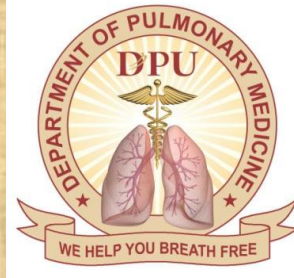


# ***Management of Pyopneumothorax in a Paediatric patient***

***Dr Nirmala.M.A.***  
**Department of Respiratory Medicine**

## ***History***



An 8 year old female, from Ahmednagar, presented to Respiratory Medicine OPD in January, 2018 with chief complaints of:

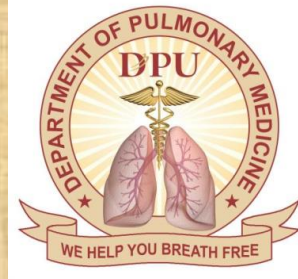
***Cough***

***Fever***

***Chest pain***

**For 6 weeks**

## *H/O Present Illness*



- Cough -***acute*** in onset, more on ***lying on the left side***, no diurnal variation
- Chest pain – ***pleuritic***
- Fever- ***intermittent***, high grade
- No h/o hemoptysis , breathlessness, loss of weight, loss of appetite

Reported to a private practitioner  
with the above complaints.

Chest Xray is suggestive of  
***hydropneumothorax***





## **Continued...**

Managed with ***Linezolid*** and ***ceftriaxone***,  
***Intercostal tube drainage*** was done and  
about ***500ml*** of pus was drained



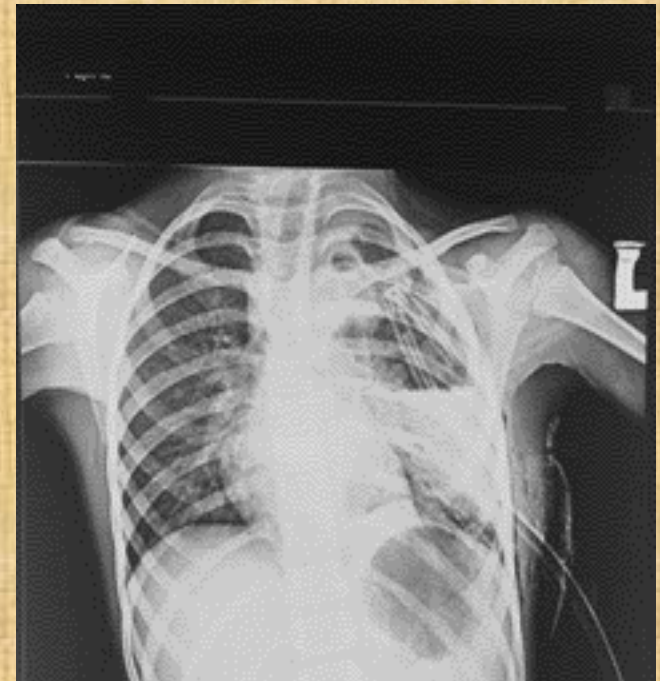
No drainage thereafter inspite of tube  
being adequately positioned, possibly  
tube not functional because of blockage



ICD removed ***inspite of significant  
amount of pus in pleural cavity***



Advised to a higher centre for further management



## ***H/O Present Illness***

- Admitted to our hospital in January. She was symptomatically better but presently she had

***Cough with scanty expectoration***

***Low grade fever***

***Loss of appetite.***

## ***General Examination***

No pallor, icterus, clubbing, cyanosis,  
lymphadenopathy or pedal edema

Vitals:

PR-76bpm

BP-130/80 mmHg

RR-16/min

## ***Systemic Examination***

Respiratory System – breath sounds reduced in left inter and infra scapular area

Rest of the systemic examination is normal



# *Investigations*

- CBC - Hb-12.0, TLC: 15,200, P-76, L-17, M-01, E-03

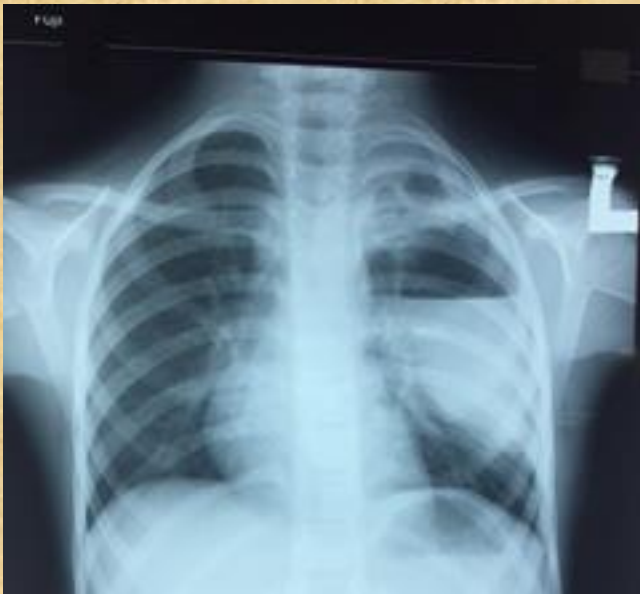
Platelets:3.5 lakhs

- Biochemistry -
  - LFTs – Normal
  - RFTs – Normal

## **Continued...**

- Sputum for AFB – Negative
- Sputum for Gm stain – Gram +ve cocci in short chain
- Sputum for pyogenic C/S – ***Klebsiella pneumoniae*** isolated ,sensitive to ***cefixime,cefotaxim,ceftriaxone***.
- Sputum for AFB C/S- No growth

## ***Chest X-ray***



Chest x ray after tube removal



***After 20 days***



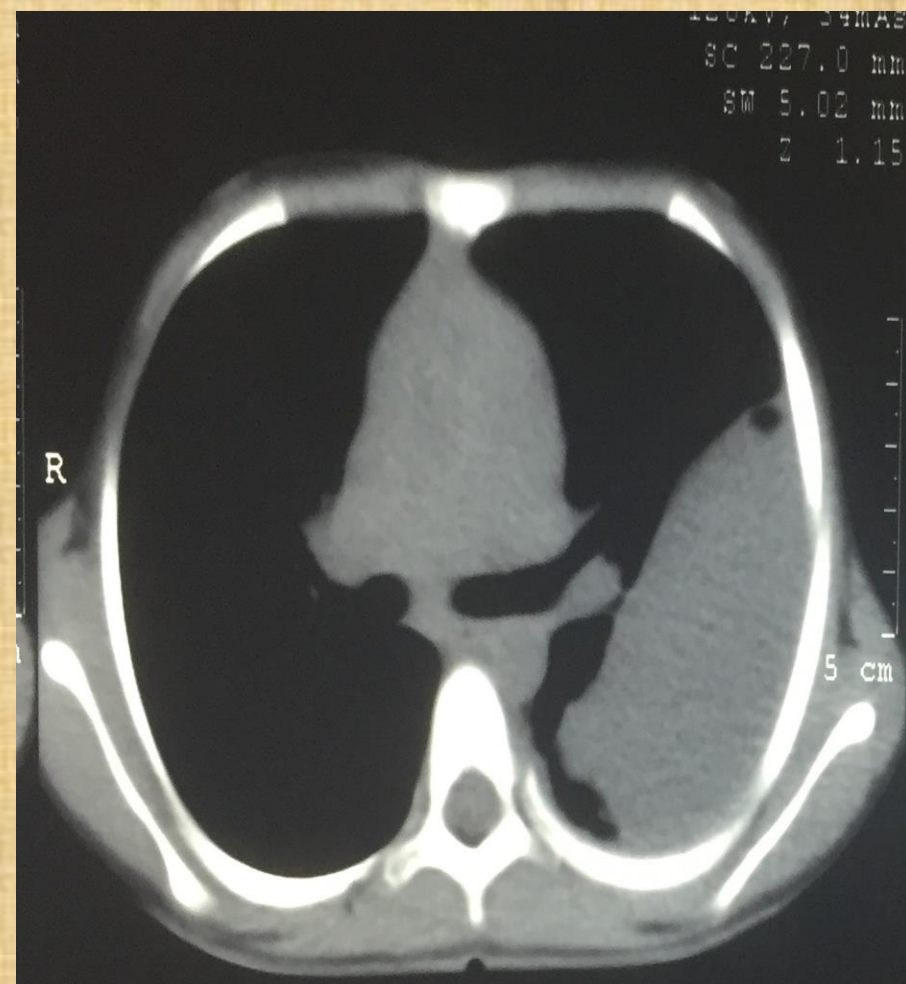
Left mid zone homogenous opacity abutting the pleural margin

## ***Ultrasound***

- ***USG left hemithorax (19<sup>th</sup> January) –***  
loculated fluid collection with fine internal  
echoes noted.



## ***CT Thorax***



A well defined fluid attenuating density lesion noted with air foci noted in superior and apical segments of left lower lobe - ***s/o left loculated pyopneumothorax***

## *Investigations*

Image guided diagnostic thoracocentesis was done and pus was drained

Pleural fluid pus for Xpert MTB-RIF – MTB not detected

Pleural fluid pus Culture – showed the presence of ***Klebsiella pneumonia***, sensitive to ceftriaxone and cefotaxim.

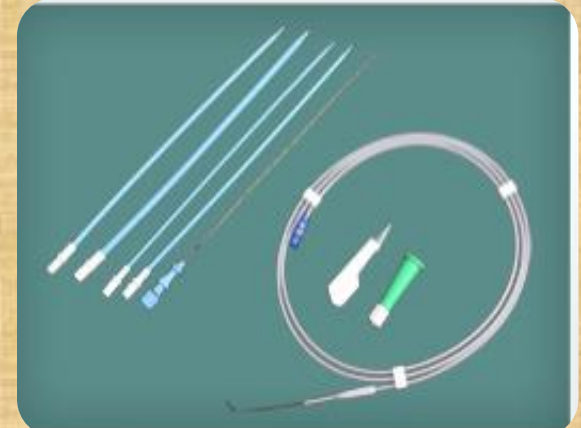
# *Diagnosis*

*Left sided loculated pyopneumothorax*



# Management

Managed with ***cefotaxime*** and ***metronidazole*** and ***pigtail insertion*** was done under ***general anaesthesia***





# *Management*

Net drainage of **1550cc of pus** was drained over 4 days.



## ***USG Thorax (Repeat)***

*No evidence of free fluid in left pleural cavity*

## ***Follow up***

- Patient is continued on injectable antibiotics and discharged on ***Tab. Cefixime 200mg OD*** and asked to follow up after 4 weeks
- Patient- ***Asymptomatic.***
- Chest x ray – ***NAD.***

# ***Discussion***

## ***Pleural space drainage:***

Various modalities of drainage:

- ***ICTD insertion***(Intercoastal tube drainage)
- ***ICCD insertion***(intercoastal catheter drainage)
- ***Image guided pigtail insertion***



## ***Recommended approach***

***Empyema***



***Large ICTD  
insertion is  
advised***

***Loculated  
pleural  
collections  
especially if  
present  
posteriorly***



***ICCD (Pigtail)  
insertion is  
advised***

## ***ICTD Drainage***

## ***ICCD drainage***

***More invasive***

***Less invasive***

Blockage is ***Less frequent***

***More frequent***

Duration of hospital stay is  
***more***

***Lesser*** duration

***Less mobility*** after procedure

***Good mobility*** after procedure

# *Clinical Pearls*

1. In case of no pleural space drainage in spite of tube being correctly positioned



*Never remove the tube*



Repeated saline flushes to remove the tube blockage



*Intra pleural fibrinolytic therapy*

2. Use of *pigtail insertion in paediatric patients*

**Thank you**