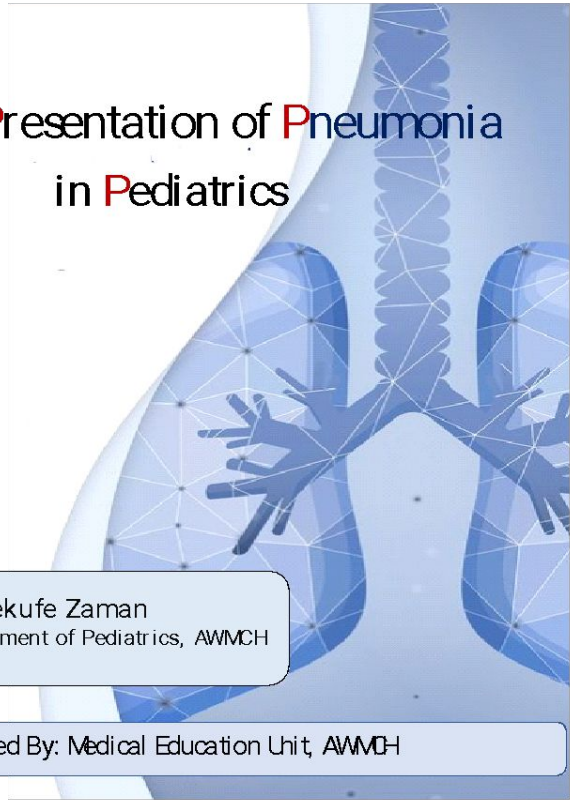
Trainee/Junior Doctor Development Programme

Protean Presentation of Pneumonia in Pediatrics



Speaker: Dr. Shekufe Zaman
DCH Student, Department of Pediatrics, AWMCH

Organized By: Medical Education Unit, AWMCH

Case-1 (Case Summery)

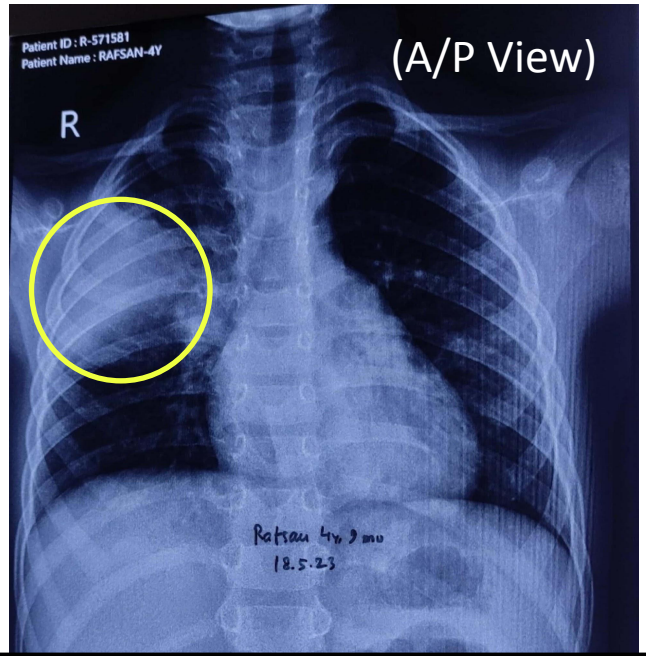
Rafsan, 4.5 years old boy,

- High grade intermittent fever - 4 days
- Non productive cough
- Respiratory distress

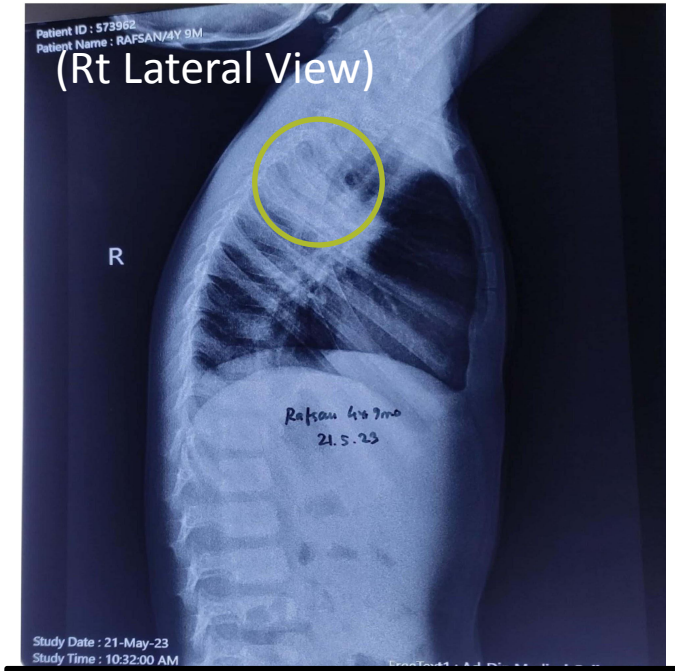
On Examination-

- Febrile
- Dyspnoeic
- Tachypnoeic
- Lungs- course crepitation & few rhonchi B/L

Case-1: Chest radiology



Dense homogenous opacity in right mid zone and part of upper zone



Homogenous opacity in apical and posterior segment of upper lobe & part of apical segment of lower lobe

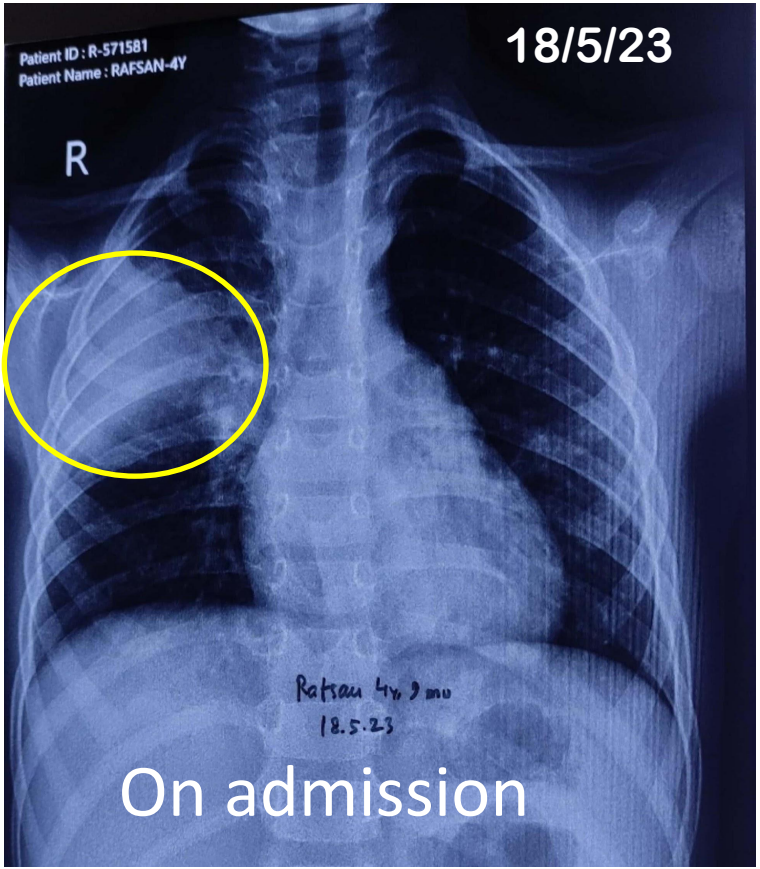
Case-1: Investigations-Blood

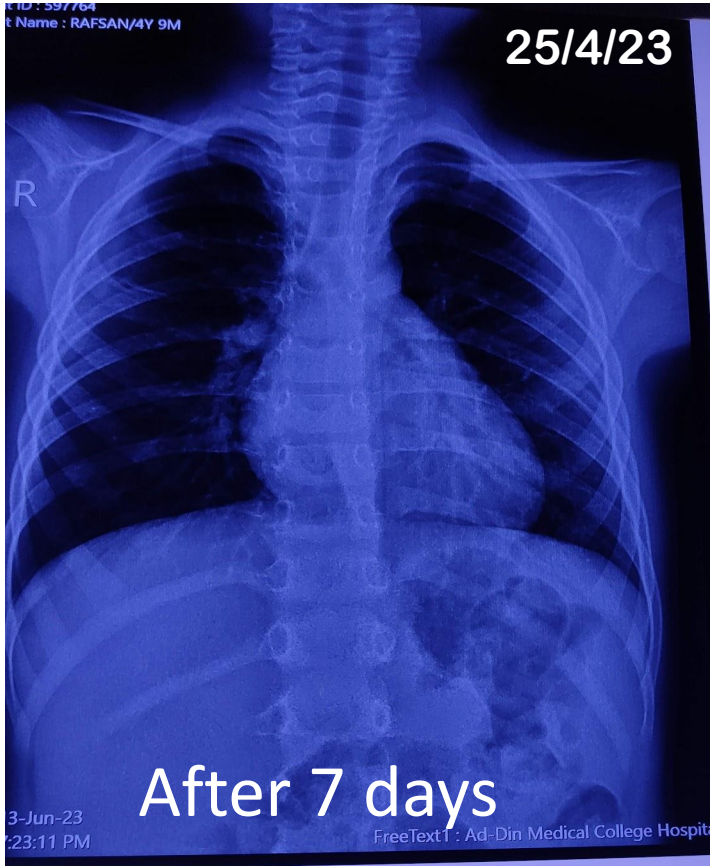
Haemoglobin	12g/dl
WBC (TC)	9000/cu mm
DC (N)	83%
(L)	12%
(E)	2%
Platelet count	2,20,000/cumm
ESR	30mm in 1st hour

- CRP-**34** mg/dl
- Blood C/S-
  no growth

<u>Treatment received-</u>
Inj. Ceftriaxone &
Inj. Flucloxacillin
-7 days

Case-1: CXR: Complete resolution





Case-1: Typical pneumonia

Case-1: A case of Typical Pneumonia

Typical pneumonia refers to pneumonia caused by:

- **Streptococcus pneumoniae,**
- **Haemophilus influenzae,**
- **Staphylococcus aureus**,
- Group A streptococci,
- Moraxella catarrhalis,
- Anaerobes and aerobic gram-negative bacteria

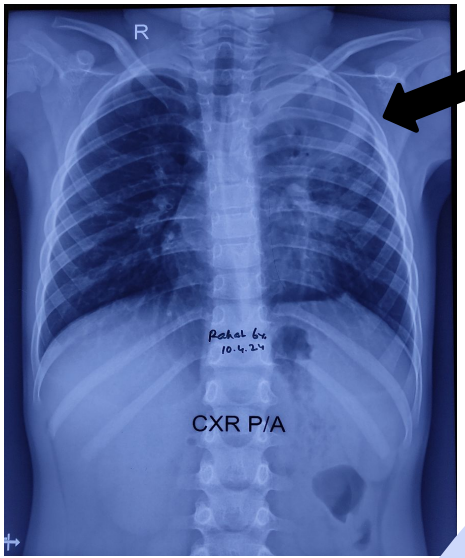
Case-2: Summary

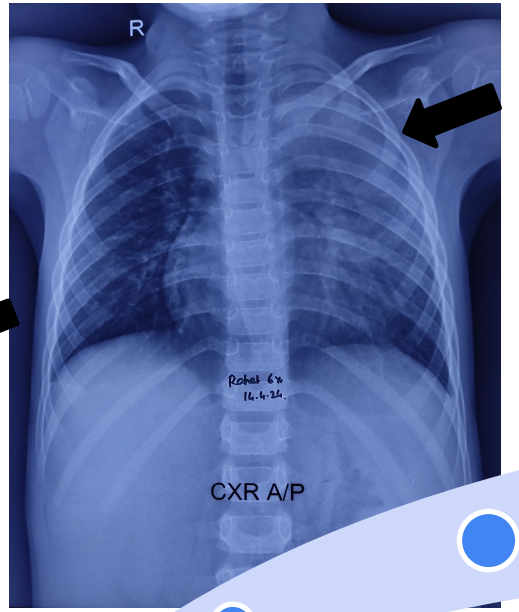
Rahat, 6 years old boy,

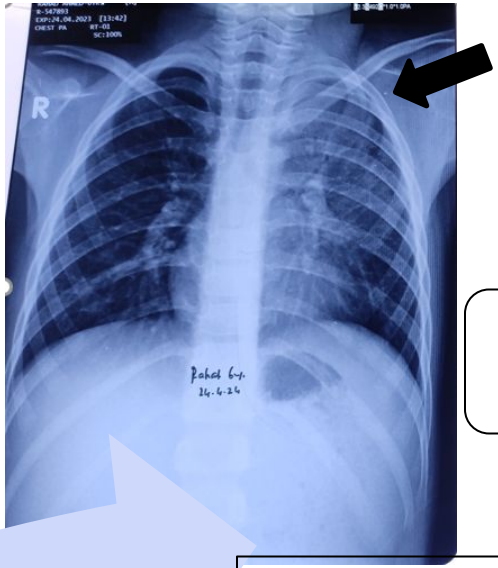
- High grade intermittent fever- 12 days
- Productive Cough
- Weight loss

O/E-

- Ill looking, febrile
- Tachypnoeic
- Dyspnoeic
- Rhonchi & crepitation B/L







10.4.2023

14.4.2023

24.4.2023

Inj Ceftriaxone & Inj Flucloxacillin

Inj MeropenEm & Inj Vancomycin
Oral Clarithromycin

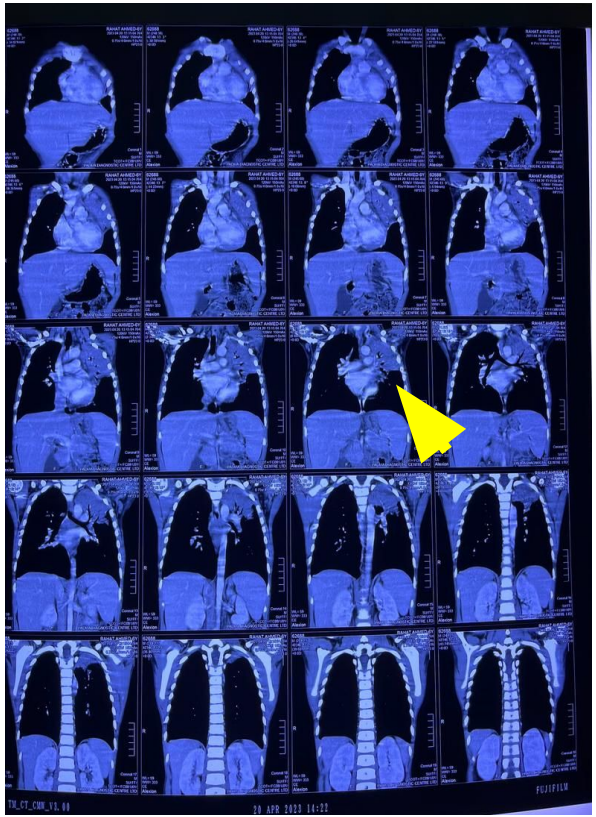
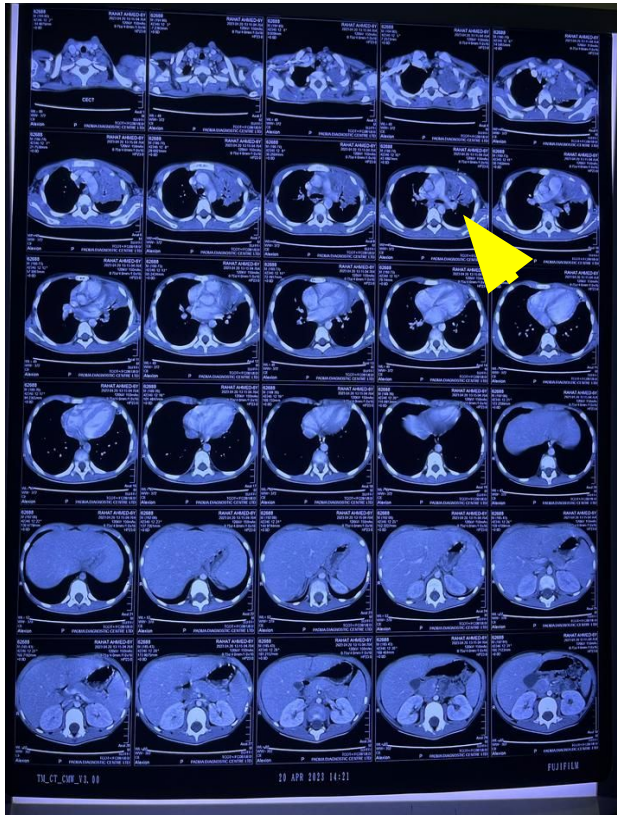
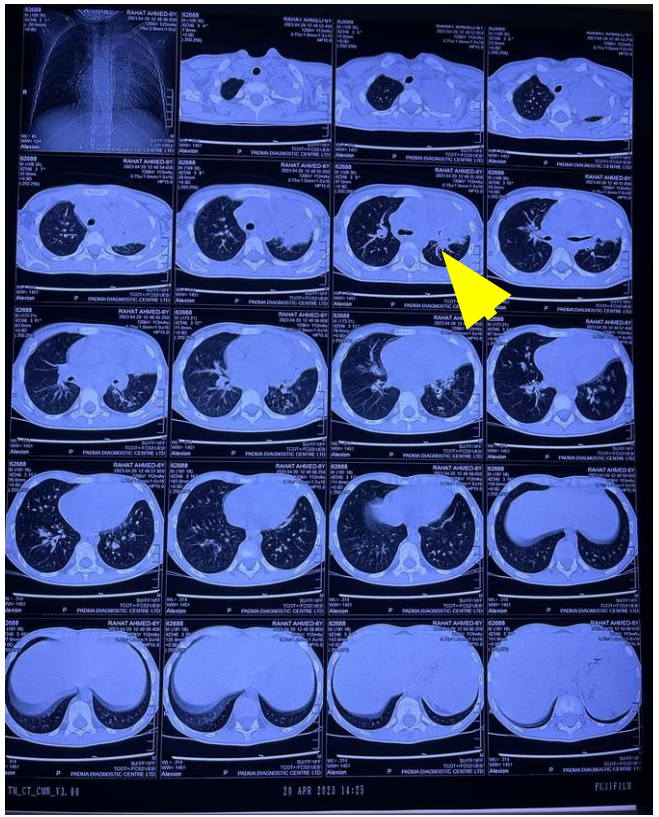
Evaluation for TB: MT,
Gene Xpert

Negative

Case-2: Investigations-Blood

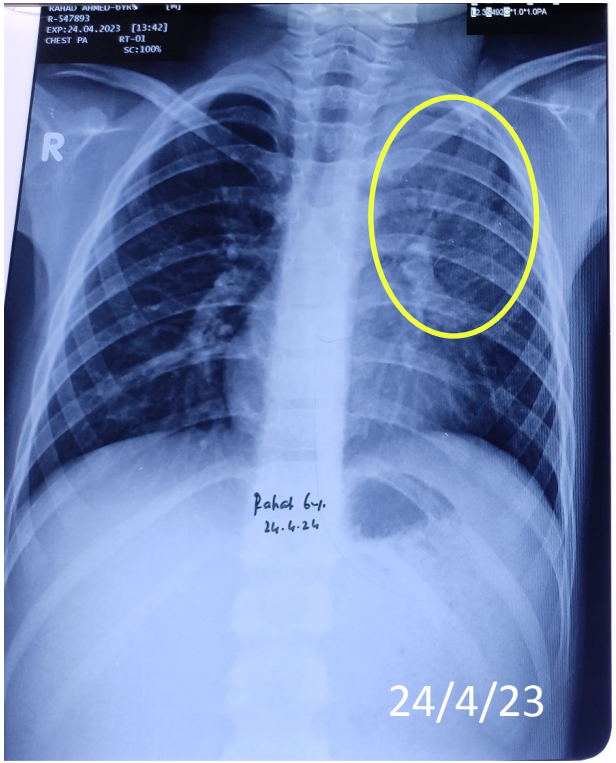
Haemoglobin	12.5g/dl
WBC(TC)	9,800/cumm
DC (N)	83%
(L)	12%
(E)	2%
Platelet count	2,50,000/ cumm
ESR	36 mm in 1st hour

- CRP-**38** mg/dl
- Blood C/S- No growth

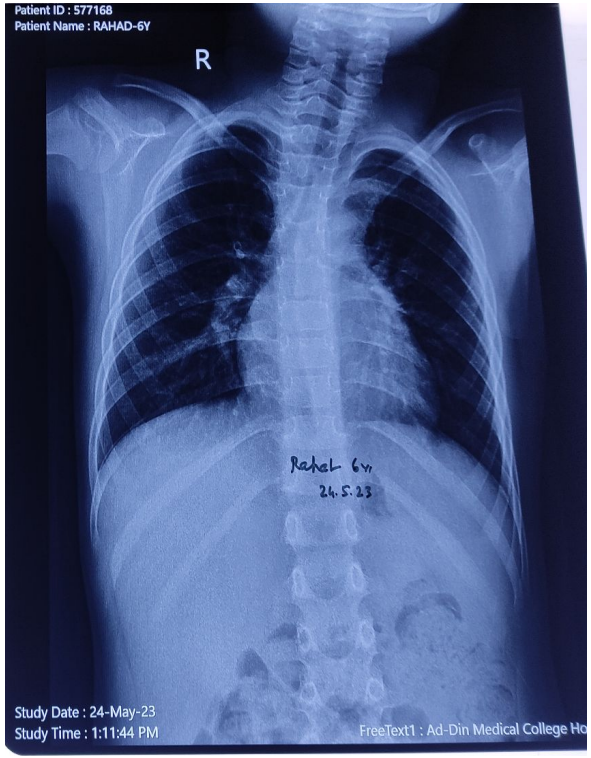




CT SCAN OF CHEST- Large inhomogenously enhanced soft tissue density area with air bronchogram in apical, anterior and superior segments of upper lobe of left lung

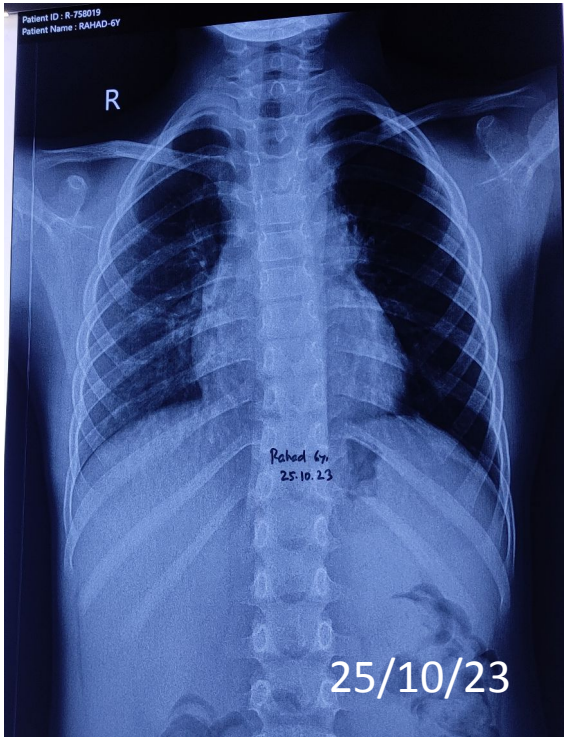
Case-2: Course of treatment with ATT



Febrile, no appetite

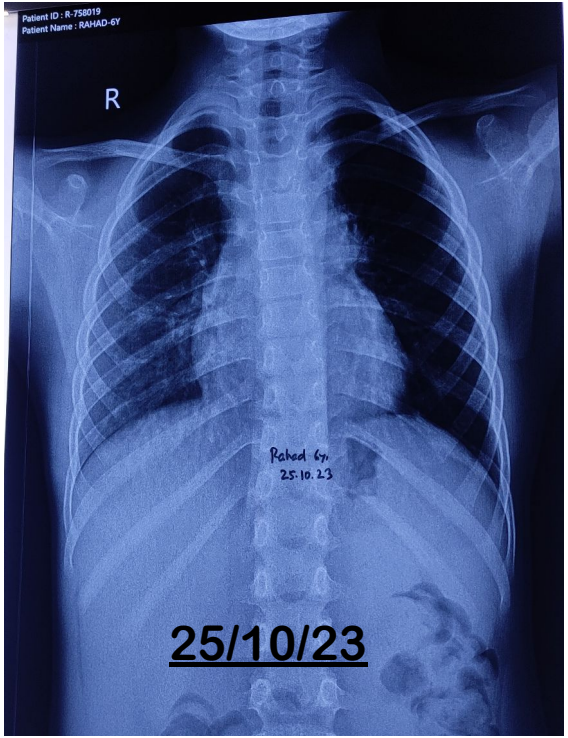


Gained 1.7kg



Gained 2.4 kg

Case-2: Non-resolving Pneumonia due to TB



Case-2: Non-resolving pneumonia

Clinical syndrome

- Characterized by persistent clinical symptoms, with or without fever
- Failure of resolution of radiographic features by 50 % in 2 weeks or entirely in 4 weeks despite the antibiotic therapy for a minimum of ten days
- Cause-tuberculosis, drug-resistant bacteria, malignancy, foreign body and fungal pneumonia

Case-3 (Summary)

Rubina, 7 year old female child,

- High grade intermittent fever
- Cough
- Pain in right upper back
- Poor appetite

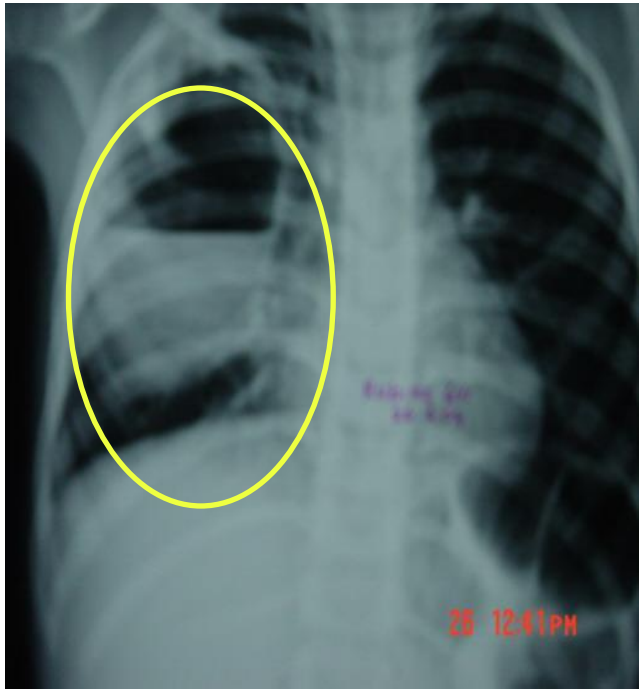
25 days

- Productive and fetid cough with reddish yellow sputum-5 days

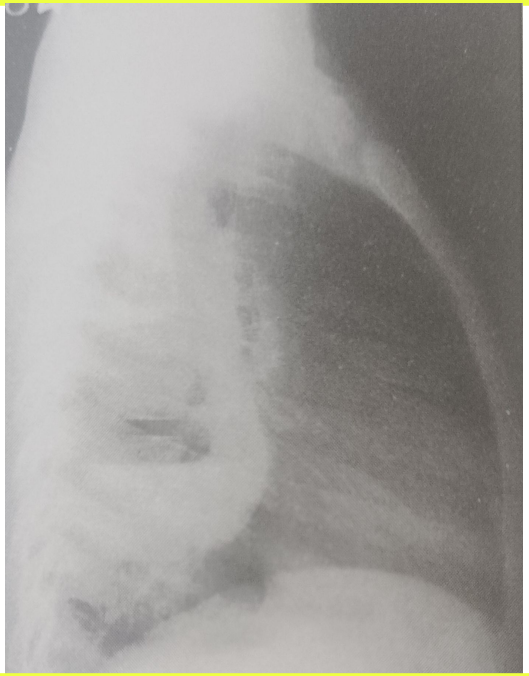
Case-3 (Examination findings)

- Toxic, febrile & anaemic
- Dyspnoeic
- Early finger clubbing
- No cyanosis or lymphadenopathy.
- Bronchial breath sound (right mid & lower zone)
  crepitation(right lower zone)

Case-3: Chest radiology



Thick walled, fluid filled cavity occupying right mid and lower zone of RL



Lung abscess in apical, posterior and lateral basal segments RLL & posterior segment RUL

Case-3: Investigations-Blood

Haemoglobin	9 g/dl
WBC(TC)	17,500/cu mm
DC (N)	**84%**
(L)	14%
(E)	2%
Platelet count	2,50,000/cumm
ESR	**90** mm in 1st hour

- **PBF**-microcytic Hypochromic anaemia
- **CRP**-**88** mg/dl
- **Blood C/S-** No growth

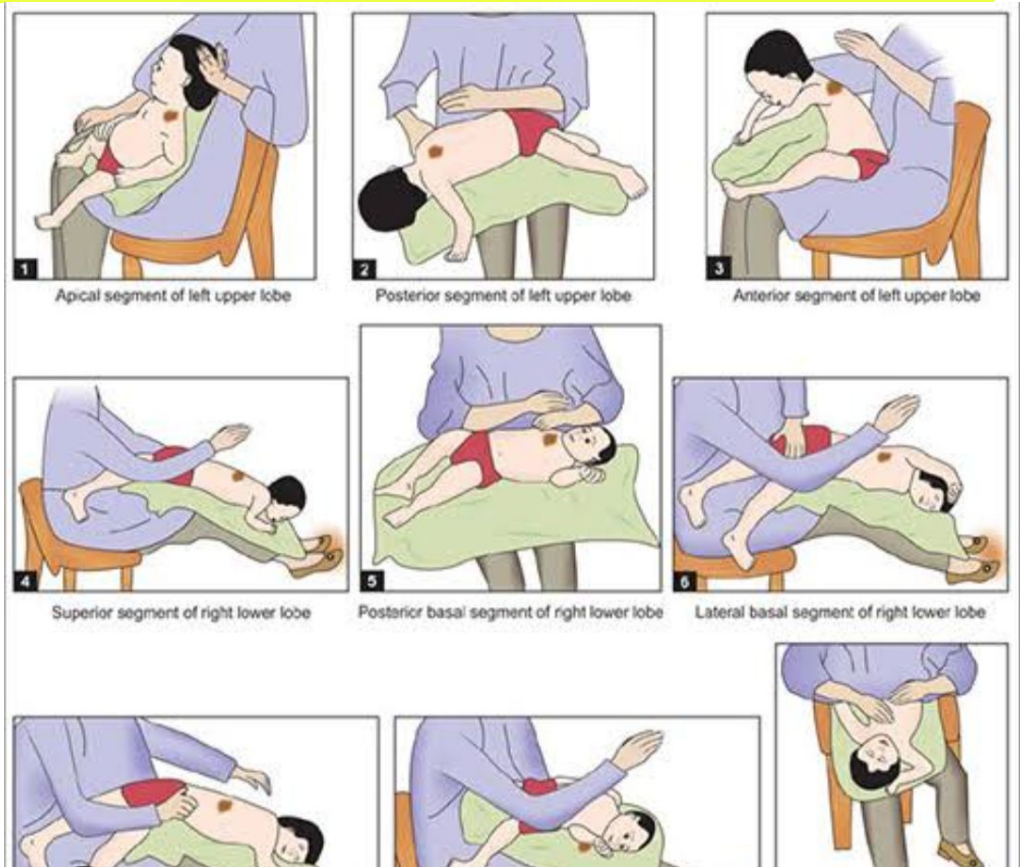
Case 3-Treatment

- Antibiotics:

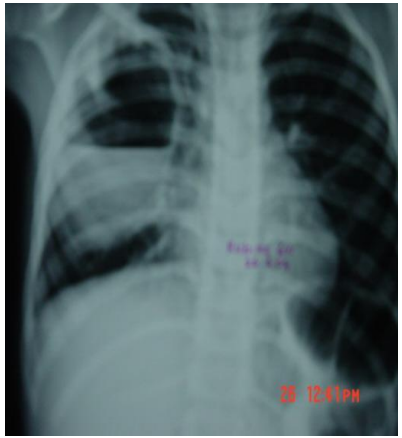
  Inj. Ceftazidime

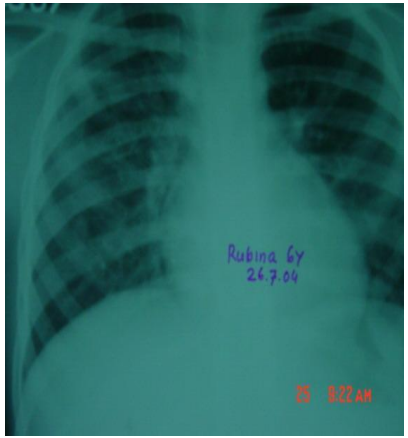
  Inj. Flucloxacillin

- Postural drainage

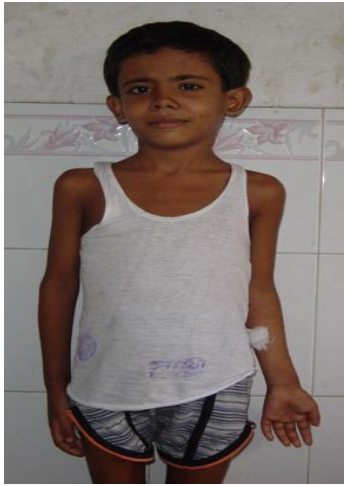


Case 3- Lung Abscess





After 1 month treatment



Case-3: Necrotizing pneumonia

Necrotizing pneumonia is a rare and severe complication of bacterial community-acquired pneumonia (CAP).

- Necrotizing pneumonia is characterized by pulmonary inflammation with consolidation, peripheral necrosis and multiple small cavities and is often accompanied by empyema and bronchopleural fistulae .
- Lying on a spectrum between lung abscess and pulmonary gangrene

Case-4 (Case summery)

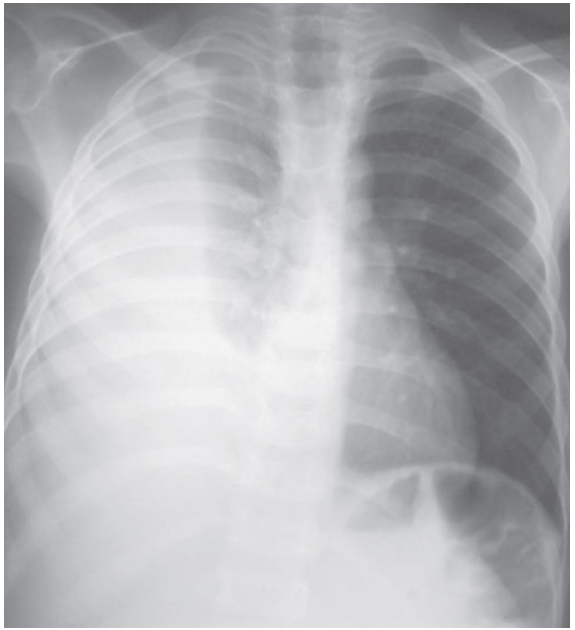
Sharmin, a female child aged 10,

- Fever & cough- 20 days
- Abdominal pain-15 days
- Respiratory distress-8 days

O/E- Toxic, febrile

- Wt-20 kg(<3rd centile)
- Tachypnoeic, dyspnoeic
- Tachycardia
- No lymphadenopathy or clubbing
- S/O pleural effusion (RL)
- Crepitation (LL)
- Hepatomegaly (non tender)

Case-4: Chest radiology



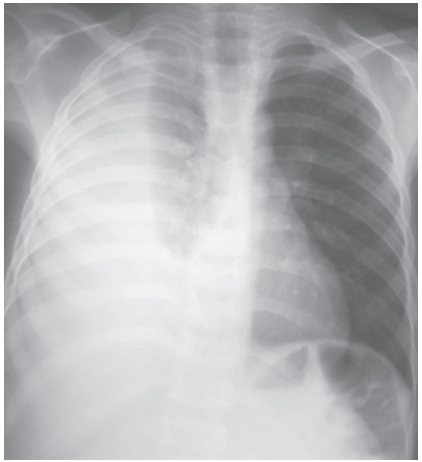
Homogeneous dense opacity obscuring the underlying lung having a curve line (meniscus sign)

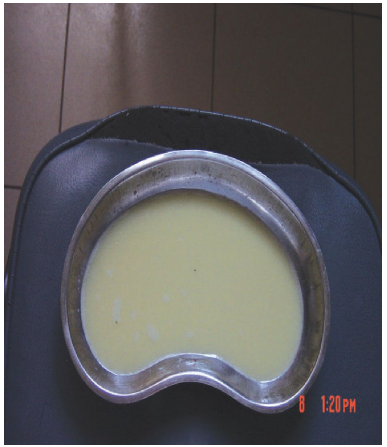
Case-4: Investigations-Blood

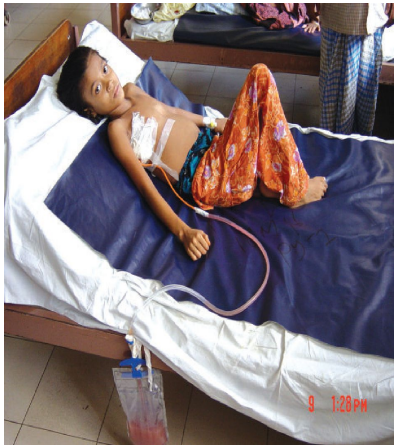
Haemoglobin	9.2 g/dl
WBC(TC)	11,500/cu mm
DC (N)	40%
(L)	50%
(E)	2%
Platelet count	2,50,000/cumm
ESR	**47** mm in 1st hour

- **PBF**- combined deficiency
- **CRP**-**78** mg/dl
- **Blood C/S**- No growth

Case 4- Tube Thoracostomy







About 500 cc of thick greyish fluid collected immediately

The tube was kept in situ with other end in a water seal container

Case 4-Investigation (continued)

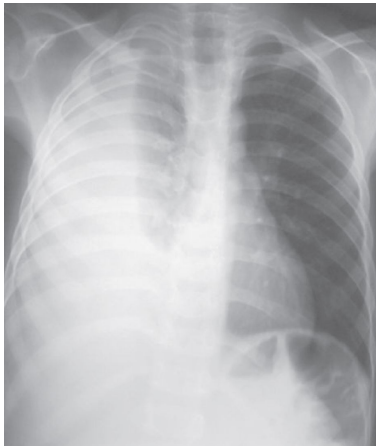
Pleural Fluid Analysis

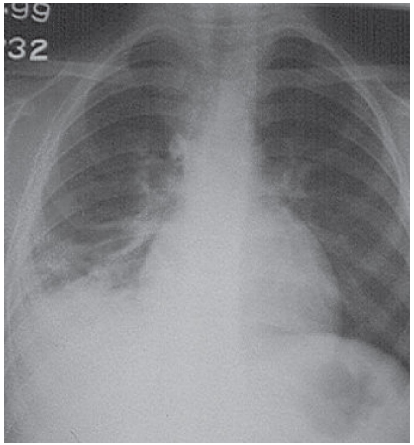
- 190 ml greyish thick pus could be aspirated
- WBC 20,000/ cu mm (N 100%) ↑↑
- Sugar 04 mg/dl ↓↓
- Protein 5.5 gm/dl ↑↑
- Culture no bacteria isolated

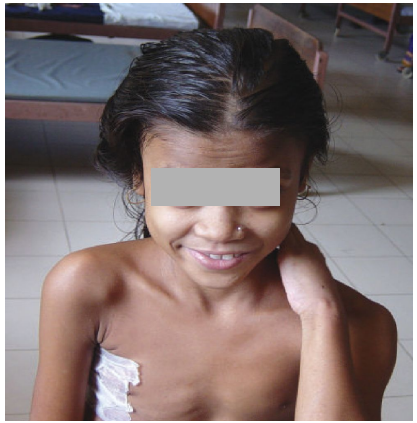
Case 4-Treatment

- Antibiotics:
  Ceftazidime, Flucloxacillin, Metronidazole-10 days
- Oral Ibuprofen
- Patient was discharged on 11th day with oral co-amoxiclav for another 2 weeks

Case-4: Empyema Thoracis



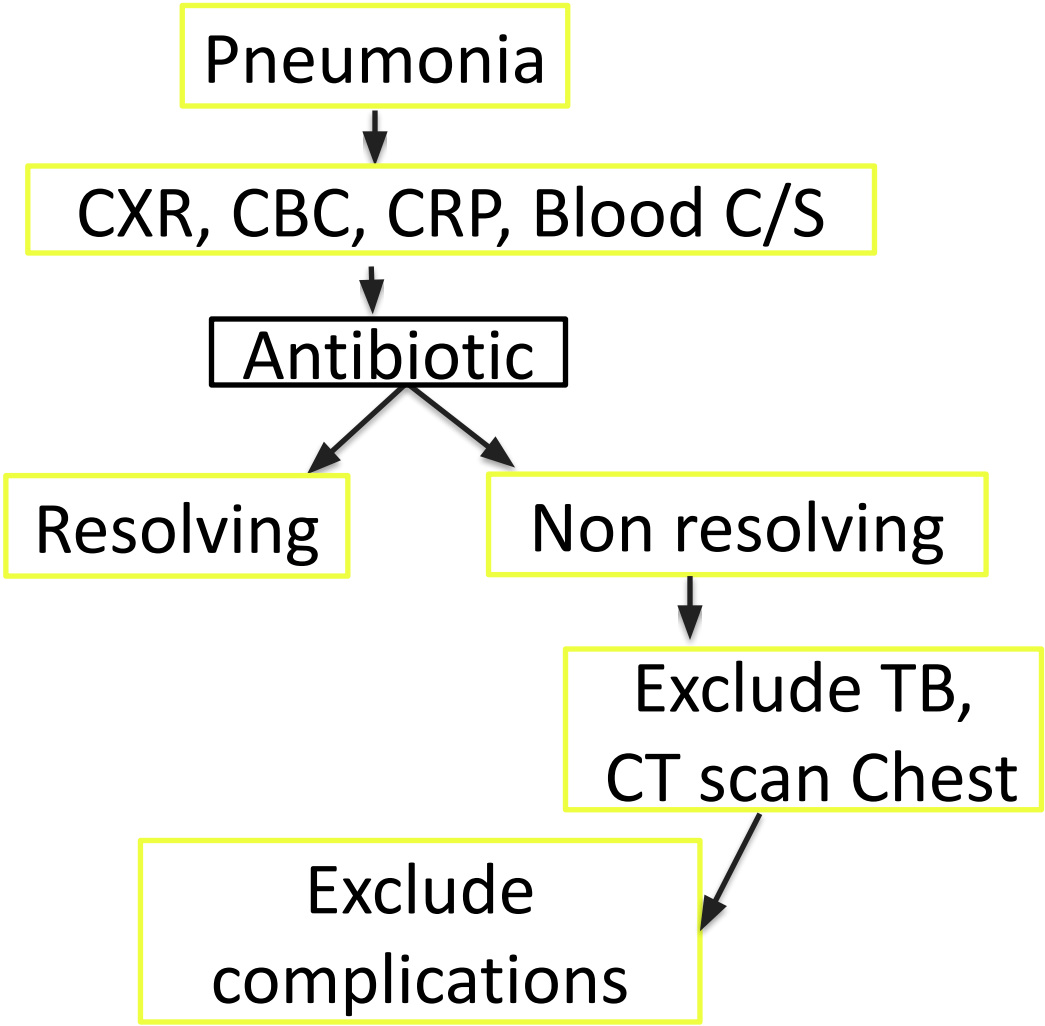


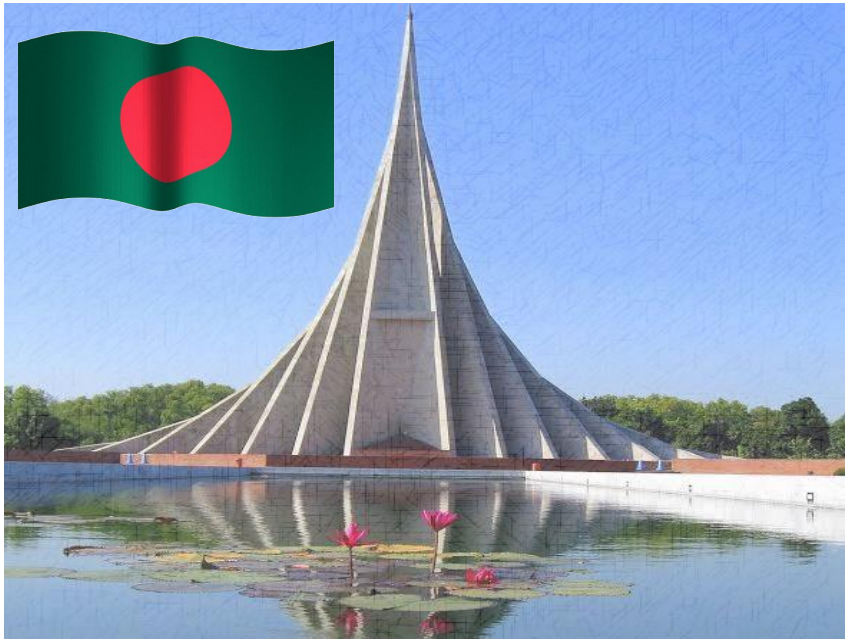


After recovery

Empyema thoracis

- Empyema is an accumulation of pus in pleural space.
- It is always secondary to infection
- Primary infections include
  bacterial pneumonia
  lung abscess
  pulmonary tuberculosis
  bronchiectasis
- Common organisms **Streptococcus pneumoniae, Haemophilus influenzae, staphylococcus aureus, H influenza**


Pneumonia
CXR, CBC, CRP, Blood C/S
Antibiotic
Resolving
Non resolving
Exclude TB,
CT scan Chest
Exclude
complications



THANK YOU