



# HOMOEOPATHIC INSIGHT IN ACUTE BRONCHITIS: A COMPREHENSIVE STUDY

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## ARTICLE INFO ABSTRACT

Cough is the most common illness-related reason for ambulatory care visits in India. Acute bronchitis is a clinical diagnosis characterized by cough due to acute inflammation of the trachea and large airways without evidence of pneumonia. The cough associated with acute bronchitis typically lasts about two to three weeks, and this should be emphasized with patients. Acute bronchitis is usually caused by viruses. Pneumonia should be suspected in patients with tachypnea, tachycardia, dyspnea, or lung findings suggestive of pneumonia, and radiography is warranted. Pertussis should be suspected in patients with cough persisting for more than two weeks that is accompanied by symptoms such as paroxysmal cough, whooping cough, and post-tussive emesis, or recent pertussis exposure. Antibiotics have been shown to provide only minimal benefit, reducing the cough or illness by about half a day, and have adverse effects, including allergic reactions, nausea and vomiting, and *Clostridium difficile* infection. This article will help professionals not only Evaluation and treatment of bronchitis include ruling out secondary causes for cough, such as pneumonia and to overcome such problems and consider the factseriously that by recommending symptomatic treatment given by using Homoeopathy can cures such problems Gently and Harmlessly.

**Keywords:** Acute Bronchitis, Homoeopathy, Tachypnea, Tachycardia, Dyspnea

## Introduction:

Acute bronchitis, characterized by inflammation in the bronchi lining, is a frequent condition in emergency departments, urgent care centers, and primary care offices. Acute bronchitis, a prevalent respiratory infection, is a significant medical concern, particularly among adult patients. Acute bronchitis ranks among the top 10 most common outpatient illnesses in the United States, affecting approximately 5% of adults annually and about 6% of children have at least one episode a year. Acute bronchitis affects more than 40 in 1000 adults per year in the UK. The causes are usually considered to be infective, but only around half of people have identifiable pathogens. This condition involves the lower respiratory tract, specifically targeting the bronchi, the prominent air passages responsible for air transport within the lungs. Acute bronchitis manifests as an inflammation of these bronchi without evidence of pneumonia and typically affects individuals without underlying chronic obstructive pulmonary disease (COPD). In 2010, COPD affects 329 million people or nearly 5% of the global population. About 5% of adults are affected In 2013, it resulted in 2.9 million deaths, up from 2.4 million deaths in 1990.

Acute bronchitis is characterized by an acute onset of a persistent cough, with or without sputum production. As a self-limiting condition, it typically follows a benign course, resolving spontaneously over 1 to 3 weeks. The etiology of these symptoms arises from the inflammatory response within the lower respiratory tract, often triggered by viral infections.[1][2][3]. The role of smoking or of environmental tobacco smoke inhalation in predisposing to acute bronchitis is unclear. One third of people may have longer-term symptoms or recurrence.

### Definition-

Bronchitis is characterized by inflammation of the bronchial tubes (bronchi), the air passages that extend from the trachea into the small airways and alveoli.

There are different types of bronchitis with different causes, symptoms and treatments which are mentioned below-

- A. Acute Bronchitis
- B. Chronic Bronchitis

### Acute Bronchitis

Acute bronchitis is a respiratory condition characterised by inflammation and swelling of the bronchi (breathing tubes), leading to increased mucus production and other changes. It is a short-term condition that usually resolves on its own within a few days or weeks, and lung function returns to normal.

Chronic bronchitis is characterized by inflammation and swelling of the bronchi, a kind of chronic obstructive pulmonary disease (COPD) condition referred to as productive cough lasts or at least 3 months or more, Occurring with span of 2 years which are more serious than acute.

### Epidemiology

The overall prevalence of ARIs in the study was 50.04%. It was higher among the children living in the rural areas (54.2%) compared to the children living in the urban areas (46.7%) ( $p = 0.01$ ). [4] In India, the prevalence of chronic bronchitis (CB) among adults over 35 is 3.49%. According to findings from a study on respiratory symptoms, asthma, and chronic bronchitis this rate is lower for women at 2.7% and higher for men at 4.29%. [5] About 5% of adult self report an episode of acute bronchitis each year and up to 90% of them seek medical advice. Viruses appear to be mainly responsible, causing up to 95% of cases of acute bronchitis in otherwise healthy adults. The viruses are the same as those that cause the common cold. [6]

In addition, several risk factors contribute to the development of acute bronchitis, including a history of smoking, residence in polluted areas, crowded living conditions, and a prior history of asthma. Specific allergens such as pollen, perfume, and vapors can potentially trigger acute bronchitis in susceptible individuals. [10]

### Etiology-

Acute bronchitis in adults is often linked to viruses that cause infections in both the lower and upper respiratory tracts, as well as exposure to lung irritants and bacterial infection. The following are the viruses, bacterial infections and lung irritants that cause acute bronchitis including viruses that cause lower respiratory tract infections includes

- Influenza A and B (most common cause of bronchitis)
- Parainfluenza
- Respiratory syncytial virus
- Human metapneumo virus

Viruses that cause infection of the upper respiratory tract include

- Rhinovirus
- Coronavirus
- Adenovirus

Bacterial infections cause a significantly lower percentage of acute bronchitis

- Chlamydia pneumoniae is mainly observed in young adults
- Bordetella pertussis
- Mycoplasma pneumoniae

Lung irritants such as

- Tobacco smoke
- Air pollution
- Vapours
- Dust and fumes [6]

### Pathophysiology

Acute bronchitis is inflammation affecting the large and mid-sized airways (bronchi), frequently precipitated by viral infections. The wide array of anatomical sites within the respiratory tract where these pathogens can take hold underscores the diverse impact of these microorganisms on the respiratory tract. [7]

The inflammatory process triggers increased blood flow and cellular activity within the affected bronchi, resulting in heightened  $^{18}\text{F}$ -fluorodeoxyglucose (FDG) uptake when observed via positron-emission

tomography (PET) scan.[8] Additionally, bronchial inflammation can stem from various triggers, with viral infections, allergens, and pollutants among the most common culprits. The inflammation of the bronchial wall leads to mucosal thickening, epithelial cell desquamation, and denudation of the basement membrane. In some instances, a viral upper respiratory infection can progress to a lower respiratory tract infection, resulting in acute bronchitis.[9]

### **Clinical features**

A complete history must be obtained, including information on exposure to toxic substances and smoking. Symptoms of bronchitis include the following:

- Cough (the most commonly observed symptom)
- Sputum production (clear, yellow, green, or even blood-tinged)
- Fever (relatively unusual; in conjunction with cough, suggestive of influenza or pneumonia)
- Nausea, vomiting, and diarrhea (rare)
- General malaise and chest pain (in severe cases)
- Dyspnea and cyanosis (only seen with underlying chronic obstructive pulmonary disease [COPD] or another condition that impairs lung function)
- Sore throat
- Runny or stuffy nose
- Headache
- Muscle aches
- Extreme fatigue

Physical examination findings in acute bronchitis are variable and may include the following:

- Diffuse wheezes, high-pitched continuous sounds, and the use of accessory muscles (in severe cases)
- Diffuse diminution of air intake or inspiratory stridor (indicative of bronchial or tracheal obstruction)
- Sustained heave along the left sternal border (indicative of right ventricular hypertrophy secondary to chronic bronchitis)
- Clubbing on the digits and peripheral cyanosis (indicative of cystic fibrosis)
- Bullous myringitis (suggestive of mycoplasmal pneumonia)
- Conjunctivitis, adenopathy, and rhinorrhea (suggestive of adenoviral infection)[11]

### **Diagnosis**

Bronchitis may be suspected in patients with an acute respiratory infection with cough; yet, because many more serious diseases of the lower respiratory tract cause cough, bronchitis must be considered a diagnosis of exclusion.

Studies that may be helpful include the following:

- Medical history
- Physical examination
- Acute bronchitis physical exam findings
- Chronic bronchitis physical exam findings
- Other diagnostic test for bronchitis
- Chest X-ray
- Arterial blood gas
- Pulse oximetry
- Blood test for bronchitis or a c b c for bronchitis
- Culture of sputum or bronchitisputham test
- Nasal swab
- Pulmonary function test
- Bronchoscopy
- Fractional expendixide test [12,13]

Complications of acute bronchitis

- Pneumonia - Pneumonia is the most frequent complication of acute bronchitis occurring when the infection splits further into the lungs causing year sex to fill with fluid
- Spontaneous Pneumo thorax lung diseases such as acute bronchitis can increase the risk of developing spontaneous pneumothorax also known as collapsed lung this conditions occurs when air builds up in the plural space which connects lungs and chest wall which is a very rare condition and a complication of bronchitis in elderly people
- Chronic bronchitis Repeated episodes of acute bronchitis lead to chronic bronchitis especially in smokers and individuals with other lung conditions[14]

### **Homoeopathic approach in Management of Acute Bronchitis[15,16]**

#### **Bryonia**

In a Bryonia case there will be a prominent cough, which is typically dry, hard and painful. The cough is worse for any kind of movement, including deep breathing, talking or eating. The person may need to hold their head or chest while coughing. There will be dry heat with fever, and if there are pains in the chest they will tend to be stitching pains, aggravated by coughing or deep breathing, and better for lying on the painful side. Bryonia is a remedy often indicated in acute bronchitis and also in the early stages of pneumonia.

### **Kali carb**

Kali carb is another important remedy in the treatment of acute bronchitis as well as pneumonia. The cough is usually dry and hard, and worse between 3am and 5am in the morning, and better for warmth and for leaning forward. The chest may feel cold, weak and heavy, and if there is pain in the chest it will be stitching in character, and typically in the region of the lower right lung.

### **Carbo veg**

Carbo veg is perhaps a less well known but equally important remedy in acute respiratory infections, including acute bronchitis. One of its key indications is breathlessness, with a great need for open air or drafts/fanning. The chest feels weak, and there are often bouts of coughing with redness of the face and sensation of heat. There may also be thick mucus on the chest which is difficult to cough up.

### **Phosphorus**

Phosphorus is a remedy often indicated in acute respiratory infections. In acute bronchitis there will typically be a hard dry cough which starts with a persistent tickle, felt in the chest. The cough tends to be worse on lying down at night, and worse while lying on the left side, or for change of temperature (eg going from a warm to cold atmosphere, or vice versa). The person will often obtain some relief from sitting propped up, and the chest typically feels tight, with a sensation of heat behind the sternum. Where Phosphorus is indicated there is often a characteristic hoarseness and raw sensation in the throat and chest.

### **Justiciaadhatoda**

This remedy is indicated in cases where dry cough from sternal region all over chest. Hoarseness, larynx painful. Paroxysmal cough, with suffocative obstruction of respiration. Cough with sneezing. Severe dyspnea with cough. Tightness across chest. Asthmatic attacks, cannot endure a close, warm room. Whooping-cough.

### **Drosera**

In a case where Drosera is indicated, there is a prominent cough which is violent and choking in character. The typical Drosera cough comes on as soon as the person lies down, and bouts can end in retching and vomiting. The cough is also worse after midnight, and for talking or eating. A cold sweat may accompany the cough.

### **Pulsatilla**

Where Pulsatilla is indicated, there is often a lot of mucus in the chest, with a cough which is typically loose in the morning (and during the day), and dry in the evening and during the night. The person will feel better for fresh open air, and worse in a warm or stuffy room. When loose, the cough may be accompanied by vomiting of mucus. There may be a sensation of fullness and pressure in the chest.

### **Spongia**

The typical cough of Spongia is very distinctive, with a dry, barking, rasping or ringing sound. It is sometimes described as sounding like a wood saw. It will often be aggravated by being in a warm room, or from talking, and is worse in the early part of the night. The cough may be eased by eating or drinking warm things. There is great dryness in the air passages, and the chest may feel very weak.

### **Ant tart**

This remedy is indicated in cases of bronchitis (or bronchiolitis in younger children) where one of the main features is an accumulation of mucus in the air passages with a difficulty in coughing it up. The cough is weak and unproductive, and there will be a rattling or bubbling sound in the chest. The cough is typically worse around 3-4am, and the mucus is thick and sticky. There may be breathlessness (dyspnoea) with a desire for sitting up and for drafts of air.

### **Causticum**

Bronchitis with a deep, hard, racking cough can indicate a need for this remedy. The person feels that mucus is stuck in the throat and upper chest, and may cough continually to try to loosen it. A feeling of rawness and soreness can develop, or a sensation as if a rock is stuck inside. Chills can occur along with fever. Exposure to cool air aggravates the cough, but drinking something cold can help. The person may feel worse when days are cold and clear, and better in wet weather.

### **Dulcamara**

When a person easily gets ill after being wet and chilled (or when the weather changes from warm and dry to wet and cool) this remedy may be indicated. The cough can be tickly, hoarse, and loose, and worse from physical exertion. Tendencies toward allergies (cats, pollen, etc.) may increase the person's susceptibility to bronchitis.

### Silicea

A person who needs this remedy can have bronchitis for weeks at a stretch, or even all winter long. The cough takes effort and may bring up yellow or greenish mucus, or little granules that have an offensive smell. Stitching pains may be felt in the back when the person is coughing. Chills are felt more than heat during fever, and the person is likely to sweat at night. A person who needs this remedy is usually sensitive and nervous, with low stamina, swollen lymph nodes, and poor resistance to infection.

### Sulphur

This remedy can be indicated when a person has had many bouts of bronchitis (sometimes the resistance has been weakened by taking antibiotics too often for minor complaints). The cough feels irritating, burning, and painful; yellow or greenish mucus may be produced. Problems can be worse if the person gets too warm in bed, and breathing problems at night may wake the person up. Redness of the eyes and mucous membranes, and foul-smelling breath and perspiration are often seen when a person needs this remedy.

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