

RS - Final.

PBL Summary

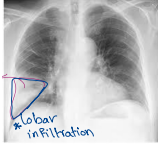
1A2

by Dania
Alrashdan.

Case 1 Pneumonia

- General**
- fever (39°C)
 - Productive Cough
 - shortness of breath.
 - unwell **بوان**
 - ↑ WOB (work breathing)
 - ↑ RR 40/min (tachypnic) / PR 110 (tachycardia)

- subcostal & inter costal retraction
- chest (Auscultation)
 - crackles (Rt side) inspiratory
 - ↑ Tactile vocal fremitus
 - ↓ air entry on Rt lower side.
- dull to Percussion. صوت أجوف

- clinical investigations**
- chest-X-ray. 
 - (Bacterial) ↑ WBC
 - Neutrophilia
 - (Mycoplasma Pneumoniae) ↓ WBC
 - (Anemia)
 - (Sepsis) ⇒ ↓ WBC
 - Blood Culture **felon patient** → No respond to Tm.
 - inflammatory markers **CRP** ↑

Definition

Inflammation of the parenchyma of the lungs. (alveoli and terminal airspaces in response to invasion by an infectious agent introduced into the lungs through hematogenous spread or inhalation)

Causes:

Infectious, mostly (Strept Pneumonia, staph aureus, Mycoplasma p. Noninfectious:

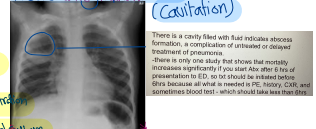
- aspiration of food or gastric juice
- hypersensitivity reactions
- foreign bodies
- Hydrocarbons and lipid substances
- radiation induced pneumonitis

Complications

- 1. Pleural effusion**
 - reactive process of Pneumonia
 - chest pain
 - cough
 - fever
 - dyspnea
 - chill
 - pericarditis
 - absent TUF
- 2. Direct invasion**
 - invasion by bacteria itself to Pleura.
 - 1. Empyema (Pb)
 - 2. Pericarditis
- 3. Hematogenous spread**
 - Meningitis
 - suppurative arthritis
 - osteomyelitis (Rakib)

- * (Pulmonary embolism)**
- CRP ↓, low grade fever
- Typical (Mild)** Gram stain.
 - oral amoxicillin (out Patient management)
 - cefuroxime
 - amoxicillin/calc.
 - CXR (less severe)
 - A typical (need special test)**
 - macrolide (azithromycin).
 - Levofloxacin. (working) → allow CXR → worse multi lobar infx
 - sick-hospitalised Patients.**
 - parenteral cefuroxime.
 - Staph aureus ⇒ Clindamycin or Vancomycin.

* Necrotizing Pneumonia (Cavitation)



There is a cavity filled with fluid inside abscess formation, a complication of untreated or delayed treatment of pneumonia. There is only one study that shows that mortality increases significantly if you start after the 1st presentation to ED, so test should be initiated before (this is because all what is needed is P.C. history, CXR, and sometimes blood test, which should have been done).

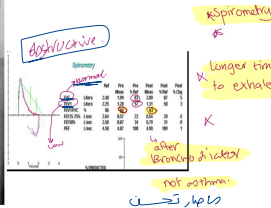
delay of Tm

you need to start Antibiotic one symptoms appear & infiltrate on CXR you don't need to wait Blood culture.

Case 2 COPD

- General**
- dyspnea
 - Productive Cough
 - smoker
 - no history of Asthma.

- physical examination**
- A febril / RR 35 ↑
 - PR 100 tachypnic (tachycardia)
 - sPO₂ 89% ↓
 - inter costal & subcostal retraction



- chest**
- expiratory wheeze
 - Prolonged expiratory phase
 - ↓ air entry
- hand** → No finger clubbing
- CUS** → normal liver not PalPable.

Definition

is a common, preventable and treatable disease.

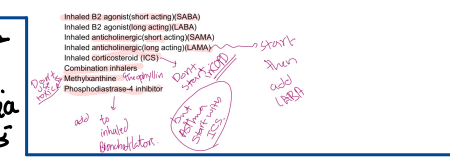
It is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases.

The chronic airflow limitation that is characteristic of COPD is caused by a mixture of **small airways disease** (e.g., obstructive bronchiolitis) and **parenchymal destruction (emphysema)**, the relative contributions of which vary from person to person.

Chronic bronchiolitis + emphysema ⇒ COPD.

- Tm**
- exposure of Risk factors.
 - Patient education
 - Appropriate assessment of Disease.
 - Pharma & non Pharma Management.
 - Prevention & Tm of acute COPD exacerbations.
- Pharma Tm**
- start with LABA then add LABA.
 - Don't start with ICS in COPD but in Asthma.
- ↳ is the sign of severe disease you have to change the antibiotics
- ↳ once you are on ICS you can't stop it

Pharmacological treatment



Case 3 ARDS

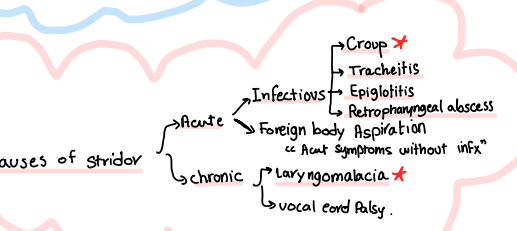
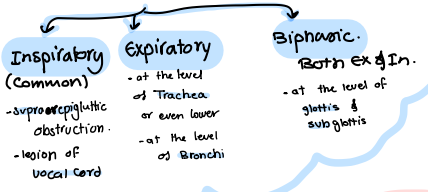
- fever, cough, dyspnea
- COVID 19 swap ⊕
- BP 120/70
 - RR 18 (Normal)
 - HR 95 ↑
 - SO₂ 86% ↓
 - temp 38.6°C
- x ABG on room air
- pH = 7.42
 - PaCO₂ = 33 mmHg
 - PaO₂ = 40 mmHg
 - sPO₂ = 80% ↓
- chest → bilateral inspiratory crackles
- chest X-ray → diffuse patch opacities
- PF Ratio = $\frac{PaO_2}{PaO_2 + FiO_2} = \frac{40}{40 + 0.21} = 1.90$

سكتة رئوية
Covid
Pneumonia
تضيق

* Adult Respiratory Distress Syndrome *

- Tm Aims to**
- ↑ Blood O₂ levels
 - ventilators breathing support
 - IV fluids
 - steroids
 - Anti-viral
- Definition**
- Acute respiratory distress syndrome (ARDS) It is a clinical syndrome characterized by an acute, diffuse, inflammatory form of lung injury resulting from diffuse injury to the alveolo-capillary membranes. (characterized by increased pulmonary vascular permeability, and loss of aerated tissue, increased work of breathing and impaired gas exchange.)
- | DIRECT LUNG INJURY | INDIRECT LUNG INJURY |
|------------------------------------|-------------------------------|
| Pneumonia | Sepsis |
| Aspiration of gastric contents | Multiple trauma |
| Pulmonary contusion | Cardiopulmonary bypass |
| Fat, amniotic fluid, or air emboli | Drug overdose |
| Near-drowning | Acute pancreatitis |
| Inhalational injury | Transfusion of blood products |
| Reperfusion pulmonary edema | |
- CO ⇒ pneumonia

Stridor ⇒ high pitched (noisy) sound.



1- Croup (obstruction) if **Acute** **severe** **life threatening**
 * Most Common Acute

- Larynx is swollen / upper part of Trachea
- Barking cough
Stridor (Inspiratory)
Low grade Fever
Hoarseness of voice
Runny nose
Respiratory symptoms at night

3. Chest-X-ray Check
 "steeple sign" narrowing & inflammation

4. Caused by **Parainfluenza virus**

5. Management (ABC)
 → low grade fever → **Nebulized adrenalin** (focus on breathing (hypoxic)?) if calm & rest after 4 hours
 → **corticosteroids (0.3mg/kg (dexam))** if not (CIC) **single dose**

2- Bacterial Trachitis **Acute**

(3-5 yrs)

- acute onset of stridor
- more severe than croup.
- high grade Fever

(bronchoscopy) - ↑ secretions of Trachea (edema)
 - stridor
 - barking cough.

- Caused by **staph. aureus**

- Diagnosis to confirm → Laryngoscopy (ENT team)
 → characteristic X-ray
 // there's a pump that reflects a swollen mucosa of Trachea (edema)

- Management (ABC) → you have to suction the airway
 - stridor (adrenalin).

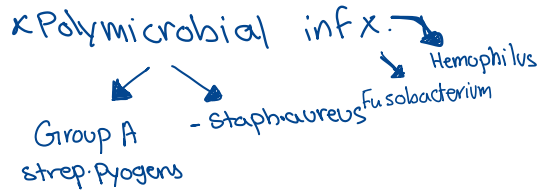
high grade fever unwell patient ⇒ Bacterial ink ⇒ Antibiotic against staph & strep.
 - MRSA Antibiotics cover it
 - IV vancomycin & Ceftriaxone (Rocephin)
 - 2nd & 3rd generation of Cephalosporine wide spectr

3- Epiglottitis - Caused by **Acute** **Hemophilus Influenza (Bacterial)** (new X-ray) thumb sign airway are narrowed.

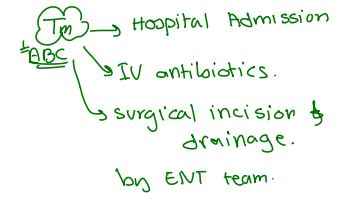


4- Retropharyngeal Abscess **Acute**

- high grade fever
 - high inflammatory markers.
 - drooling (because can't swallow) sometimes → neck or throat pain
 - deviation of uvula (ENT team)
 - Start broad spectrum Antibiotics.
 - X-ray → abscess appears as soft tissue or soft thickening
- uncommon life threatening at any age / ≠ in children under 5yrs
 - without Tm abscess lead to obstruction & asphyxiation.



*** broad spectrum Abiotic ***



*** Laryngomalacia** رخاوة الحنجرة

most Common of **Chronic**
 Laryngoscope
 - omega shape of epiglottis
 - Normal healthy child during the 1st month of life noisy breathing & inspiratory stridor
 - around age 6-8 wks the stridor exacerbated by crying/activities. - supine position - or infx (viral).
 - Postnatal variation
 - diminishes by next sleeping.
 - Rarely produce cyanosis.
 - Peaks at 6-9 months.
 - at 1 year & half starts to improve.
 - at 2 years disappear totally.
 Croup - Acute history (لا يجيب الهمزة) - Chronic Laryngomalacia (لا يجيب الهمزة) ...