

CLINICAL MEETING

14-9-2017

CASE PRESENTATION :

by

DR.K.ADITYA 1ST yr PG

DEPARTMENT OF PEDIATRICS

Case History

- Baby A
- Age: 7 months
- Male Baby
- Residence: Miryalguda, Nalgonda

- DOA : 17-8-17 around 5 PM

Chief complaints

- Informant: Mother
- Fever - 5 days
- Cough & cold - 4 days
- Rapid breathing -4 days

h/o Presenting Illness

- **Fever since 5 days**

- Insidious onset, mild grade, not associated with chills and rigors, intermittent, with no diurnal variation, with no aggravating factors & relieved on tepid sponging

- **Cough & cold since 4 days**

- Cough, mild and occasional, non productive, with no aggravating or relieving factors, no diurnal variations and no variations with posture
- Associated watery nasal discharge present

h/o Presenting Illness

- **Rapid breathing since 4 days**
 - Started on the 2nd day of fever, and has increased over the last 4 days
 - associated with chest indrawing
 - associated with decreased intake of oral feeds
 - no h/o bluish discolouration of skin or lips
 - no variations with posture
- H/o excessive crying present which is consolable
- No other significant history

- **Treatment history (Prior to admission):**

- Child was taken to a doctor near their house 1 day back , where he was started on Inj. Ceftriaxone [3 doses over 36 hours], syrup Paracetamol , syrup ambrodyl .
- Child was not improving and hence referred to KIMS Narketpally

- **PAST HISTORY :**

- No similar complaints in the past .

- **FAMILY HISTORY :**

- No similar complaints in the parents or the elder sibling .

Case history...

- **ANTENATAL HISTORY** : Not significant
- **BIRTH HISTORY**: 2nd in Birth order. Full term born through LSCS indication being previous LSCS. Cried immediately after birth
- **POSTNATAL HISTORY** : Not significant

Case history...

- **FEEDING HISTORY:**

- Exclusive Breastfeeding till 3 months of age after which started on top up feeds with buffalo milk [1:1dilution with water]. At present baby is on both breast feeds and bottle feeds with buffalo milk.

- **IMMUNISATION HISTORY** : Completely Immunised as per Govt. immunization schedule .

- **DEVELOPMENTAL HISTORY:** Milestones attained appropriate for age

Clinical examination: General examination

- Child lying on bed, by side of mother
- Child looks moderately active and restless
- No pallor, no icterus, no cyanosis , no lymphadenopathy, no oedema
- Head to toe examination : normal

Clinical examination: Vital data at time of admission

- Temperature : 99°F
- Heart Rate : 128/min .
- Respiratory Rate : 54/ min
- CRT < 3 seconds
- SPO2 : 83-85% at room air

Clinical examination: Anthropometry

- Weight = 6.5 kgs [Exp=8 kgs]
- Length = 65 cms [Exp =69.2 cms]
- Head circumference = 43.5 cms [Exp=44 cms]
- No malnutrition according to IAP classification

SYSTEMIC EXAMINATION

RESPIRATORY SYSTEM

- **Examination of upper respiratory tract** : Normal
- **Examination of chest** :
- **Inspection** :
 - Shape of chest -Normal
 - Tracheal position not appreciated
 - Chest movements appeared equal on both side
 - Bilateral subcostal retractions and inter costal retractions seen
 - Apex impulse could be visualised
 - No visible pulsations, scars, dilated veins

- **Examination of chest :**
- **Palpation :**
 - Respiratory movements are apparently equal on both side
 - Deviation of trachea not appreciated
 - Apex impulse felt in left 4th intercostal space close to the left sternal border
 - Tactile vocal fremitus decreased in all areas on the left side of chest compared to the right
- **Percussion :**
 - Increased resonant note heard over all areas on the left side of chest compared to the right

- **Examination of chest :**

- **Auscultation :**

- Decreased breath sounds heard in all left lung areas compared to the right
- B/L occasional wheeze heard .
- Decreased vocal resonance heard in all left lung areas compared to the corresponding right lung areas

- **Other system examination:**
- **CVS examination**
 - S1 S2 heard. Normal, no murmurs
- **Per abdominal examination :**
 - Soft, no organomegaly
 - Bowel sounds heard -normal
- **CNS examination:**
 - Normal

SUMMARY

- A 7 month old male baby brought with chief complaints of fever of 5 days, cough and cold -4 days, rapid breathing and chest indrawing - 4 days, with decreased feeding and inconsolable excessive cry
- Clinical Examination findings -- decreased breath sounds, decreased vocal fremitus, & decreased vocal resonance & Increased resonant note heard over all areas on the left side of chest compared to the right side, apical impulse felt in 4th left intercostal space close to the left sternal border.

Investigations on day 1 :

- **Complete blood picture**
 - HB : 9.1 g%
 - TLC : 36200/cu.mm N=63% L=29% E=4% M=4% B=0%
 - PLT COUNT : 6.83L/cu.mm.
 - SMEAR : Microcytic , Hypochromic Anaemia with Leucocytosis and Thrombocytosis .
- **GRBS** : 131 mg/dl.
- **CRP** : Positive 2.4mg/dl.
- **LFT , RFT** - Normal .
- **Smear for MP** - Negative
- **Dengue serology** : Negative
- **Blood C/S.**

Treatment of the case - on admission

Immediate treatment given

- O₂ inhalation with nasal prongs - 2 lit/min
- IV fluids - DNS 100ml/kg/day
- Inj. Amoxyclav 100mg/kg/day IV
- Inj. Amikacin 15mg/kg/day IV
- Nebulisation with asthalin 0.15mg/kg/dose

Monitoring of vitals

Condition after 5 minutes of start of treatment

- **Vital data**

- Temp – 99° F
- HR – 118 / min
- RR – 46 /min
- CRT < 3 Secs
- SPO2 – 92%-95% with nasal prongs O2 inhalation @ 2 lit/min

- **Other clinical findings** – no change

- **ABG report**

- Baby on Oxygen With Nasal Prongs @ 2 lit/min

- pH=7.43

- PCO₂=26.0 mm of hg

- PO₂ =64.5 mm of hg

- HCO₃⁻ = 21.2 mmol /l

- SP0₂= 95%

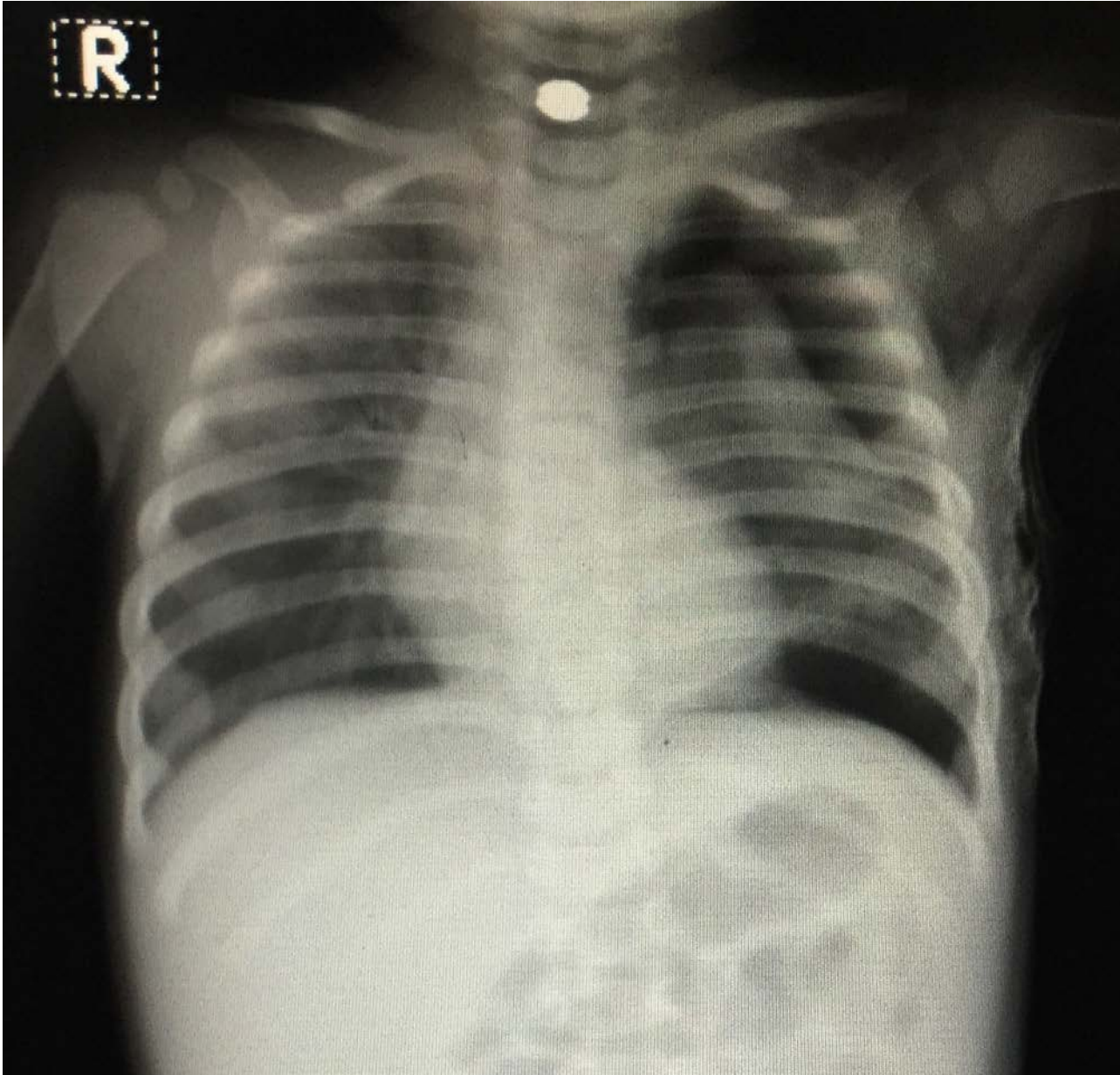
Bedside Chest X-Ray AP view



- Suggestive of tension pneumothorax

- Needle decompression done in the 2nd ICS in the MCL using a 20 G catheter needle
- Hissing sound heard after insertion
- Repeat X ray Chest was done

Chest X ray after needle decompression



- X-Ray chest taken after the needle decompression showed some resolution of pneumothorax

- Paediatric surgeon's opinion was taken
- Decided for immediate Intercostal tube drainage

Intercostal tube placement

High risk consent was taken from the parents .

- Under aseptic conditions , a 16 No. ICD tube was placed in the pleural space in the left 4th ICS @ anterior axillary line, and ICD tube connected to a under water seal
- Fluid with air bubbles noted
- Straw coloured, serous fluid was present which was collected and sent for AFB staining & culture and sensitivity .
- Air column movement with respiration, noticed in the tube.
- After the procedure, clinical improvement was noted in the baby.

After ICD tube placement

- Baby is active, respiratory distress decreased
- Vitals:
 - Temp = 99 F
 - HR = 108 / min
 - RR = 38 / min
 - CRT < 3 SEC
 - SPO2 = 97% - 99% with nasal prongs O₂ inhalation.

Day 1 (after 4 hours of ICD)

- Baby was active and improving
- Baby maintaining saturation > 95 % @ room air
- Vitals stable

Day 2

- Child was active, afebrile
- Decrease in respiratory distress, no tachypnea, decreased chest retractions
- Child accepting oral feeds well and maintaining saturation > 95 % @ room air .
- Air column movement present in tube. No drainage of fluid in tube
- Vitals stable..
- **Respiratory Examination :**
- Decreased breath sounds on the left side of chest compared to the right side
- No adventitious sounds heard
- **Further investigations :**
 - Early morning gastric aspirate sample was sent for AFB & CBNAAT.
 - Repeat CXR .
 - Mantoux test done.
- **Continued same treatment**

Chest X Ray on day 2



Day 3

- Child is active and well
- No respiratory distress, decreased cough, no tachypnea, no retractions seen
- Accepting oral feeds well & maintaining saturation >95% @ room air
- No movement of air column in ICD tube. No turbid fluid .
- Vitals stable

- **Respiratory system examination :**
 - Chest movements are equal on both sides
 - Resonant note heard over both lung fields
 - Breath sounds are heard equal on both sides of chest

Day 3

- **Investigations :**

- Blood C/S - [1ST] : No growth seen
- Pleural fluid for AFB: No Acid Fast Bacilli seen
- Gastric aspirate for CBNAAT - Negative

- **Treatment :**

- Continuing same treatment

Day 5

- Child is active and asymptomatic
- No respiratory distress, no cough, no tachypnea, no retractions
- Accepting oral feeds well and maintaining saturation > 95% @ room air
- Vitals Stable
- No air column movement in ICD tube. No turbid fluid
- **Respiratory system examination :**
- Chest movements are equal
- Breath sounds are heard equally on both sides

Day 5

- **INVESTIGATIONS :**

- Mantoux test – Negative
- Gastric aspirate for AFB - No Acid Fast Bacilli seen.
- **Pleural fluid - C/S :** Moderate inflammatory cells with Gram Positive Cocci seen. MSSA grown. Resistant to Pencillin & sensitive To Clindamicin , Gentamicin , Cotrimaxazole , Ciprofloxacin

- **Treatment :**

- continuing same treatment in view of the satisfactory clinical response

Chest X Ray Erect on day 5



Day 6

- Child is active and well
- No respiratory distress, no cough, no tachypnea, no chest retractions
Accepting oral feeds well & maintaining saturation > 97 % @ room air
- Vitals stable
- **Respiratory system examination :**
 - Chest movements are equal on both sides
 - Breath sounds are heard equal on both sides
 - No adventitious sounds
- **Investigations :**
 - Blood c/s [2nd]: No growth after 3 days of aerobic incubation

Day 6

- **ICD removed at 9 am**
- **Condition after removal of tube :**
 - Child was active & well. No respiratory distress noted
 - Child maintaining saturation > 97 % @ room air
 - Vitals stable
- **Respiratory system examination :**
 - Chest movements are equal .
 - Breath sounds are heard equal on both sides
 - No adventitious sounds
- **Investigations :**
 - Repeat CXR done
- **Treatment :**
 - Continuing same treatment

Chest X Ray (Erect) on day 6 after removal of ICD tube



Day 7

- Child is active and well
- No signs of any respiratory distress
- Accepting oral feeds well and maintaining saturation > 95 % @ room air
- Vitals stable
- **Respiratory system examination**
 - Chest movements are equal
 - Breath sounds are heard equal on both sides
 - No adventitious sounds
- **Treatment :**
 - Continuing same treatment

Day 11

- Child is active and well
- Child accepting oral feeds well and maintaining saturation > 95 % @ room air
- Vitals stable
- **Respiratory system examination:**
 - Chest movements are equal
 - Breath sounds are heard equal on both sides
 - No adventitious sounds
- **Investigations :**
 - CBP
 - CT chest

Day 11

- **CBP**

- Hb:8.3 gm% , TLC:24000/cu.mm. N=55% L=35% E=5% M=5% B=0%
- Platelet count 7 lakhs/mm³
- Smear examination : Microcytic, hypochromic anaemia with leucocytosis & thrombocytosis

- **CT CHEST :**

- Consolidation with cavitation in posteromedial basal segment of left lower lobe . f/s/o of infective consolidation. mild left pleural effusion

Day 13

- Baby is active and asymptomatic
- Accepting oral feeds & maintaining saturation > 97 % @ room air
- Vitals stable
- **Respiratory system examination :**
 - Chest movements are equal
 - Breath sounds are heard equal on both sides
 - No adventitious sounds
- **Investigations :**
 - Repeat Chest X ray
- **Treatment :**
 - Continuing same treatment

Chest X Ray on day 13



Day 14 – Day of discharge

- Child is active & well
- No respiratory distress, no tachypnea, no retractions
- Child accepting oral feeds well.
- Vitals stable
- General examination – Normal
- **Respiratory system examination :**
- Chest movements are equal
- Breath sounds are heard equal on both sides
- No adventitious sounds heard .
- Other systemic examinations : normal
- Antibiotics – stopped after 14 days

Follow up

- Child brought for follow up to paediatric after 1 week .
- No complaints were present
- Child was active and well, accepting oral feeds well
- General examination – Normal, Vital signs - Normal
- **Respiratory system examination :**
- Chest movements are equal on both sides
- Breath sounds are heard equal on both sides
- No adventitious sounds heard
- **Other systemic examinations :** Normal

Final diagnosis

- 7 month old with
- **Left sided Pneumothorax**
 - associated Left lower lobe consolidation, cavitation, pleural effusion(?empyema – Staph. A)

THANK YOU