmhg

d. Fio2/pao2 and > 200 mmhg

e. Fio2/pao2and < 300 mmhg

Answer:b

Patient with bilateral infiltrates after H1N1 :

(ARDS)

Swine flu (H1N1) is an infection that a type of flu (influenza) virus causes. It's called swine flu because it's similar to a flu virus that affects pigs (swine). The virus leads to a lung (respiratory) disease in pigs. Swine flu (H1N1) is a respiratory infection in humans.

A cause of respiratory failure I:

a. Guillain bare

b. ARDS

c. Kyphosis

d. Foreign body in a major brochus

Answer:b

All of the following associations between conditions and mechanisms of hypoxia are true, except:

a. COPD and V/Q mismatch (The principal contributor to hypoxemia in COPD patients is ventilation/perfusion (V/Q) mismatch resulting from progressive airflow limitation)

b. ARDS and pulmonary shunt (edema in patients with ALI/ARDS is impaired gas exchange with intrapulmonary shunt,)

c. Multiple rib fractures and hypoventilation

d. Hepatopulmonary syndrome and V/Q mismatch (The hepatopulmonary syndrome is characterized by a defect in arterial oxygenation induced by pulmonary vascular dilatation in the setting of liver disease1) (Dyspnea and hypoxemia are worse in the upright position (which is called platypnea and orthodeoxia, respectively)

e. Motor neuron disease and hypoventilation

Answer:d

pt had pancreatitis then complained of sob and on CXR(bilateral diffuse opacities) what is the diagnosis

A- Atypical pneumonia

B- ARDS

C -sarcoidosis

Answer:b

SARCOIDOSIS

1.History of cough and erythematous lesions in the lower limb. No other complaints. CXR showed bilateral hilar lesions. Diagnosis:

Sarcoidosis

2. Which of the following is NOT a characteristic chest X-ray finding in a patient with sarcoidosis? Select one:
a. Bilateral reticular abnormality with honeycombing
b. Bilateral hilar lymphadenopathy
c bilateral Patchy infiltrates
d. Cardiomegaly
e. Pleural effusion

:ans:d

3.True regarding sarcoidosis :

increase absorbtion of calcium from intestine (Vitamin D effect due to hydroxylase activity of epitheloid activity of granuloma

4.Which of these is not found in sarcoidosis ??

Finger clubbing

5.Not a finding in sarcoidosis:
A. Cranial nerve palsy
B. Uveitis
C. Wrong answer

ans:c

6.IN patients with sarcoidosis, all of the following are associated with good prognosis, except:
a. Fever
b. Erythema nodosum
c. Age less than 40 years
d. Black race
e. Presence of polyarthritis

:ans:d

7.Ethnicity (particularly African American and Afro Caribbean origins), age over 40 years at presentation, lupus pernio,chronic uveitis, sinonasal and osseous localizations, CNS involvement, cardiac involvement, severe hypercalcemia, nephrocalcinosis and radiographic stages III and IV have been associated with a poor prognosis· All of the followings are associated with Worse prognosis in sarcoidosis except :
a- Incidious onset
b- Multiple extrathoracic lesion.
c- Blacks..
d- Erythema nodosum.
e- Lupus pernio.

ans:d

8.All the following are true about sarcoidosis Except.
a- raised serum level of angiotensin converting enzymes
b- Negative tubercline skin test
c- Normochromic normocytic anemia
d- Hypercalcemia
e- Pulmonary caseating granuloma

ans:e

9.A 33 year old woman presented with Sarcoidosis , her labs showed :
BUN 13 mg/dl ,Na 140 meq/L , K 3.8 meq/L , Cl 105 meq/L , Ca 11.9 mg/dl , PO4 3.5 mg/dl , Cr 1.9 mg/dl , alb 4 g/dl , CO2 23 meq/L . All the following are likely to be a finding in this patient except :
A) Increased intestinal Ca absorption
B) Increased production of 1,25 dihydroxyvitamin D3
C) Increased levels of PTH
D) Hypercalciuria
E) Increased risk for nephrolithiasis

ans:c

SARCOIDOSIS

10.Young female patient had a heart block on ECG, along with bilateral lung infiltration on chest X-ray, what is the diagnosis?
A) Sarcoidosis

11.Which one of the following cause bilateral bell's palsy?
A) Amyloidosis
B) Acoustic neuroma
C) Sarcoidosis

Ans:c

12.All of the followings can be caused by sarcoidosis EXCEPT :
a. Stridor .
b. Wheezes .
c. Heart block .
d. Facial nerve weakness
e. Hypercalcemia and Hypocalciuria

Ans:e

MINI OSCE

Station 1
Q1: what is the name of the skin lesion?
Erythema Nodosum
Q2: two Possible diagnosis ?
Sarcoidosis
IBD

Station 2
Name this:
Erythema nodosum
3 causes of it :
Sarcoidosis
Tuberculosis
IBD
oral contraceptive pills
Infection

Station 3
This p.t complains of SOB and doctor notice bells palsy
What is your diagnosis ? (Sarcoidosis)

1. **what you will order next to this p.t? (PFT)**
2. **what will you do to confirm your diagnosis ? (hilar biopsy)**
3. **give 2 treatments for this patient? (steroid, Methotrexate)**

Station4
What are the findings?
Bilateral reticulonodular opacification
Mention 4 ddx ?
Interstitial lung disease
Sarcoidosis
Idiopathic pulmonary fibrosis

IDIOPATHIC PULMONARY FIBROSIS

the correct about idiopathic pulmonary fibrosis?
Antifibrotic drugs decrease the decline in lung function Antifibrotic drugs, such as pirfenidone and nintedanib, have been shown to decrease the decline in lung function in patients with idiopathic pulmonary fibrosis (IPF).

complication of amiodarone ? Pulmonary fibrosis

A 65-year-old man presents with progressive dyspnea and dry cough for 2 years. He is diagnosed as idiopathic pulmonary fibrosis. One of the following medications has LIMITED rule in the treatment regarding this radiologic stage? Select one:
a. Heart lung transplantation.
b. Oxygen therapy
c. Pulmonary rehabilitation
d. High dose corticosteroids
e. Anti-oxidants and anti-fibrotics

Answer:d

A 55 year old women, with past history of rheumatoid arthritis , presents with progressive shortness of breath and dry cough a few months ago , on examination bilateral fine inspiratory crackles . whats the Dx ?
a. Pulmonary odema
b. Consolidation
c. Pleural effusion
d. Pulmonary fibrosis
e. Lung cancer

Answer:d

MOT IDIOPATHIC !! —> Given the patient's history of rheumatoid arthritis and the presence of bilateral fine inspiratory crackles, the likely diagnosis is pulmonary fibrosis secondary to rheumatoid arthritis. While idiopathic pulmonary fibrosis (IPF) is a possibility, the presence of an underlying connective tissue disease such as rheumatoid arthritis increases the likelihood of secondary pulmonary fibrosis. Therefore, without additional information indicating otherwise, pulmonary fibrosis secondary to rheumatoid arthritis would be a more likely diagnosis than IPF in this case.

lung fibrosis biopsy : subpleural fibrosis + cystic lesion

Side effect of statin include followings except ?
A. Pulmonary fibrosis
B. Headache

Answer:a

Drug-induced —> amiodarone, nitrofurantoin, bleomycin, phenytoin.

In patients with idiopathic pulmonary fibrosis (usual interstitial pneumonia) all of the followings are expected pathophysiological changes EXCEPT :
a. Low DLCO .
b. Decreased FEV1/FVC .
c. Severe O2 desaturation on exercise.
d. Reduced vital capacity and total lung capacity .
e. Increased pulmonary artery pressure

Answer: B (increased FEV1/FVC ratio).

In patients with suspected idiopathic pulmonary fibrosis, the most valuable measure is:
a. Bronchoscopy
b. Sedimentation rate
c. Trial of steroids
d. Open lung biopsy

Answer:d

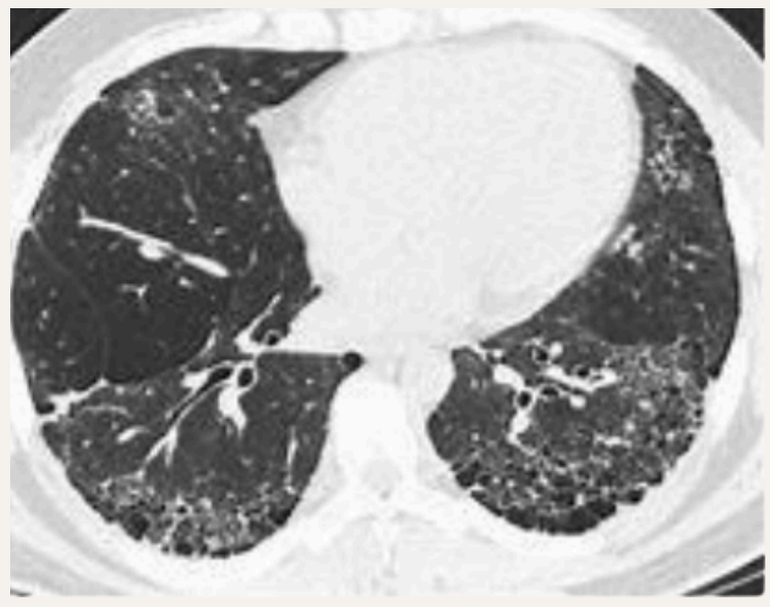
6.Which of the following is one form of "interstitial lung disease" :
a-Asthma
b-Bronchiectasis
c-Idiopathic pulmonary fibrosis
d-Pulmonary hypertension ·

Answer:c

Which of the following is NOT a feature of idiopathic pulmonary fibrosis?
a- Age of onset greater than 50 years
b- Bilateral apical inspiratory crackles
c- Restrictive pulmonary function test
d- Bilateral basal reticular abnormalities in chest CT

Answer:b (it is basal not apical)

Case 5 this xray is for a patient with respiratory symptoms
(the ct shows honey coomb appearence of IPF)
what is expected spirometry pattern you will find
restrictive pattern
on examination, one of these findings is not true
1- inspiratory crackles at base of lung
2- ecg shows right venricular hypertrophy
3- normal JVP



What are the findings ?
•Bilateral reticulonodular opacification
Mention 4 ddx ?
Interstitial lung disease
Sarcoidosis
Idiopathic pulmonary fibrosis

PLERURAL EFFUSION

Which of the following is WRONG regarding Lightâ€™s criteria for pleural effusion?

a) Serum LDH is more than 2/3 of pleural fluid LDH

b) NOT a feature of transudative effusion

c) HCL more than two-thirds of serum HCL

Answer: c

2. A 52-year-old male presents with a one-month history of right-sided chest pain and dyspnea. CXR shows a right-sided pleural effusion. A thoracocentesis is performed, and the results of the pleural fluid analysis are as follows:

- **Pleural/serum total protein ratio: >0.5**
- **WBC count: 7,000 cells/Î¼L**
- **Lymphocytes: 85%**
- **Glucose: 30 mg%**
- **LDH: 1430 IU/L**

Which of the following is NOT likely to be a cause of the pleural effusion in this patient?

a) Rheumatoid arthritis

b) Mesothelioma

c) Tuberculosis

d) Para-pneumonic effusion

e) Lymphoma

Answer: d

3. A 55-year-old woman with asthma is on systemic steroids for one year. She develops a recent right-sided pleural effusion. She feels unwell and tires easily. Aspiration reveals turbid fluid, a high lymphocyte count, high LDH, low glucose, and a pH of 7.4. The most compatible diagnosis is:

a) Pulmonary embolism

b) Empyema

c) Tuberculosis

d) Subphrenic abscess

e) Pancreatitis

Answer: c

4. A 59-year-old patient presents to the ER with chest pain and shortness of breath. She had an appendectomy 8 days ago. Chest examination reveals dullness to percussion on the right side, decreased tactile fremitus, and asymmetrical chest expansion on the right side. What is the most likely diagnosis?

a) Pneumothorax

b) Pleural effusion

c) Pneumonia

d) Pulmonary embolism

e) Lung abscess

Answer: b

PLERURAL EFFUSION

5. Stony dullness on percussion, decreased tactile vocal fremitus, and loss of auscultatory sounds are features of:

a) Pneumothorax

b) Pleural effusion

c) Pneumonia

d) Pulmonary embolism

e) Lung abscess

Answer: b

6. A woman developed dyspnea over 3 weeks and presented to the ER. X-ray showed a large left pleural effusion. What is the next step?

a) Aspiration of fluid to dryness and examination of fluid

b) Only examination of fluid

Answer: a

7. A pleural effusion analysis shows a total protein pleural/serum ratio of 0.38, an LDH level of 125 IU, and an LDH pleural/serum ratio of 0.45. What is the most likely cause of this pleural effusion?

a) Uremia

b) Pulmonary embolism

c) Sarcoidosis

d) Systemic lupus erythematosus

e) Congestive heart failure

Answer: e

8. All of the following are causes of exudative pleural effusion except:

a) Malignancy

b) Trauma

c) Collagen vascular disease

d) Infection

e) Congestive heart failure

Answer: e

9. Regarding pleural effusion caused by tuberculosis, which of the following is true?

a) Fluid analysis is predominantly lymphocytic

b) Fluid is positive for AFB stain in less than one-third of patients

c) Negative culture for AFB cannot exclude the disease

d) Pleural biopsy increases the yield for AFB culture

Answer: all true!!!

10. A 24-year-old female presents with a 4-day history of fever, chills, and left-sided chest pain that worsens with inspiration. Chest X-ray shows consolidation in the left lower zone with signs of pleural effusion on the same side. Which of the following is NOT an indication for chest tube insertion and intrapleural thrombolytic therapy?

a) Multiloculated fluid on CT scan

b) LDH of 1500 mg/L

c) Gram stain of pleural fluid is positive for Gram-positive cocci

d) Fever remains >39Â°C despite IV antibiotics

e) Pleural fluid culture positive for Streptococcus pneumoniae

Answer: e

PLERURAL EFFUSION

19. Leukotriene pathway modifiers are most effective in:

a) Aspirin and exercise-induced asthma

b) Cough variant asthma

c) Elderly asthmatics

d) Nocturnal asthma

e) Female asthmatics

Answer: a

20. Which of the following is specific for asthma pathogenesis?

a) Airflow limitation

b) Airway hyper-responsiveness

c) Inflammation of the mucosa

d) Peak flow variability

e) Bronchoalveolar eosinophils

Answer: b

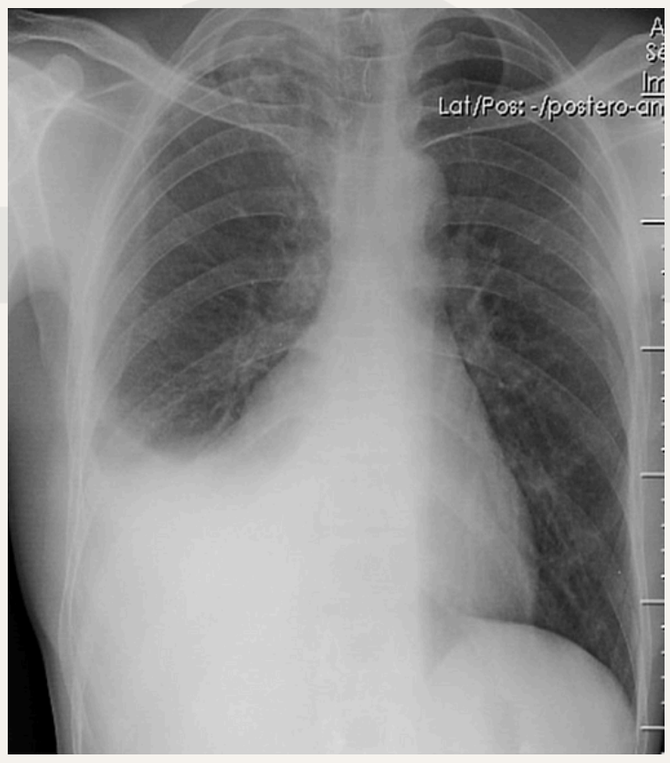
MINI OSCE

Q1: what the radiological abnormalities found in this X -ray?

Concave opacity in RLL silhouetting heart border

Q2: your radiological DX

pleural effusion



Q2: Regarding CXR :
-ALL of the following cause exudative Pleural effusion, Except?

A. Heart Failure

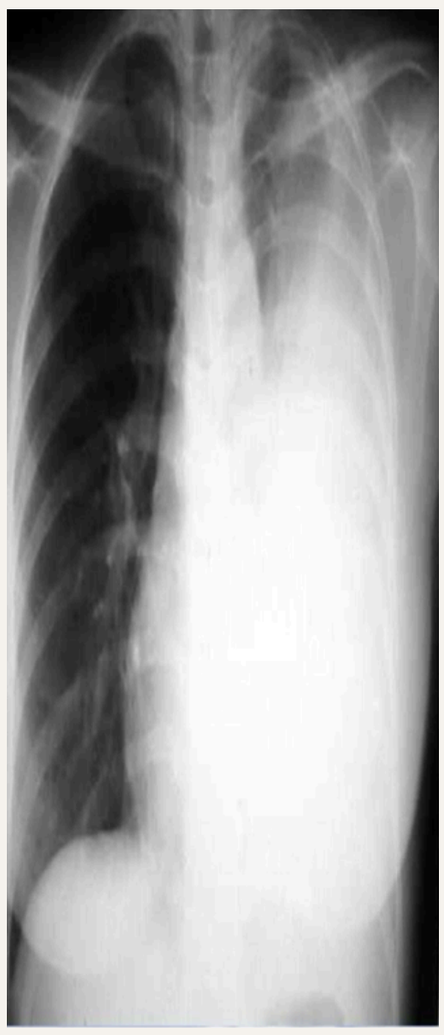
b. Pneumonia

c. Mesothelioma

d. TB

***According to the light's criteria, which of the following +ve with exudative ?**

Pleural fluid to the serum total protein > .5



PLERURAL EFFUSION

Transudate

$$\frac{\text{pleural fluid protein}}{\text{serum protein}} < 0.5$$

$$\frac{\text{pleural fluid LDH}}{\text{serum LDH}} < 0.6$$

pleural fluid LDH
< 2/3 upper limit normal

Common causes

- CONGESTIVE HEART FAILURE
- CIRRHOSIS
- NEPHROSIS

Exudate

$$\frac{\text{pleural fluid protein}}{\text{serum protein}} > 0.5$$

$$\frac{\text{pleural fluid LDH}}{\text{serum LDH}} > 0.6$$

pleural fluid LDH
> 2/3 upper limit normal

Inflammatory causes such as

- BACTERIAL PNEUMONIA
- CANCER
- TRAUMA

1) What is your diagnosis?
Pleural Effusion

1) List three causes of this condition?
CHF pneumonia - malignancy - pulmonary embolism

1) What are other possible findings on the physical exam?
Dullness to percussion - decreased tactile fremitus - decreased breath sounds

ABNORMALITY	BREATH SOUNDS	PERCUSSION	FREMITUS	TRACHEAL DEVIATION
Pleural effusion	↓	Dull	↓	None if small Away from side of lesion if large

HEMOPTYSIS

17- 55-year-old man came to the ER due to one episode of hemoptysis, he is smoker, chest x ray is free, what is the best next step?
A) Discharge and follow-up with x-ray annually
B) Lung CT
C) Bronchoscopy

Answer b

Female patient presents with SOB, hemoptysis, pleuritic chest pain, she is unstable with systolic BP of 80 mmHg, what is the best next step in management?
A) LMWH
B) Thrombolysis
C) Warfarin

Answer b

One of the following statements is considered WRONG about massive hemoptysis?
a. Coughing of fresh blood about 600 ml over a 24-h period.
b. Coughing of 150 ml of fresh blood per time
c. Coughing of 80 ml of fresh blood per time
d. It is considered life-threatening hemoptysis with increased patient mortality.
e. Post-pulmonary tuberculosis complications are of its common causes.

Answer : c

17. Which of the following is LEAST likely to cause hemoptysis?
a-Tuberculosis
b-Acute bronchitis
c-Pulmonary embolism
d-Bronchogenic carcinoma
e-Aortic stenosis

Answer : e

PULMONARY HTN

• Which is False in a predominant "blue bloater' COPD patient? Select one:
a. They are overweight and have a chronic cough with sputum.
b. They have an elevated carbon dioxide and low oxygen in the blood .
c. Pulmonary hypertension does not complicate the disease.
d. The patients have polycythaemia and are cyanosed .
e. Patients usually respond very well to long term oxygen therapy. Answer: c

• In pulmonary hypertension. One of the following is false:
a. PHTN starts when pulmonary artery pressure exceeds 60 mmHg at rest.
b. Elevated pulmonary artery pressure leads to decrease PO2 and constriction of pulmonary arteries.
c. Polycythemia and pulmonary embolism are known complications.
d.COPD and lung fibrosis are common causes of the disease.
e. High altitude climbing without first acclimated results in pulmonary HTN.
Answer: a

• Diagnosis of acute symptomatic pulmonary embolism can be excluded when which of the following is normal?
a. Chest x-ray
b. Ventilation-perfusion lung scan
c. Bilateral leg venograms
d. PaO2 and A-a O2 gradient
e. CT scan of the pulmonary arteries
Answer: e

• In pulmonary hypertension the following statements are true except :
a) Primary pulmonary hypertension likely to begin with spasm of the musclelayer of pulmonary arteries .
b) Secondary pulmonary hypertension most probably results from disease that impedes flow of blood through lungs or that causes periods of low oxygen in blood.
c) In some people the bone marrow responds to hypoxemia by red bloodcell production (polycythemia).
d) Signs and symptoms of right sided heart failure usually dominates the picture in core pulmonale.
e) Medical treatment of pulmonary hypertension is usually effective•
Answer: e

pulmonary hypertntion occurs in the following condition except :
a- Chronic obstructive pulmonary disease(COPD)
b- Mitral stenosis
c- Cyanotic congenital heart disease
d- Subacute bacterial endocarditis
e- Right ventricular failure. Answer :e

• typical case scenario of scleroderma with shortness of breath , what is the most likely diagnosis?Pulmonary hypertension

RISPIRATORY FAILURE

A cause of respiratory failure I:
a. Gillian bare
b. ARDS
c. Kyphosis
d. Foreign body in a major brochus

Answer: b

Which of the following arterial blood gas (ABG) patterns is most consistent with Type II respiratory failure?
a. Hypoxia, hypercapnia, low pH
b. Hypoxia, hypocapnia, normal pH
c. Normal PaO_2, low $PaCO_2$, elevated pH
d. Hypoxia, normal $PaCO_2$, low pH

Answer: a

Which of the following ABG parameters are CORRECT in chronic type II respiratory failure?
a. PH 7.25, paC02 52.5 mmHg, pa02 56 mmHg, HC03 30 mmol/L.
b. PH 7.10, paC02 52.5 mmHg, pa02 62 mmHg, HC03 24 mmol/L.
c. PH 7.30, paC02 30 mmHg, pa02 63.7 mmHg, HC03 15 mmol/L.
d. PH 7.36, paC02 30 mmHg, pa02 50 mmHg, HC03 22 mmol/L.
e. PH 7.54, paC02 22.5 mmHg, pa02 90 mmHg, HC03 24 mmol/L

Answer: a

Myxoedema coma is NOT characterized by?Select one
a. Hypotension
b. Brachycardia
C. Typel respiratory failure
d. Typell respiratory failure

Answer: d

Lung-type respiratory failure (Type I) is characterized by which one of the following?
a. Normal chest X-ray
b. Hypocapnia or normocapnia
c. Diffusion is the main mechanism of hypoxia
d. Easy to correct hypoxia
e. PEEP is contraindicated

Answer: b

All of the following conditions typically can cause pump failure's type respiratory failure except :
a-Myasthenia gravis .
b-Multiple rib fractures .
c-Bronchiolitis obliterans .
d-Severe chest pain .
e-Gullien-Barrie syndrome

Answer: c

RISPIRATORY FAILURE

Nasl CPAP/BiPAP can be used to treate all of the following conditions except:

a- Myasthenia gravis

b-Acute pulmonary edema

c- Obstructive sleep apnea.

d- Respiratory failure due to severe kyphoscoliosis .

e- Narcolepsy

Answer: e

A patient presents with the following arterial blood gas (ABG) results:

- **PaO_2 = 56 mmHg**
- **$PaCO_2$ = 62 mmHg**
- **pH = 7.13**

What is the **most likely diagnosis**?

a) Compensated metabolic acidosis

b) Decompensated Type 1 respiratory failure

c) Decompensated Type 2 respiratory failure

d) Partially compensated respiratory alkalosis

e) Mixed metabolic and respiratory acidosis

Answer: c

TB

Which TB drug is contraindicated in pregnancy?
a) Isoniazid
b) Rifampin
c) Streptomycin
d) Pyrazinamide

Ans: c

A case of RA and takes etanercept, what statement is correct?
a) Etanercept decreases the risk of TB
b) Etanercept has no effect on TB risk
c) There is risk of reactivation of TB
d) Etanercept treats both RA and TB

Ans: c

TB treatment that causes discoloration of urine?
a) Isoniazid
b) Rifampin
c) Ethambutol
d) Pyrazinamide

Ans: b

The difference between latent TB and TB disease is that:
a) Only TB disease can be detected by a tuberculin skin test
b) Latent TB is curable but TB disease is not
c) People with latent TB infection are not infectious, whereas people with TB disease are sometimes infectious
d) People with latent TB sometimes have acid-fast bacilli smear positive

Ans: c

As regards treatment of pulmonary TB, which statement is correct:
a) Drug treatment is maintained for 2 months in uncomplicated cases
b) Ethambutol is used routinely in children
c) An important factor is patient compliance with therapy
d) Duration of treatment is 1 month for uncomplicated cases

Ans: c

TB drug that causes problem in vision:
a) Isoniazid
b) Rifampin
c) Ethambutol
d) Pyrazinamide

Ans: c

MDR TB is resistant to:
a) Isoniazid only
b) Rifampin only
c) Both isoniazid and rifampin
d) All anti-TB drugs

Ans: c

TB

Wrong about TB management?
a) Anti-TB stopped after 4 weeks
b) DOTS strategy recommends treatment for 6 months
c) TB drug resistance is confirmed by culture
d) MDR TB requires second-line therapy

Ans: a

Wrong regarding TB?
a) Sensitivity tests for anti-TB drugs are done using cultures on LJ media
b) Microscopy used to differentiate resistant and sensitive bacteria
c) GeneXpert used to detect rifampin resistance
d) PCR can help in diagnosis

Ans: b

Not a drug used for treatment of TB:
a) Rifampin
b) Ethambutol
c) Isoniazid
d) Bismuth

Ans: d

Anti-TB drugs and side effect, correct answer is:
a) Streptomycin and renal failure
b) Pyrazinamide and hepatitis
c) Isoniazid and optic neuritis
d) Vestibular neuritis and ethambutol

Ans: a

In primary TB:
a) Patient remains infectious after 2 months of therapy
b) Bilateral hilar lymphadenopathy
c) Caseating lesions in lymph nodes always present
d) Cavitations are common

Ans: c

A common predisposing factor can be seen in all of the following conditions, except:
a) RA
b) Diabetes mellitus
c) HIV
d) Hypertension

Ans: d

Which of the following is the gold standard for diagnosis of TB?
a) Chest X-ray
b) Mantoux test
c) Sputum culture
d) GeneXpert

Ans: c

TB

Which of the following is used in the intensive phase of TB treatment?
a) Streptomycin
b) Ethambutol
c) Amikacin
d) Levofloxacin

Ans: b

A TB patient is declared non-infectious when:
a) He completes 6 months of treatment
b) He completes 1 month of treatment
c) Sputum smear becomes negative
d) Symptoms resolve

Ans: c

Which drug is most commonly associated with peripheral neuropathy in TB treatment?
a) Rifampin
b) Isoniazid
c) Pyrazinamide
d) Ethambutol

Ans: b

Patient came from India to UK, complains from cough, night sweat, fever, weight loss, and anorexia, sputum stain with acid-fast bacilli is positive, treatment regimen for this patient is?
a) Rifampin, Isoniazid, Pyrazinamide, and Ethambutol for 6 months
b) Rifampin and Isoniazid for 6 months, plus Pyrazinamide and Ethambutol for the first 2 months
c) Rifampin and Isoniazid for 6 months, plus Pyrazinamide and Ethambutol for the first 4 months

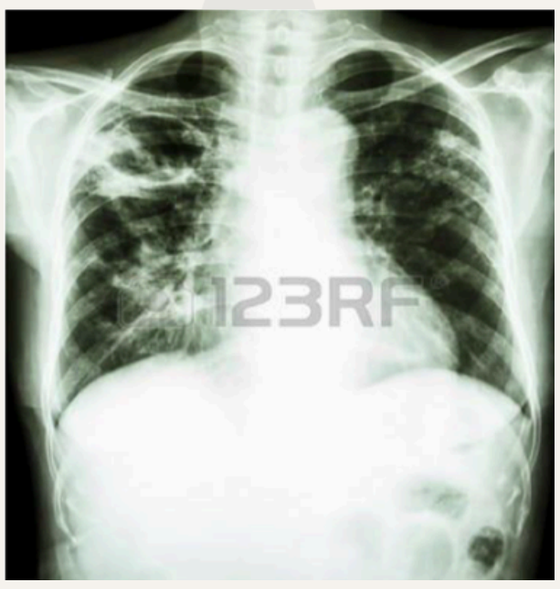
Ans: b

MINI OSCE

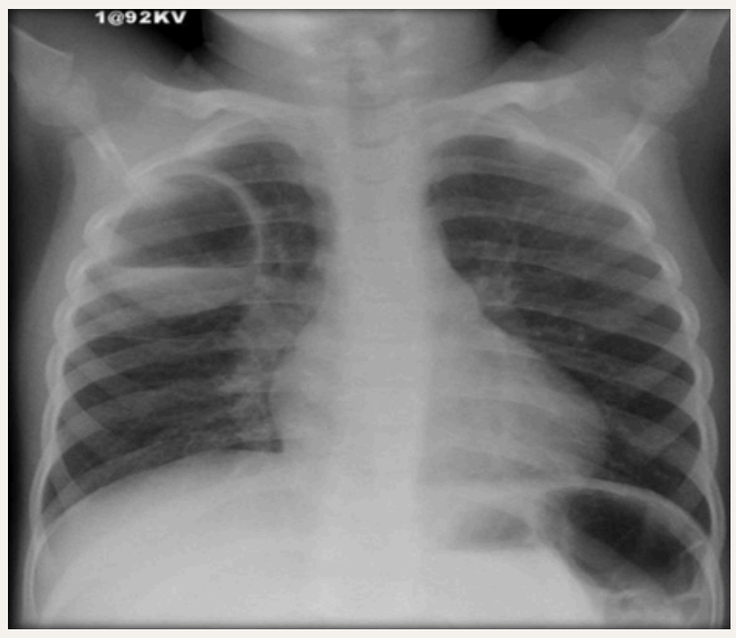
***) Mension tow Ddx :**

1.TB

2.Lung Absess

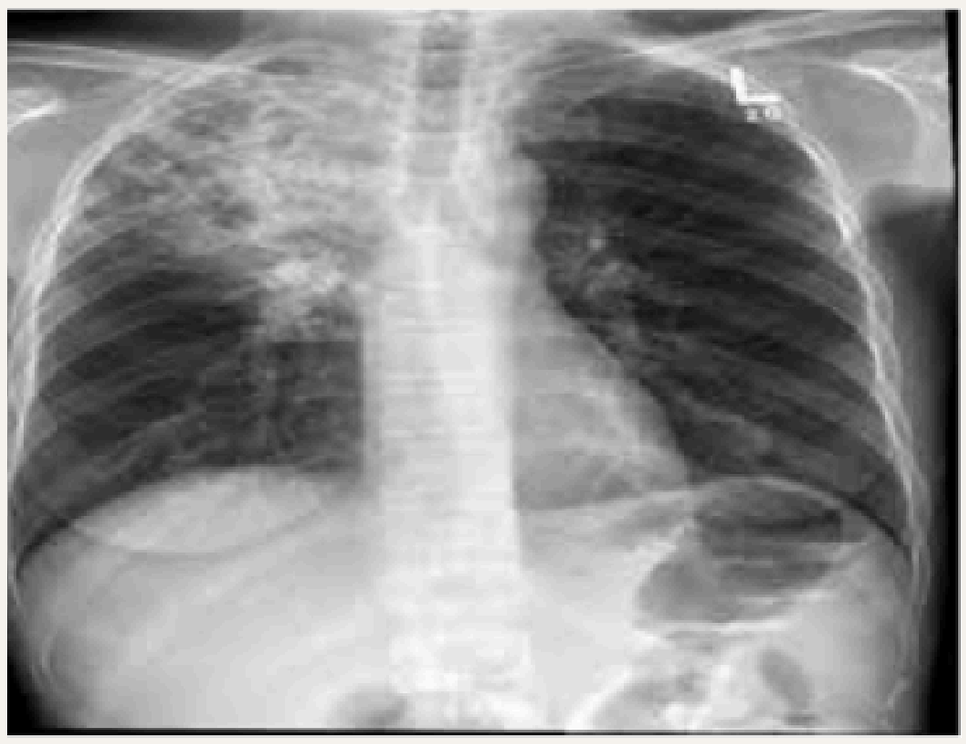


***) all of the following organisms can cause :**
this lesion exept:
a.staph aureus
b.mycoplasma
c.TP
d.Anaerobic bacteria
e.klebsella
Ans.b



TB

MINI OSCE



***) A 55 years old patient come with fever and chronic cough:**

Q1: Mention 3 investigations you should order?

A. Tuberculin skin test

B. Sputum culture

C. Ziehl-Neelsen stain

Q2: What are the treatment and the duration?

A. Isoniazid and rifampin for 6 months

B. Ethambutol and pyrazinamide for 4 months

Q3: What is multidrug-resistant TB?

A. Resistance to isoniazid and rifampin → switch to another regimen

DName :

Erythema Nodosum

3 causes:

A. Sarcoidosis

B. Tuberculosis

C. IBD

D. Oral contraceptive pills

E.infection

****

لا تحسبنَّ المَجدَ تمرًا انت آكلُه لَن تبلُغ المجد حتى تَلعق الصبرا