

Trainee/Junior Doctor Development Programme

Protean **P**resentation of **P**neumonia in **P**ediatrics



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

Organized By: Medical Education Unit, AWMCH

Case-1 (Case Summery)

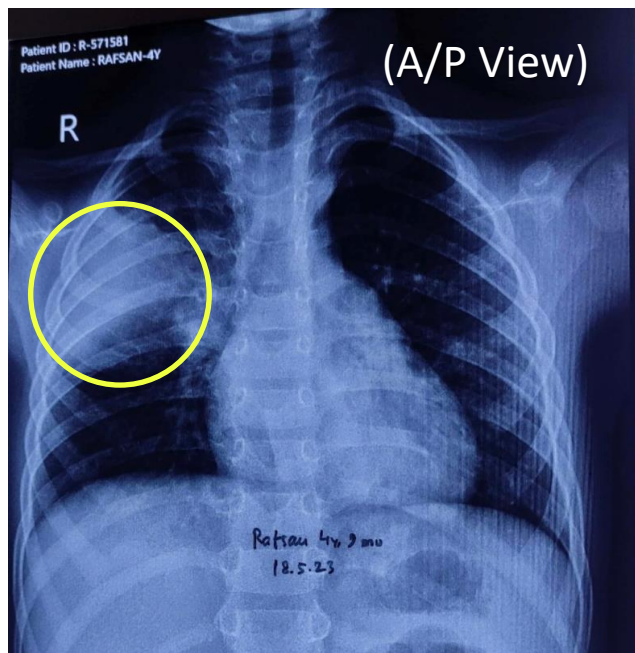
Rafsan, 4.5 years old boy,

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

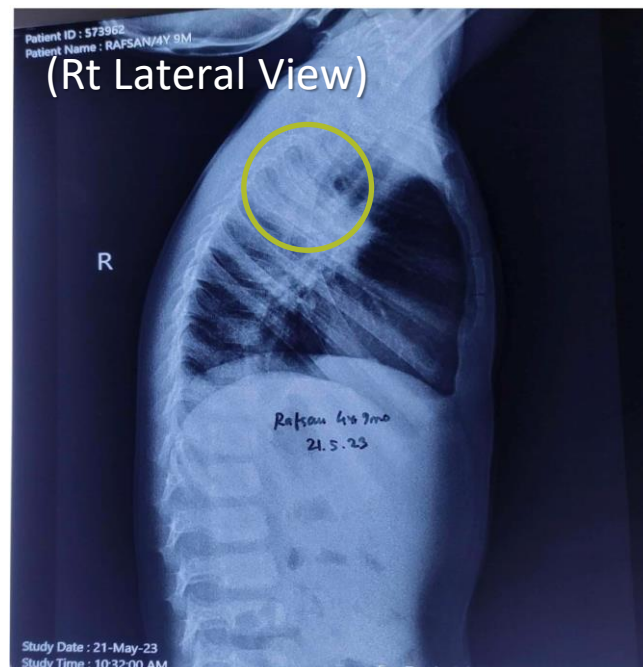
On Examination-

- Febrile
- Dyspnoeic
- Tachypnoeic
- Lungs- coarse 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

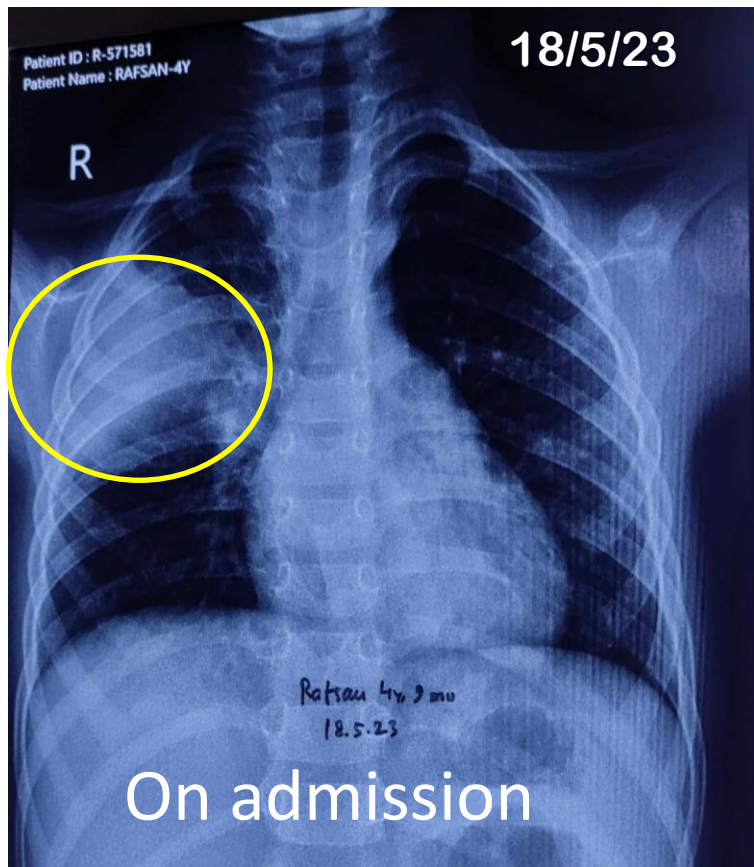
Case-1: Investigations-Blood

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

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

Treatment received-
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

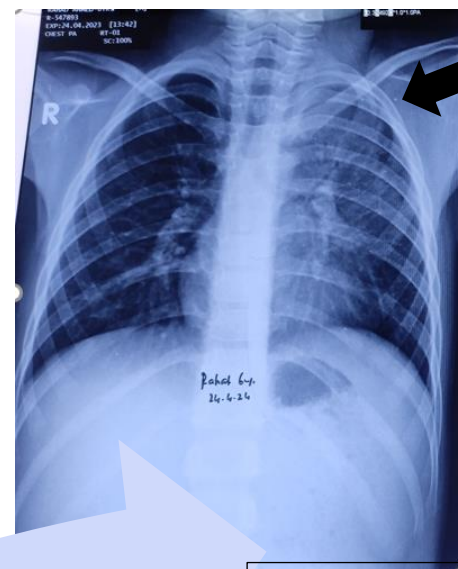
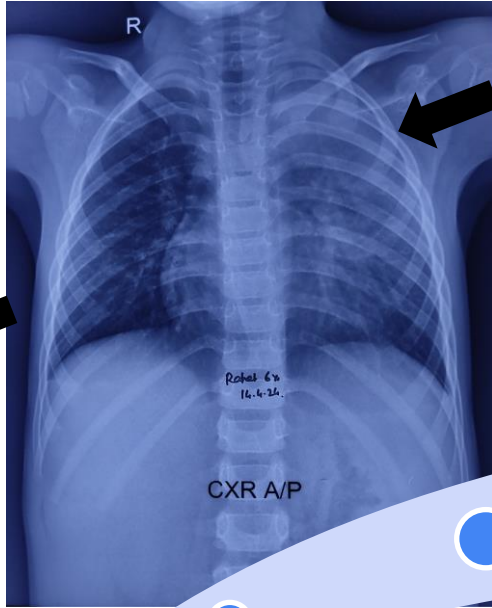
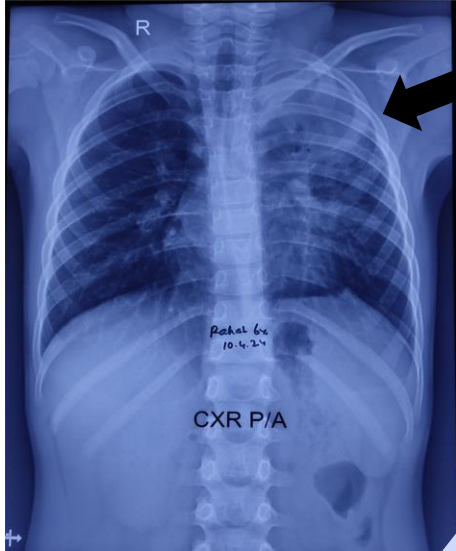
Case-2: Summary

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

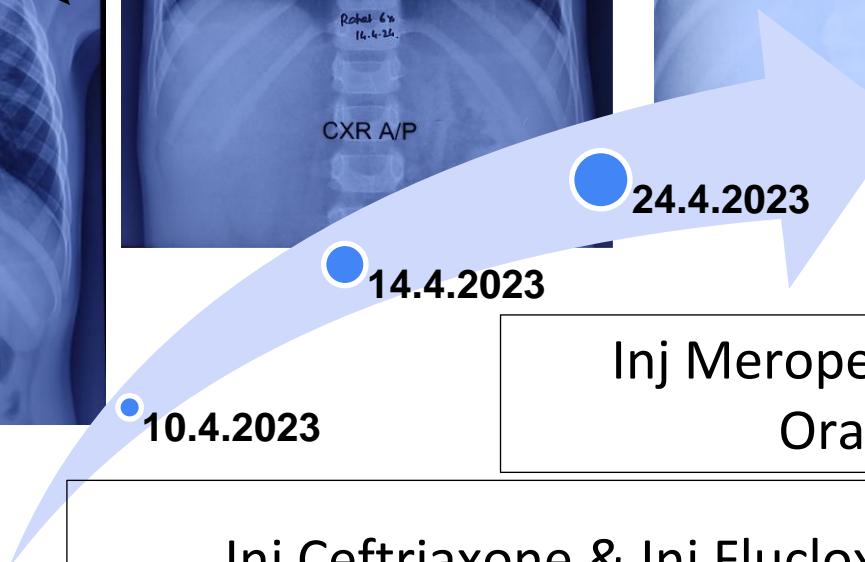


Negative

Evaluation for TB: MT,
Gene Xpert

Inj Meropenem & Inj Vancomycin
Oral Clarithromycin

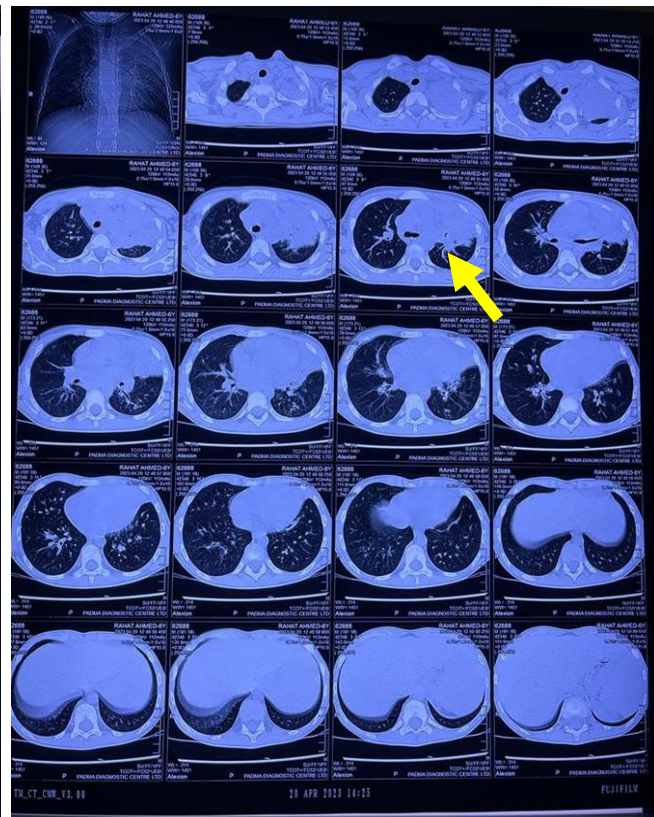
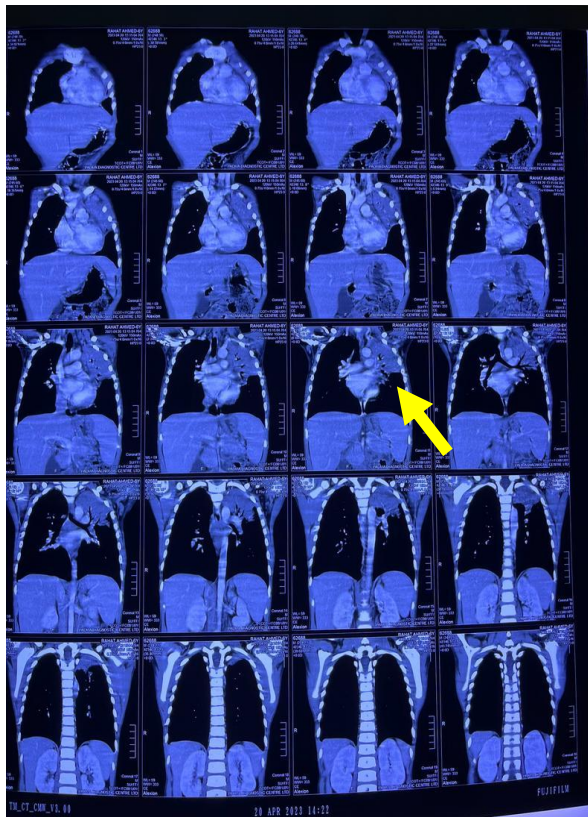
Inj Ceftriaxone & Inj Flucloxacillin



Case-2: Investigations-Blood

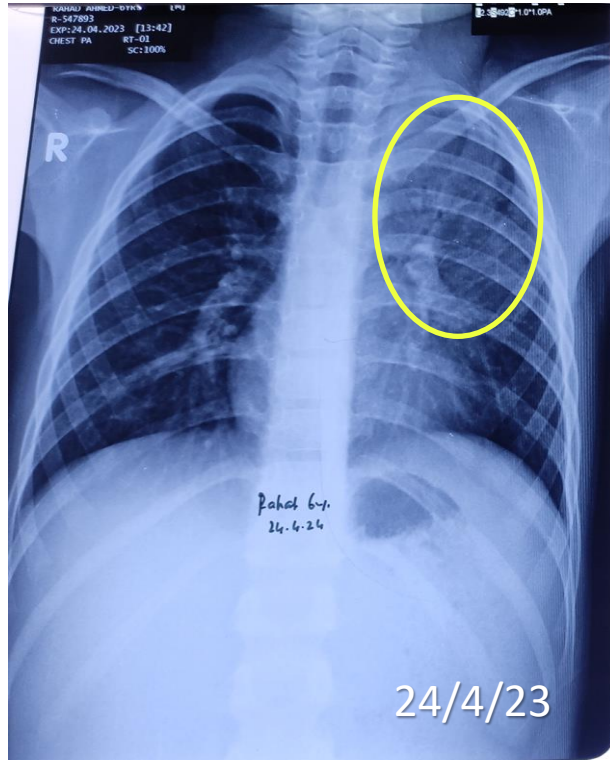
Haemoglobin	12.5g/dl
WBC(TC)	9,800/cumm
DC (N)	83%
(L)	12%
(E)	2%
Platelet count	2,50,000/ cumm
ESR	36 mm in 1 st hour

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

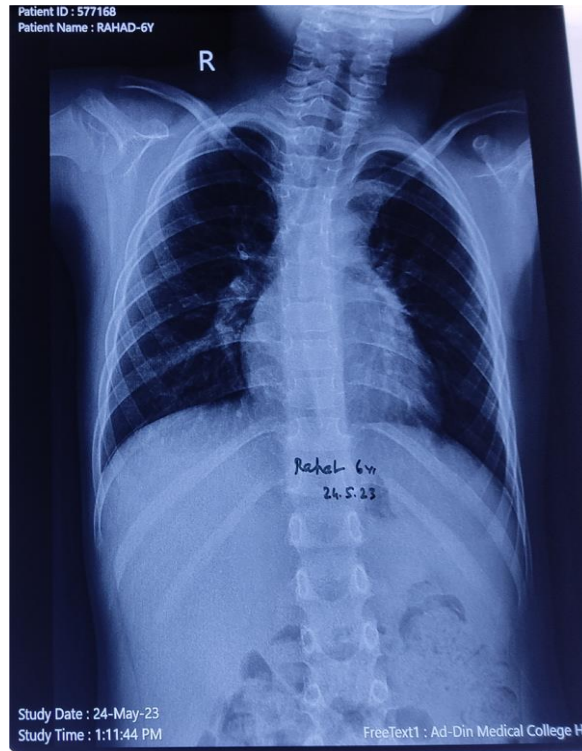


CT SCAN OF CHEST- Large inhomogeneously enhanced soft tissue density area with air bronchogram in apical, anterior and superior segments of upper lobe of left lung

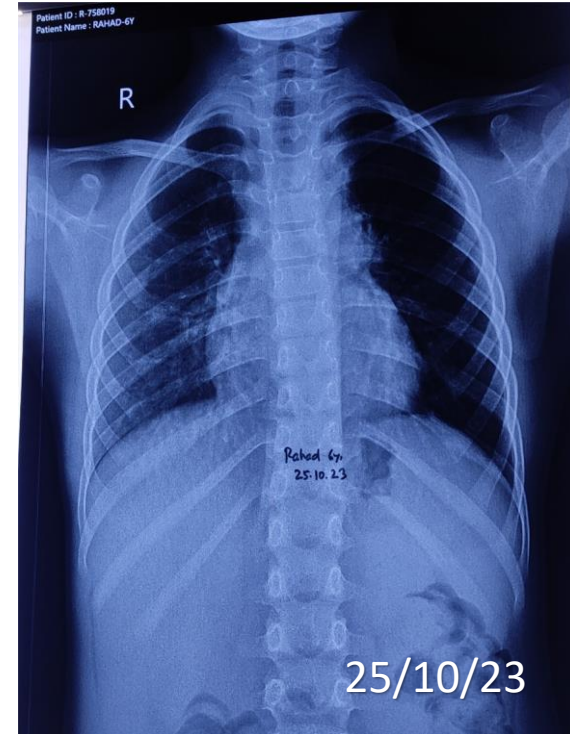
Case-2: Course of treatment with ATT



Febrile, no appetite

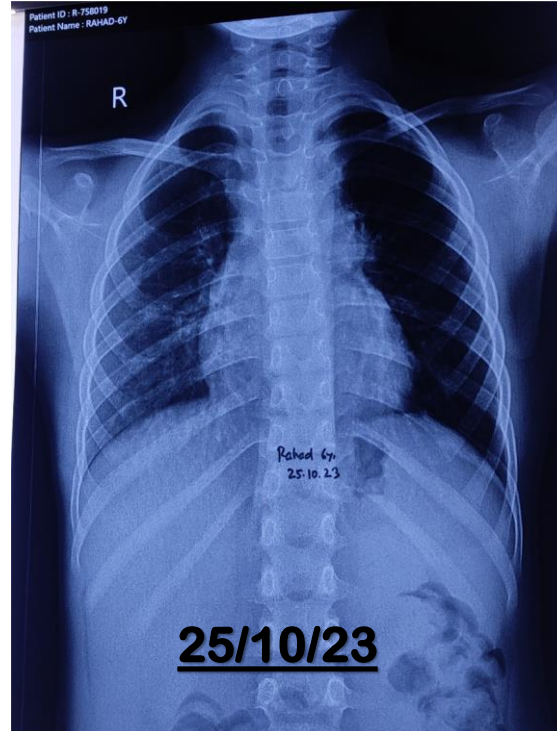


Gained 1.7kg



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)

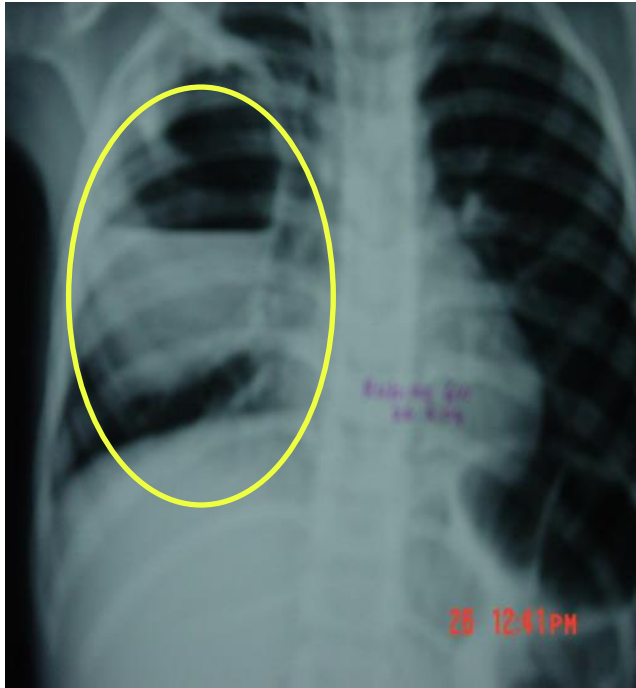
- Rubina, 7 year old female child,
 - High grade intermittent fever
 - Cough
 - Pain in right upper back
 - Poor appetite
 - Productive and fetid cough with reddish yellow sputum-5 days
- 25 days



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

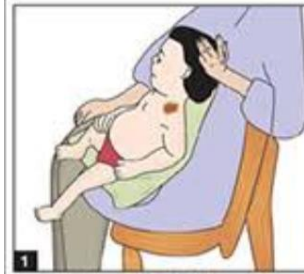
Case-3: Investigations-Blood

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 1 st hour

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

Case 3-Treatment

- Antibiotics:
Inj. Ceftazidime
Inj. Flucloxacillin
- Postural drainage



1 Apical segment of left upper lobe



2 Posterior segment of left upper lobe



3 Anterior segment of left upper lobe



4 Superior segment of right lower lobe



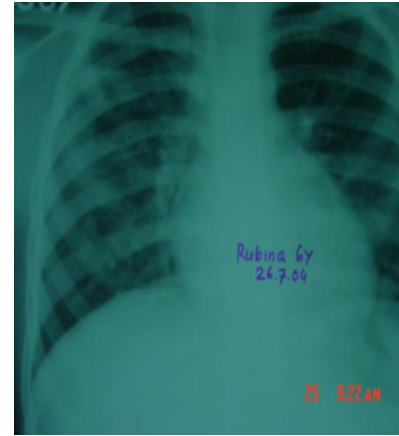
5 Posterior basal segment of right lower lobe



6 Lateral basal segment of right lower lobe



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)

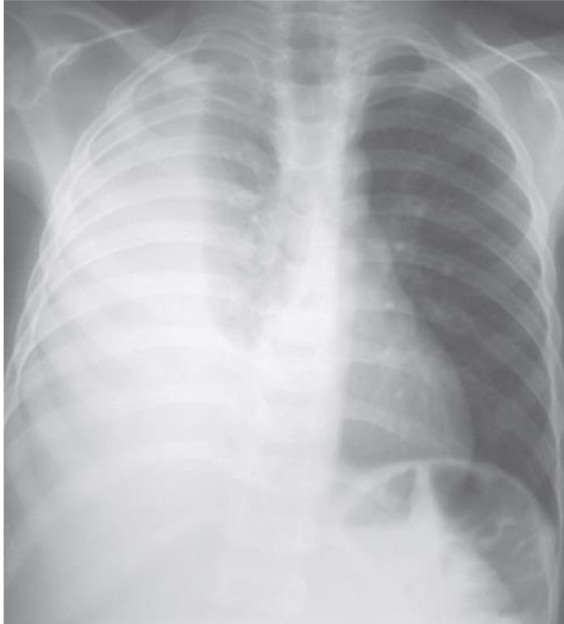
Sharmin, a female child
aged 10,

- 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



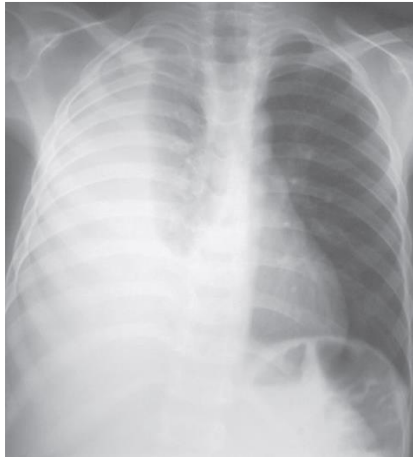
Homogeneous dense opacity obscuring the underlying lung having a curve line (meniscus sign)

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 1 st 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)

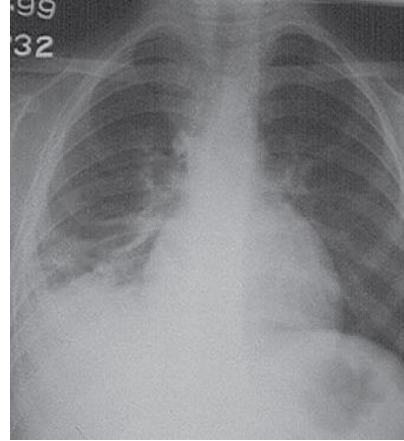
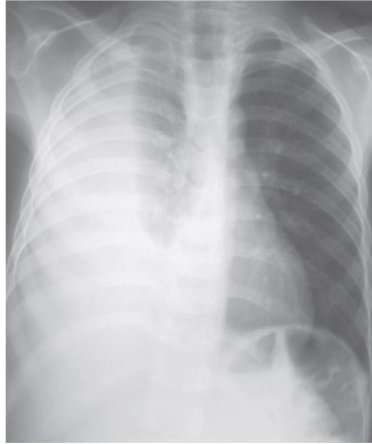
Pleural Fluid Analysis

- 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

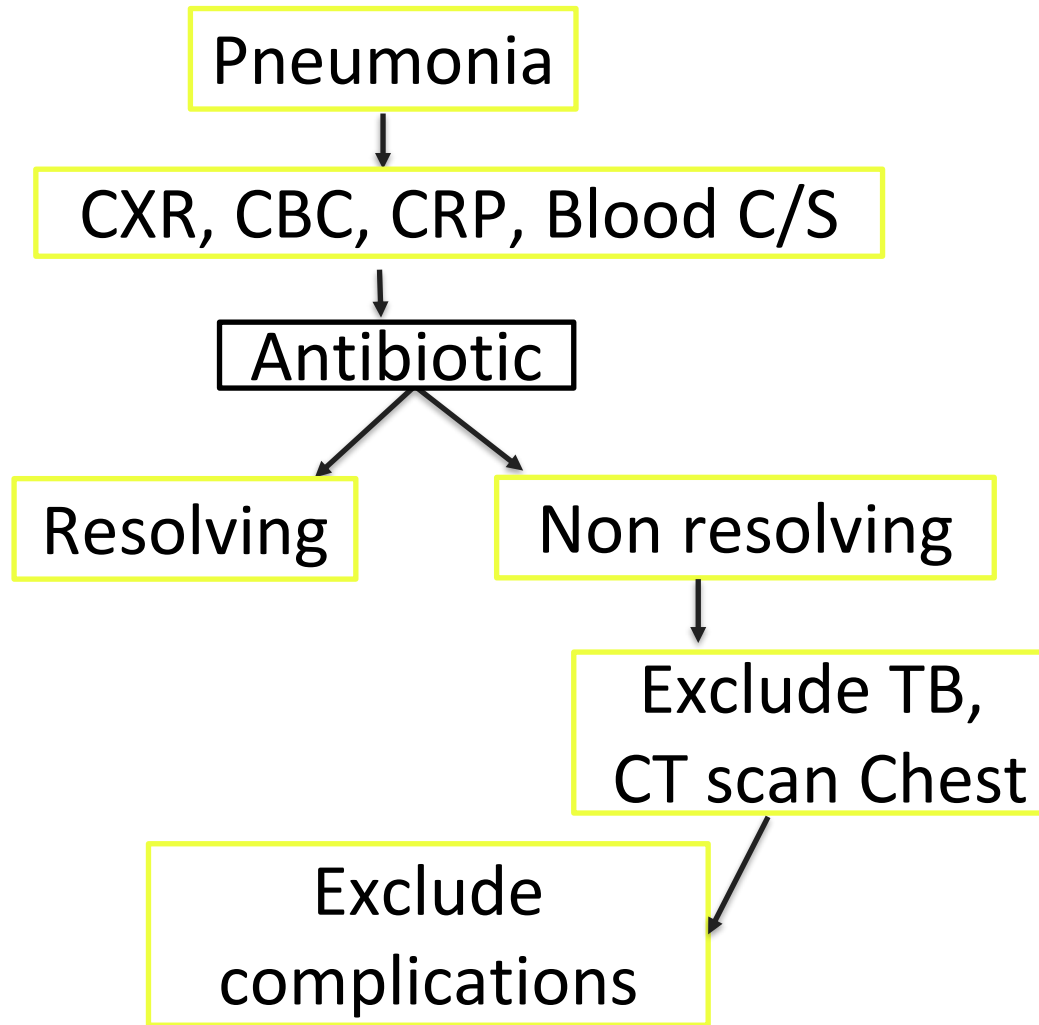


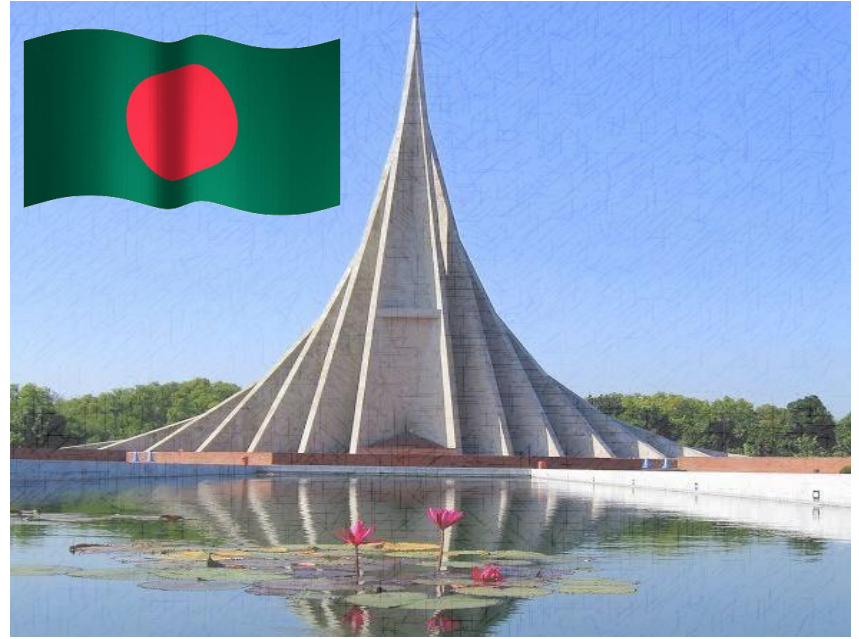
After recovery



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**





THANK YOU