

**Review Article**

**Pediatric Pneumonia and Homeopathic Management**

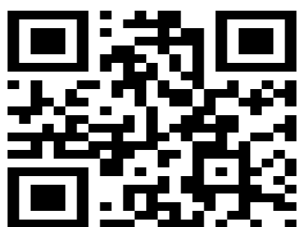
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**ABSTRACT**

Pneumonia is leading infection of parenchyma of lung. Pneumonia is a common disease in pediatric age. As per WHO prevalence of pneumonia of children in India is 41%. [7] Complication of pneumonia is very bad. It has severe complications like acute respiratory syndrome, respiratory failure, sepsis and lung abscesses. Homeopathy have many medicines which are sphere of action on lungs and power to cure pneumonia. When accurate similimum medicine given to patient then we can cure the pneumonia.

**Keywords:** Pneumonia, pediatric age, homoeopathic management



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**INTRODUCTION**

Pneumonia is a complex pathological process which include the accumulation of edematous fluid and inflammatory cells in the alveoli in response to proliferation of microorganism in normal sterile lungs. [1]

It is a condition where infiltration of interstitial tissue or consolidation of alveoli with the inflammation of cells.

If pneumonia not treated properly or fatly, it has major high-risk complication like respiratory failure, acute respiratory distress, sepsis, lung abscesses and fatal to death. [2]

**Etiology**

Viral etiology 1. RSV (respiratory syncytial virus), 2. Influenza, parainfluenza or

adenovirus and SARS-Cov2

Bacterial etiology

A. in first 2 month of age 1. Gram negative (Klebsiella and E.coli)

2. Gram positive (pneumococci and streptococci)

B. 3 month to 3 years of age

1. Pneumococci, 2. H.Influenza, 3. Staphylococci

C. after 3 years

1. Pneumococci, 2. Staphylococci

D. children’s and adolescent

Chlamydia and mycoplasma. [2]

**Following are the etiological classification**

PNEUMOCOCCI	STAPHYLOCOCCI
<b>Age</b> – older children’s	More common in infant
<b>Organism</b> – S. pneumoniae	Aureus
<b>Incidences-</b> common	Occurs less frequently
<b>Epidemiology-</b> 90% of children bacterial pneumonia	Oct to May 30% 30% under 3 month

	70% under 1 year Male>female
<p><b>Pathogenesis</b>                  Children 3 stage                  Red Hepatization                  In this stage early consolidation of alveoli with Oedema, leucocyte, fibrin, RBC, and pneumococci fill in alveoli.                  Gray Hepatization                  Rapidly formation Phagocytes.                  Resolution                  Macrophages increased.                  Degeneration of neutrophils.                  Indigested remaining bacteria.                  Infant – patchy and diffuse involvement.</p>	<p>Children 3 stage                  Bronchopneumonia, often more prominent on one side.                  Peculiarity: present of hemorrhagic necrosis and irregular cavitation.                  Multiple abscesses</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Can forms pyopneumothorax</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Destroy bronchi</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Broncho pleural fistula</p>
<p><b>Clinical features</b>                  Infants                  Mild URTI with stuffy nose, fretfulness, and reduced appetite.                  Sudden onset of fever, apprehension, restlessness, and respiratory distress.                  Air desire moderate to sever                  Cyanosis                  In sever case or distress – granting, Alae nasi flar,                  Chest muscle retraction.                  Tachycardia and tachypnea</p> <p>Children                  Fever with shaking chills.                  Restless and drowsiness.                  Dry hacking cough                  Cyanosis                  Pain on affected side.</p>	<p>H/o staphylococci skin affection in child or In family                  H/O URTI in patient or family                  Sudden onset of high grade fever, cough with respiratory distress.                  Sever dyspnea                  Shock like stage                  Associated GIT disturbance</p> <p>Rapid progression</p>
<p><b>Physical examination</b>  <u>Infant:</u> often careful                  OBSERVATION: respiratory distress                  PERCUSSION: if dullness is found, it should be presence of empyema or pleural effusion.</p> <p>AUSCULTATION:</p>	<p>OBSERVATION:                  Respiratory distress 2. Moaning 3. Decreased sternal and sternal retraction                  Infant lethargic – irritable and toxic                  PERCUSSION: in later stage presence of dullness.                  AUSCULTATION: early stage-</p>

<p>Decreased breathing sound.                  Affected side- presence of crepts.                  During resolution- presence of moist rales.                  PALPITATION: enlargement of liver</p> <p>Children observation                  Children may be tilting on affected side or it may be lying on the affected side with knee drawn up position.                  Respiratory distress                  Percussion                  Dullness is present on affected side.                  Auscultation                  Reduced breathing sound                  reduced vocal resonance                  Affected side – presence of crackling rales.</p>	<p>Decreased breathing sound.                  Affected side- presence of rhonchi and scattered rales.                  Later stage-                  Decreased breathing sound and vocal resonance.</p>
<p><b>Investigation</b>                  CBC – shows increased WBC                  ( increased polymorphs)                  HB- normal or decreased.                  Chest X-ray shows                  -patch (consolation can be detected by XRC before the physical finding).</p>	<p>CBC – shows leukocytosis, WBC normal.                  XRC shows right side of lung -80%                  Bilateral side -20%                  During the course                  -pleural effusion.                  - Pyopneumothorax.                  Require chest X-ray in frequent interval.</p>
<p><b>Treatment</b>                  Allopathic                  For older children                  Hospitalization decision depend on severity.                  For infant                  Hospitalization, I.V. fluid and oxygen.</p>	<p>Antibiotics given                  Drainage of pus                  I.V. fluid and oxygen.</p>

<b>STREPTOCOCCAL</b>	<b>VIRAL</b>
Age- 3-5 years	Peak prevalence 2-3 years
<p><b>Organism</b>                  Group a streptococci</p>	<p>1. RSV (respiratory syncytial virus), 2. Influenza, parainfluenza or adenovirus and SARS-Cov2</p>
<p><b>Epidemiology</b>                  It is limited to upper respiratory tract</p>	<p>Common                  Types and severity depends on age, season and crowding.</p>
<p><b>Pathogenesis</b>                  In this stage formation of tracheobronchial mucosa have a necrosis with formation of ulcer with huge amount of exudation with localized hemorrhage and Oedema.</p>	<p>In this stage invasion of bronchiolar mucosa by virus.                  ↓                  Acute inflammation and Oedema of bronchiolar wall</p>

<p>It has common large pleural effusion. It has hyper infiltration of lung due to obstruction in distal air trapping.</p>	<p style="text-align: center;">↓</p> <p>Hyper secretion of mucus</p> <p style="text-align: center;">↓</p> <p>Infiltration of round cells</p> <p style="text-align: center;">↓</p> <p>Necrosis of cell wall and accumulation of cellular debris. ↓</p> <p>Resistance to air flow gives rise ball-valve mechanism.</p>
<p><b>Clinical features</b> Similar to pneumococcal</p>	<p>Anticipated by respiratory symptom like rhinitis, cough, history of URTI in family. Low temperature Breathlessness common in child</p>
<p><b>Physical examination</b> Similar to pneumococcal</p>	<p>Observation: Nasal flaring. Chest retraction. Auscultation: rales late in illness Wheezing ++</p>
<p><b>Investigation</b></p> <ul style="list-style-type: none"> <li>i. Leukocytosis</li> <li>ii. ASO titre increased</li> <li>iii. XRC- diffuse bronchopneumonia with large pleural effusion.</li> </ul>	<ul style="list-style-type: none"> <li>I. WBC under 20,000</li> <li>II. XRC- diffuse infiltration. Hyperinflation. Straightening of ribs.</li> </ul>

**Homeopathic approach**

Homeopathic treatment depends on the clinical inquiry or case taking of pneumonia. When your case taking is accurate or proper then your will get chances to find similimum. When exact similimum takes place then you will get fast cure in the patient.

Importance should be given to spontaneous observation of mother. The history should be included in detail day wise progression of complaints with direction, pace, frequency of cough, fever, dyspnea, discharge, etc. as well as intensity and quality. It contains alimnt from change of weather, food, and draft, family history of URTI, aggravation, and amelioration. Concomitant symptom like dullness, drowsiness, irritability, restlessness and weakness. H/O febrile convulsion, past history of similar episodes. Physical generals like thirst, appetite, sleep pattern and ability

to suck milk in infant. Thermals and family history.

Physical examination is must while examination of patient. Keep the child in comfortable position while examination. Distract the child who is crying- 1. Look (ill/sick/active/ playful/ toxic), 2. Alae nasi or use of accessory muscle, 3. Granting/ moaning, 4. Cyanosis-periphery/central, 5. temperature/ respiratory rate, 6. chest examination and auscultation, 7.per abdomen- in infant liver and spleen enlargement/ skin turgor, 8. In children-neck rigidity, brudzinski’s sign present in toxicity. In infant- anterior fontanels.

Estimate to miasm, sensitivity and susceptibility. Tubercular miasm because –a. pace of disease is rapid involvement of chest with hyperactivity of disease, b. erraticity, c. low reactivity, d. pathology of infection-

inflammation and hyper secretion- spasm. Sensitivity depends on activeness of baby, if baby have irritability and restlessness that indicate high sensitivity. If baby have dull, drowsiness that indicate low sensitivity. Susceptibility is a reaction to stimuli; availability of characteristic means moderates to high susceptibility. Indication of good susceptibility is febrile response i.e., alertness and fever. If lethargic, toxic state in disease means low susceptibility. Pace depend on virulence of organism and state of susceptibility. Complication is the low susceptibility that denote poor reaction and lack of characteristics. [6]

### Strategies in the management in pneumonia

1. Collected the characteristic data of pneumonia.
2. Collect some other accidental findings of pneumonia with clinical presentation.
3. In the pneumonia child has immune-compromised, e.g. Steroid treatment in nephrotic syndrome

When all characteristic available, make acute totality and find well selected acute remedy and given in moderate (200) potency in 4 hour interval. The basic rule is to give power to susceptibility. If crisis over and resolution is takes place then you can give deep acting remedy i.e. constitutional or intercurrent remedy. When we have less characteristic symptom and low susceptibility then we need to give higher (1M/10M) potencies of remedy in acute frequent interval until point of response. Always constitution and intercurrent remedy give in bed time because action of remedy is good in bed time.

In case there is no acute form and moderate susceptibility then resort the case by giving constitutional remedy.

If in case acute partial symptom present with strong tubercular symptom is present then we can give intercurrent remedy followed by constitutional remedy on the next day.

All above method we can use for clinical for 12 to 24 hours. Radiological it takes 2-3 week to resolve. [3]

### Some therapeutics which we use in pneumonia

#### Antim tart

Symptom of upper respiratory tract travel

fast to chest. Secretion is excessive. Chest is full of mucus with loose mucus, course rattling. Sputum cannot be come out and system is lack in reaction. Amelioration by vomiting of thick whitish mucus. Threatening look with drowsiness, toxicity. Moaning, crankiness, thirst for sips of water. White coating of tounge.hot patient.

#### Arsenic alb

Arsenic alb is a deep acting antisyphilitic as well as acute antisycotic remedy. It have profuse secretion. Rapid pace, cough, breathlessness and midnight agg or night agg. Watery excoriating nasal discharge. Great prostration with sudden weakness in child. Thirst increased and chilly patient. Restlessness at night.> covering, <uncovering. [4]

#### Bryonia

Gradual progression. Stitching pain due to pleural involvement. Expression of face is agony and child may tilt on affected side. Dryness of mouth, dryness of mucus membrane. Dry cough with headache. [5]

#### Conclusion

When we follow the accurate line of treatment in pneumonia and observation of case is proper then we can cure the pneumonia in pediatric.

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