

STREPTOCOCCAL PNEUMONIA

- ▶ Infection of lung by GrpA beta hemolytic streptococci is secondary to measles, chickenpox, influenza or whooping cough
- ▶ GrpB streptococci is an imp cause of resp distress in newborns
- ▶ Pathologically it cause interstitial pneumonia
- ▶ Tracheobronchial mucosa may be ulcerated and lymph nodes enlarged

CLINICAL FEATURES

- ▶ Onset is abrupt with fever, chills, dyspnea, rapid respiration, blood streaked sputum, cough and extreme prostration
- ▶ X-ray film shows interstitial pneumonia, segmental involvement, diffuse peribronchial densities or an effusion

COMPLICATIONS

- ▶ Serosanguineous or purulent empyema
- ▶ Pulmonary suppuration (less frequent)
- ▶ Bacteremia

PRIMARY ATYPICAL PNEUMONIA

- ▶ Etiological agent is *Mycoplasma pneumoniae*
- ▶ Transmitted by droplet infection (winter)
- ▶ Uncommon in children below 4yrs
- ▶ It involves interstitial tissue with round cell infiltration
- ▶ Alveolar space are edematous and mucosa of the bronchiole inflamed and ulcerated
- ▶ Obstruction of the terminal bronchioles causes emphysema and atelectasis
- ▶ Pleura shows patchy fibrinous exudates

CLINICAL FEATURES

- ▶ IP : 12–14days
- ▶ Malaise, headache, fever, sore throat, myalgia and cough
- ▶ Cough is dry 1st later associated with mucoid expectoration, may be blood streaked
- ▶ Hemolytic anemia can be seen
- ▶ X-ray poorly defined hazy or fluffy exudates radiate from hilar regions
- ▶ Enlargement of hilar lymph nodes and pleural effusion are reported

DIAGNOSIS

- ▶ Cold agglutinins are elevated
- ▶ Demonstration of IgM Abs by ELISA during acute stage
- ▶ IgG are seen on complement fixation test after one week of illness

TREATMENT

- ▶ Macrolide antibiotics
(erythromycin, azithromycin or clarithromycin)
or tetracycline (for older children) for 7 to 10
days

CHLAMYDIA PNEUMONIA

- ▶ Pneumonia in young infants
- ▶ C/F include spasmodic cough
- ▶ H/O purulent conjunctivitis during early neonatal period may be present

PNEUMONIA DUE TO GRAM NEGATIVE ORGANISMS

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- ▶ Etiological agents are
 - E.coli
 - Klebsiella
 - Pseudomonas
- ▶ Affects small children or children with malnutrition and deficient immunity
- ▶ X-ray shows unilateral or bilateral consolidation

TREATMENT

- ▶ IV third generation cephalosporins with or without an aminoglycosides is recommended for 10–14 days
- ▶ Ceftazidime or piperacillin–tazobactam are effective in patients with pseudomonas infection

VIRAL PNEUMONIA

- ▶ Respiratory syncytial virus is the imp cause in infants under 6months of age
- ▶ At other ages, influenza, parainfluenza, and adenovirus are common
- ▶ Features of consolidation are not present
- ▶ Radiological signs consists of perihilar and peribronchial infiltrates

INGESTION OF ALIPHATIC HYDROCARBONS

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- ▶ Kerosene exerts its toxic effects on lungs and CNS
- ▶ Poorly absorbed from GIT
- ▶ C/F of hydrocarbon pneumonia are cough, dyspnea, high fever, vomiting, drowsiness and coma
- ▶ X-ray films shows ill defined homogeneous or patchy opacities

LOEFFLER SYNDROME

- ▶ Due to larvae of many nematodes
- ▶ Some cases may be due to drug reaction to aspirin, penicillin, sulfonamide or imipramine
- ▶ C/F are cough, low fever, feeling unwell, scattered crepitations
- ▶ Eosinophilia
- ▶ X-ray shows pulmonary infiltrates varying size

ACUTE RESPIRATORY TRACT INFECTION (ARTI) CONTROL PROGRAM

- ▶ Acute lower respiratory tract infection is a leading cause of mortality in children below 5yrs of age
- ▶ Clinical criteria for diagnosis of pneumonia include rapid respiration with or without difficulty in respiration
- ▶ Rapid respiration is defined as respiratory rate more than 60,50 or 40 per minute in children below 2months of age ,2 months to 1 yr, 1 to 5yrs respectively

- ▶ The WHO recommends that in a primary care setting if a child between 2 months and 5 yrs of age presents with cough he should be examined for rapid respiration, difficulty in breathing, presence of cyanosis or difficulty in feeding
- ▶ If the respiration is normal and there is no chest indrawing and difficulty in feeding, the patient is assessed to be having an upper resp tract infection and can be managed at home

- ▶ If the child has rapid respiration but there is no chest indrawing he/she is suffering from pneumonia and can be managed at home with oral cotrimoxazole for 5days
- ▶ Patients with chest indrawing are considered to have severe pneumonia and treated with parenteral penicillin
- ▶ Severe chest indrawing or cyanosis indicates very severe pneumonia and treated in hospital with IV penicillin with gentamycin and supportive care

- ▶ In children below 2 months of age the presence of :fever ,convulsions ,abnormally sleepy, stridor in a calm child, wheezing, not feeding, tachypnea, chest indrawing ,altered sensorium, central cyanosis, grunting and distended abdomen indicates severe d/s and are admitted to hospital and treated with parenteral ampicillin and gentamycin along with supportive care

Table 14.4: WHO clinical classification for treatment in children aged 2 mo to 5 yr with cough or difficult breathing

| Signs, symptoms | Classification | Therapy | Where to treat |
|--|-----------------------|------------------------------|----------------|
| Cough or cold | No pneumonia | Home remedies | Home |
| No fast breathing, chest indrawing or indicators of severe illness | | | |
| Increased respiratory rate | Pneumonia | Cotrimoxazole or amoxicillin | Home |
| <2 mo-old: ≥ 60 per min | | | |
| 2-12 mo-old: ≥ 50 per min | | | |
| 12-60 mo-old: ≥ 40 per min | | | |
| Chest indrawing | Severe pneumonia | IV/IM penicillin | Hospital |
| Cyanosis, severe chest indrawing, inability to feed | Very severe pneumonia | IV penicillin + gentamicin | Hospital |