



Scope of Homeopathic Medicine in Pneumonia – A Review

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ABSTRACT-

Pneumonia is the most common cause of death in India and one of the leading causes of death worldwide. In India, it is the leading cause of death from infectious diseases. It is commonly caused by streptococcus pneumonia. Through the inhalation of airborne droplets from a cough or sneeze, it can spread to other people. Indications for often-prescribed homoeopathic treatments for pneumonia are provided in this article.

Keywords- Infectious disease, homoeopathy, pneumonia, Streptococcus pneumonia, vaccines.

Introduction ^[1]

Pneumonia is an infection of the lung that affects the air sacs, or lung alveoli, and it can be caused by bacteria, viruses, or fungi. It is the primary infection-related cause of hospitalization and mortality worldwide, resulting in severe human and economic effects. A productive or dry cough, chest discomfort, fever, and difficulty breathing are typical symptoms. It is caused by the facultative anaerobic pathogenic bacteria Haemophilus influenza and pathogenic gram-negative bacteria.

Classification ^[2, 3,4,5,6,7]

The classification is followed by the American Thoracic Society.

- 1. Community Acquired pneumonia:** A major cause of hospitalization, death, and huge medical expenses is community-acquired pneumonia. The way a disease shows appears can vary from a minor illness that can be treated as an outpatient to a serious condition. Haemophilus influenzae and Streptococcus pneumoniae, two Gram-positive and Gram-negative bacteria, are the causes.
- 2. Hospital Acquired Pneumonia:** Healthcare-associated infections (HAI), sometimes referred to as hospital-acquired infections (HAI), are nosocomial acquired illnesses that may be incubating or absent at the time of admission. These infections often develop 48 hours (about 2 days) after hospital admission and develop after. It is caused by Candida that Pseudomonas, Enterococcus, Staphylococcus aureus, and Proteus.
- 3. Ventilator Associated Pneumonia:** If pneumonia (lung infection) occurs in a patient who has been on mechanical ventilation for longer than 48 hours (about 2 days), it is referred to as ventilator-associated pneumonia (VAP). In patients undergoing critical care units for newborns and children, ventilator-associated pneumonia ranks second in terms of hospital-acquired infections. It is caused by *Staphylococcus aureus*, *Pseudomonas aeruginosa* and other gram-negative bacteria.

Epidemiology ^[6]

WHO estimates that pneumonia causes one out of every three newborn (0–5) deaths. In children, pneumonia affected over 156 million people in 2008. There are 24.8 cases per 10,000 individuals in this age group; the greatest rates are found in people 65 to 79 years old (63 cases per 10,000 adults) and in persons 80 years of age or older (164.3 cases per 10,000 adults). The most common illness in developing countries is pneumonia.

Etiology ^[8]

Bacteria and viruses are the main causes of pneumonia, with fungi and mycoplasma appearing less often.

- Bacterial pneumonia: Most cases of community-acquired pneumonia (CAP) are caused by bacteria, with *Streptococcus pneumoniae* being recognized in more than fifty percent of the cases. Additional bacteria that are frequently recognized include *Legionella pneumophila*, *Moraxella catarrhalis*, *Staphylococcus aureus*, and *Chlamydia pneumoniae*, which account for 20%, 13%, and 3% of cases, respectively.
- Viral pneumonia: Approximately one-third of pneumonia cases in adults and 15% of cases in children are caused by viruses. Agents such as rhinoviruses, coronaviruses, influenza viruses, respiratory syncytial viruses (RSV), adenoviruses, and parainfluenza have been implicated. Pneumonia caused by the herpes simplex virus is uncommon, except for certain populations, including infants, cancer patients, recipients of transplants, and those with severe burns. Cytomegalovirus pneumonia is common following organ donation or in individuals with impaired immune systems.
- Fungal pneumonia: People who breathe in huge quantities of soil- or bird-borne fungus can get pneumonia. They infected patients with this pneumonia who already had weaker immune systems due to illnesses like AIDS. "Pneumocystis jirovecii" pneumonia is one kind of fungal pneumonia (PCP).
- Mycoplasma pneumonia: This type of pneumonia, which often affects older kids and young adults, is caused by mild cases. Neither bacteria nor viruses are mycoplasma organisms.

Pathogenesis ^[9]

The invasive organism induces an excessively inflammatory immune system reaction in the lungs, which increases the symptoms. Less functional space for the exchange of oxygen and carbon dioxide arises from leaky, tiny blood capillaries in the lungs, which permit protein-rich fluid to penetrate the alveoli.

To take in more oxygen and expel more carbon dioxide, the patient starts to breathe more quickly and becomes more oxygen deprived. Leaky capillaries cause an increase in mucus with blood, which lowers lung gas exchange efficiency. The high concentration of white blood cells causes the alveoli to fill even more with fluid and debris, inflaming the lungs and increasing the risk of pneumonia.

Histopathology ^[10]

Histopathology in pneumonia can be broadly studied under 2 main headings:

1. Bronchopneumonia/lobular pneumonia - The most common feature of bronchopneumonia is purulent inflammation around the airways, which may or may not be seen in a single lung lobe.
2. Lobar pneumonia - Lobar pneumonia is a widespread accumulation that affects the whole lung lobe. Its development may be split into the following four stages:
 - Congestion: Extremely thick and swollen lung tissue, frequent congestion, vascular congestion, and an accumulation of infectious organism-rich alveolar fluid are typical features of this stage. Few red blood cells (RBCs) and neutrophils are present at this stage.
 - Red hepatization: There is a significant infiltration of fibrin, neutrophils, and red blood cells into the alveolar fluid. The term "hepatization" refers to the gross appearance of the lungs, which resemble a hard red liver.
 - Gray hepatization: The color of red blood cells turns gray as they degenerate and become related to fibrinopurulent exudates.
 - Differentiation: characterized by the local macrophages' clearance of exudates, either with or without the formation of constant scars.

Risk factor ^[10]

Youngsters under two years old and people over 65 are more susceptible to long-term lung diseases that affect the immune system, such as asthma, COPD, cystic fibrosis, diabetes, or heart disease.

Sign and symptoms ^[11]

The symptoms of pneumonia range from minor to severe. Pneumonia's most typical symptoms may include:

- Cough with phlegm.
- Fever, sweating and chills.
- Shortness of breath with Chest pain.
- Children under 5 years of age may have fast breathing.
- Infants may vomit, lack energy, or have trouble drinking or eating.
- Older people may have a lower-than-normal body temperature.

Management ^[12]

A radiological examination, test results, and clinical condition all affect how pneumonia is evaluated and diagnosed.

- Clinical assessment- To assess the clinical signs and symptoms mentioned previously, this involves thoroughly examining the patient's medical history and doing a full physical examination.
- Laboratory evaluation - includes tests such as a complete blood count with differences, blood cultures, sputum analysis, Gram stain, urine antigen testing, polymerase chain reaction to identify the nucleic acids of a specific bacterium, and inflammatory biomarkers like ESR and C-reactive protein.

Arterial blood gas can reveal hypoxia and respiratory acidosis.

- Radiological evaluation- includes a chest x-ray as an initial imaging test. If laboratory and clinical characteristics are supportive, the finding of infiltrations of the lungs on plain film is seen as the gold standard for diagnosis.

Chest CT scan is performed in complex cases where the cause is unknown.

Vaccination- ^[8]

There are mainly two types of vaccines recommended by center for disease control and prevention to every person of 6 months and older for pneumonia.

1. The **pneumococcal polysaccharide vaccine (PPV)** is reserved for those 65 years of age or older who belong to a high-risk category. This immunization is often only required once in the lifetime of an adult.
2. The **pneumococcal conjugate vaccine (PCV)** is given to newborns by the NHS. The first dose is given to babies when they are two months old.

Differential diagnosis ^[13]

The differential diagnosis of pneumonia includes-

- COPD
- Pulmonary edema
- Pulmonary embolism
- Bronchiolitis
- Bronchiectasis

Homoeopathic management ^[14]

Aconite napellus - initial stage brought on by the cold in the dry, chilly air. About the same time the attack started, there were chills. There was also a high fever, a dry burning sensation, hot skin, a fast, hard pulse, acute thirst, anxiety, restlessness, dyspnea, and maybe even dread of dying. Finally, there was continual pressure on the left chest and laborious breathing. gripping his throat, drinking at night, and experiencing a wheezing cough that got worse with each inhalation. He prefers to lie on his back while he coughs. breathing difficulty when asleep. blood clot that is violent in the chest. Pneumonia. pressure in the chest at the slightest motion. The lungs are warm.

Antimonium tartaricum - the most effective treatment for older patients' right lung pneumonia with jaundiced cough, particularly during the winter when expectoration is poor, and the chest is weak. respiratory difficulties that are relieved by coughing. respiratory problems in newborns. as well as severe respiratory discomfort. young people with rattled chests.

Bryonia alba - Cough dry, hard, and very painful; worse at night; makes it harder to sit and consume food and liquids. He tries to inhale deeply, but either he coughs or can't. Coughing up solid or stained with rusty blood. Pneumonia. Sharp edges are included. Right scapula or chest, coughing, and heavy breathing are worse. Pleurisy. Coughing occurs when one enters a heated room. When coughing, hold the chest or press against the sternum.

Chelidonium: right-sided pneumonia followed by a painful cough, a backache, and a desire for warm beverages. hemorrhage. Intercostal neuralgia on the right side, aggravated with movement. Pneumonia bilious. hepatic symptoms, along with respiratory symptoms. Breathlessness and chest tightness. breathlessness that makes urination worse. They frequently complain on the right side. discomfort with motions. and becomes better after noon.

Lachesis mutus - when pneumonia enters its last stage and resembles typhoid fever, particularly when there is a lung abscess. mostly in the left lung, hepatization. severe respiratory difficulties.

Sulphur- severe mucous rattling in the chest. hot flushes that are weak, frequent, and weak. wants the window or door to be open. When the pneumonia is further advanced and shows no signs of recovery. Often, bryonia is needed.

Phosphorus- Lower left lung pneumonia. Pneumonia with oppression; worst while lying on the left side; worst when moving least. respiratory congestion. severe cough and constricted, suffocating breathing. Coughing hard and dry, racking. Sputa that is purulent, rusty, or blood colored.

Veratrum viride - Pneumonia is accompanied by severe pulmonary congestion. breathing difficulties. Breathing heavily and slowly, like a weight on your chest, Pneumonia is accompanied by severe congestion and a woozy feeling in the stomach. vomiting as well as nausea. violent cough immediately.

Conclusion

It is impossible to create vaccinations against every microorganism, though. New microorganisms constantly appear, and old ones constantly alter. Microbes get resistant to antibiotics; therefore, new medications won't be sufficient on their own. To obtain more insight into lung immunity, including how it responds to different infections, how common host variables affect it, and how it might be targeted for therapeutic purposes, a significant investigational effort must be launched. A range of homoeopathic medicines that are appropriate for use with various patient types are required for a treatment. To improve the body's reaction, homoeopathic medicines that boost immunity might also be used.

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