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## THE ROLE OF CALCAREA CARBONICA IN RESPIRATORY HEALTH: INSIGHTS FROM HOMEOPATHIC LITERATURE

Dhanya Suresh<sup>1</sup>, V. Winston Vargheese<sup>2</sup> and C.R. Krishna Kumari Amma<sup>2</sup>

<sup>1</sup>*Department of Anatomy, Government Homoeopathic Medical College,  
Kozhikode, Kerala, India*

<sup>2</sup>*Department of Materia Medica, Sarada Krishna Homoeopathic Medical College, (Affiliated to The  
Tamil Nadu Dr. M.G.R. Medical University, Chennai), Kulasekharam, Kanyakumari District,  
Tamilnadu, India.*

\*Corresponding Author Email: [drdhanyasuresh2007@gmail.com](mailto:drdhanyasuresh2007@gmail.com)

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### ABSTRACT:

Calcium plays a pivotal role in numerous physiological processes within the body, including those related to respiratory health. This abstract presents a synthesis of findings from various studies and homeopathic literature, shedding light on the effectiveness of Calcarea Carbonica in addressing respiratory conditions, particularly in children and females. The literature review underscores the significance of calcium regulation in bronchial constriction and mast cell mediator release, implicating its involvement in bronchial hyperreactivity and asthma. Studies have highlighted the detrimental effects of vaping on calcium signalling pathways, leading to inflammation and decreased cell viability in the respiratory system. Homeopathic perspectives, as articulated by renowned practitioners such as Margret Tyler and Cyrus Maxwell Boger, further elucidate Calcarea Carbonica's efficacy in addressing respiratory ailments, especially in children prone to colds and females experiencing glandular affections and mucous production. Retrospective studies examining the effectiveness of Calcarea Carbonica on musculoskeletal conditions and pulmonary diseases reveal promising outcomes, with significant improvements observed in cases of acute bronchitis, chronic bronchitis, bronchial asthma, rhinitis, and upper respiratory tract infections (URTI). Furthermore, guiding symptoms from materia medica by Constantine Hering emphasize the rattling of mucus, bronchitis, sensation of dust in the throat and lungs, bronchocele, catarrh in sinus frontalis, and pressive pain in the forehead as indicators for Calcarea Carbonica intervention, with notable improvements observed in patients presenting these symptoms. In conclusion, the evidence presented underscores the therapeutic potential of Calcarea Carbonica in addressing a spectrum of respiratory ailments, particularly in children and females, thereby warranting further investigation and consideration in clinical practice.

**KEYWORDS:** Boger, Calcium, Calcarea, Retrospective, Respiratory.

**INTRODUCTION:**

Calcium, a fundamental element in the intricate web of biochemical processes that sustain life within the human body, plays a pivotal role in various physiological functions, including neurotransmission and the regulation of smooth muscle activity(1-5). Recent studies have shed light on the intricate relationship between calcium signaling pathways and respiratory health, particularly in the context of conditions such as asthma and pulmonary diseases.

Research by Shipman(6) highlights the potential adverse effects of vaping on pulmonary health, emphasizing disruptions in calcium regulation as a key contributor to decreased cell viability and heightened inflammation. Moreover, investigations by Rodger(7) underscore the significance of calcium ion mechanisms in airway smooth muscle, offering promising avenues for novel therapeutic interventions in asthma management.

Further insights from Hansford(1) delve into the role of calcium in respiratory control, elucidating its involvement in ATP hydrolysis and mitochondrial function. These findings underscore the integral role of calcium in orchestrating respiratory processes at both the cellular and systemic levels.

In the realm of alternative medicine, the significance of calcium is echoed in studies by Tyler(2) and Boger(3), who elucidate its impact on respiratory ailments, especially in vulnerable populations such as children. Clarke and Hering(4) further corroborate these observations, noting symptoms such as mucus accumulation and bronchial irritation associated with calcium dysregulation.

Drawing upon these diverse perspectives, this article aims to explore the multifaceted role of calcium in respiratory health, synthesizing evidence from conventional and complementary medicine to offer a comprehensive understanding of its implications for clinical practice and therapeutic interventions

**MATERIALS AND METHODS****Study Setting:**

A total of hundred cases were selected randomly from Sarada Krishna Homoeopathic Medical College Hospital's Inpatient Department, Outpatient Department, and peripheral centres, treated with *Calcarea carb* and had significant improvement. The cases were selected from 2000-2014 – which have been prescribed with *Calcarea Carbonica* and shown marked improvement in disease conditions.

**Selection of Samples**

The selection of samples for this study adhered to rigorous criteria, ensuring the reliability and validity of the findings. A minimum of one hundred cases were included, providing a robust dataset for analysis. Employing a random sampling technique, cases were randomly selected from various sources including Sarada Krishna Homoeopathic Medical College

Hospital's Inpatient Department, Outpatient Department, and peripheral centers. These cases spanned a significant timeframe, covering a period of sixteen years from 2000 to 2014, thereby capturing a comprehensive view of the efficacy of Calcarea carb treatment over time. The chosen cases exhibited notable improvements following the administration of Calcarea carb, underscoring its therapeutic efficacy in diverse clinical scenarios. This meticulous approach to sample selection enhances the credibility of the study's findings and underscores the potential of Calcarea carb as a valuable therapeutic option in homoeopathic practice.

### **Process of study**

The 400 cases which were prescribed with Calcarea Carbonica were randomly selected. Out of these, a careful selection process pinpointed 250 cases that exhibited a positive response to Calcarea Carbonica. Narrowing it down even further, the final cohort of 100 cases was meticulously chosen for an in-depth study, where Calcarea Carbonica judiciously applied, resulting in significant improvements.

The selected cases underwent a thorough processing through a case-concept form and a standardized paper on homoeopathic prescription which were used by Institute of Clinical Research (ICR) Mumbai.

This meticulous approach facilitated the comprehensive analysis of each case. Finally, the synthesized data from the analysed cases were amalgamated to derive the overarching concept underlying the efficacious treatment with Calcarea Carbonica.

### **Study Design**

The case is processed through case –concept form and standardized paper on homoeopathic principles which enables the analysis of the case, and finally the analysed data synthesized together to form the concept involved in the treatment.

Case concept form (CCF) is a form designed to enable a homoeopathic physician to consciously identify the concepts utilized whilst solving – a case in homoeopathic practice. patient is the one with problems who visit or is brought to the physician with an expectation that, he would resolve it. While studying a case, CCF allows us to extend our learning by making us aware of our concepts. Any case treated homoeopathically can be used for this form, provided an adequate case record including follow ups is maintained. This form comprises of 6 sections and 20 areas. These sections/ areas have been derived from various steps taken by a homoeopathic physician from the time he receives the case till the final outcome

The problem definition in understanding a patient's condition involves a meticulous process aimed at unravelling the underlying issues. Initially, through clinical interviews and thorough examination of the case record, physicians delve into the patient's history and current symptoms. Subsequently, correlations among the amassed data are established through symptomatic classification, clinicopathological, psychological, and Hahnemanian miasmatic pathology evaluations. This leads to the analysis and synthesis of the totality of symptoms, which is pivotal in determining the appropriate remedial action. Different totality categories such as acute, chronic, intercurrent, sequential, split, and related are considered, utilizing

both repertorial and non-repertorial techniques. Problem structuralization further refines the understanding by organizing the case into homologous blocks and evolutionary totality. Finally, problem resolution entails the application of remedial and non-remedial management strategies, encompassing general and individual approaches, mechanical measures, specific homoeopathic planning, and prognosis assessment. Through education and training, specific case studies are conducted, employing a retrospective study method, with inclusion criteria focusing on patients showing significant improvement with Calcarea Carb treatment, while excluding those with no discernible progress.

## OBSERVATION AND RESULT

While considering the respiratory system affections and improvement with Calcarea Carbonica a grand total of 36 persons were affected with different respiratory complaints, are got significantly improved with Calcarea Carbonica

(5). On an age group up to 12 month one was affected with acute bronchitis and significantly improved with Calcarea Carbonica. On an age group of 1-12 years 5 female children were affected with acute Brochities, one female child with chronic bronchitis, one female child with Lobar Pneumonia and one with rhinitis and 7 were affected with URTI and got significantly improved with Calcarea Carbonica.

In an age group of 1-12, one male child was affected with acute bronchitis, one was with bronchial asthma, two were affected with chronic bronchitis and got significantly improved with Calcarea Carbonica

In an age group of 13-21, one female was affected with sinusitis, 2 were affected with URTI

One male child was affected with acute rhinitis, one was with bronchial asthma, one was with deviated nasal septum and two were affected with URTI, and got significantly improved with Calcarea Carbonica

On an age group of 22-35 females, 1 was affected with URTI

On an age group of 36-60 females, 3 were affected with bronchial asthma. 2 were affected with bronchitis and 2 were with chronic sinusitis and got significantly improved with Calcarea Carbonica

**Table 1: Reparatory system affection according to Age and sex**

| Age group | Gender       | Patient count |
|-----------|--------------|---------------|
| 1 to 12   | Female child | 14            |
| 1 to 12   | Male child   | 5             |
| 13-21     | Female       | 3             |
| 13-21     | Male         | 5             |
| 22-35     | Female       | 1             |
| 36-60     | Female       | 7             |

|             |        |    |
|-------------|--------|----|
| 36-60       | Male   | 0  |
| Above 60    | Male   | 0  |
| Infant      | Infant | 1  |
| Grand total |        | 36 |

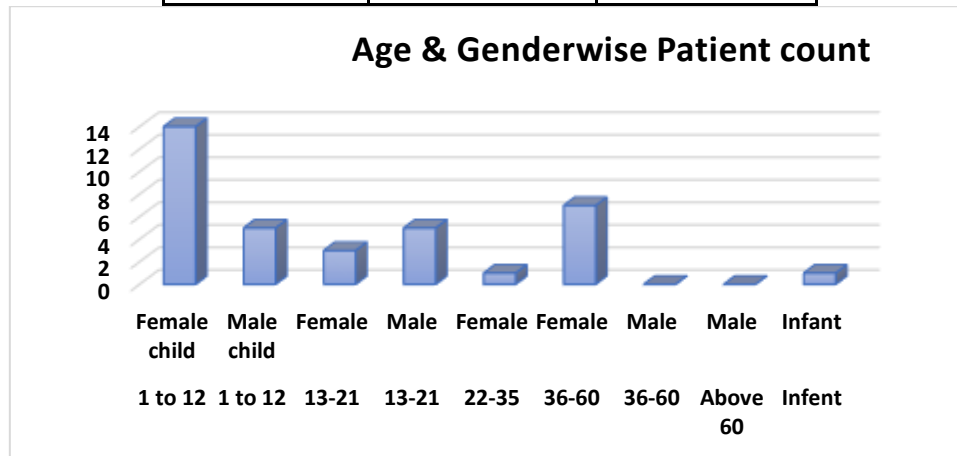


**Fig 1: Reparatory system affection according to Age and sex**

**Table 2: Differential diagnosis in respiratory system affection in relation with age and sex**

| Age group       | Gender       | Disease            | Sum of patient count |
|-----------------|--------------|--------------------|----------------------|
| Up to 12 months | Infant       | Acute bronchitis   | 1                    |
| 1 to 12         | Female child | Acute bronchitis   | 5                    |
|                 |              | Chronic bronchitis | 1                    |
|                 |              | Lobar pneumonia    | 1                    |
|                 |              | Rhinitis           | 1                    |
|                 |              | Urti               | 7                    |
|                 | Male child   | Acute bronchitis   | 1                    |
|                 |              | Bronchial asthma   | 1                    |
|                 |              | Chronic bronchitis | 2                    |
| 13-21           | Female       | chronic sinusitis  | 1                    |
|                 |              | Urti               | 2                    |
|                 | Male         | Acute rhinitis     | 1                    |
|                 |              | Bronchial asthma   | 1                    |
|                 |              | Dns                | 1                    |
|                 |              | Urti               | 2                    |
| 22-35           | Female       | Urti               | 1                    |
| 36-60           | Female       | Bronchial asthma   | 3                    |
|                 |              | Bronchitis         | 2                    |
|                 |              | Chronic sinusitis  | 2                    |
| Grand total     |              |                    | 36                   |

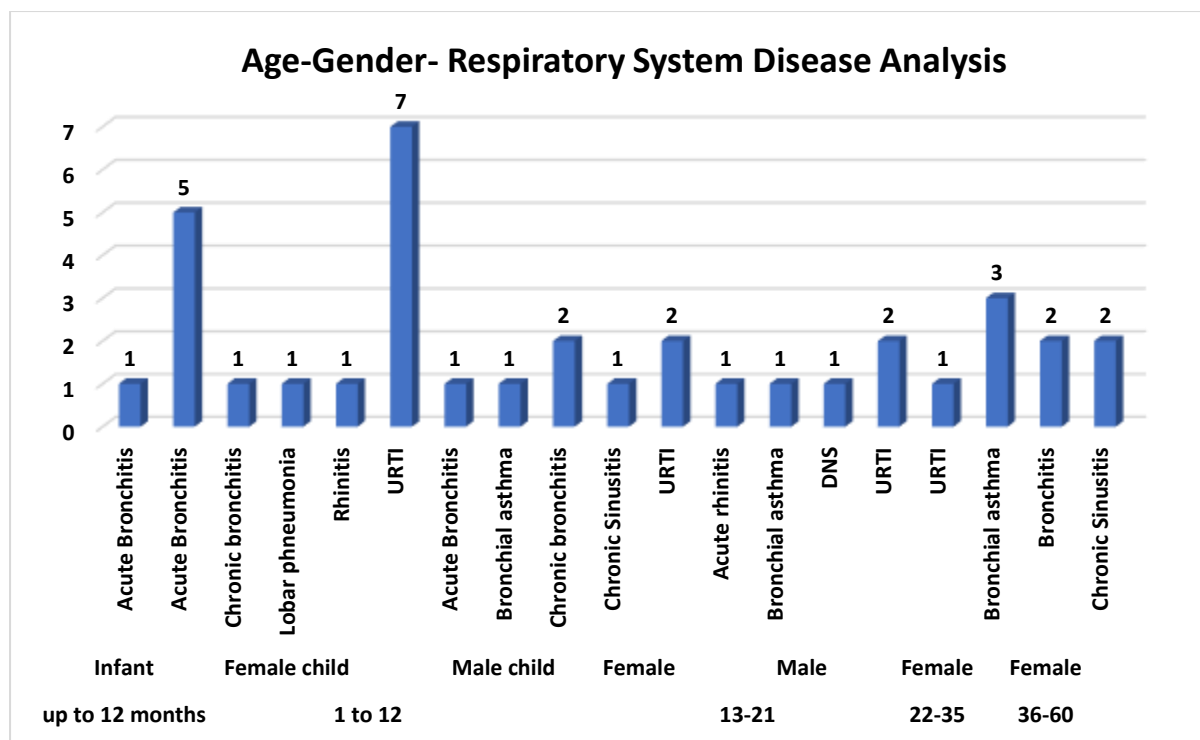


**Fig 2: Differential diagnosis in respiratory system affection in relation with age and sex**

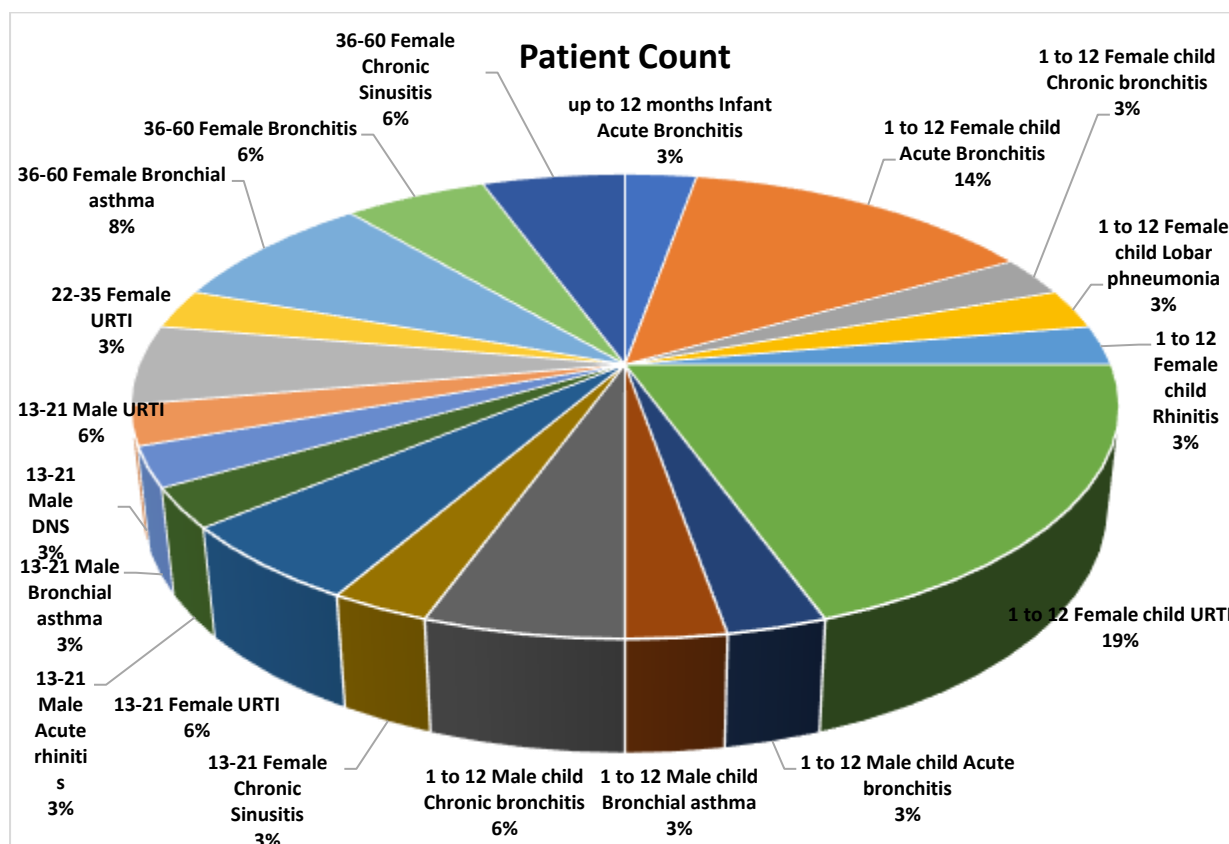


**Fig 3: Differential diagnosis in respiratory system affection in relation with age and sex**

## DISCUSSION

From the above observation it is made clear that *Calcarea Carbonica* acted wonderfully on females and children, on an age group of 1-12 years 7 female children were affected with URTI and 5 female children were affected with acute bronchitis and got improved with *Calcarea Carbonica*. Out of 36 cases improved with *Calcarea Carbonica* 26 were female patients

(5)Assessing the effectiveness of *Calcarea Carbonica* carb on musculoskeletal conditions -a retrospective study – shows the action of *Calcarea Carbonica* over females on musculoskeletal system.

(6)According to Shipman JG, Onyenwoke RU, Sivaraman V the potential negative effects of vaping in relation to pulmonary disease.  $Ca^{2+}$  signalling pathways have more recently garnered attention as a potential mediator of these negative effects. These studies have demonstrated that vaping results in  $Ca^{2+}$  dysregulation, leading to decreases in cell viability and increases in inflammation. According to Rodger IW Calcium ion mechanisms in airway smooth muscle: potential targets for novel symptomatic drugs for asthma. (1)In R G Hansford in article role of calcium in respiratory control explains  $Ca^{2+}$  activated ATP hydrolysis in the cytosol provides ADP to mitochondria to stimulate oxidative phosphorylation by acceptor control of mitochondrial respiration. These studies correlate the importance of calcium in respiratory system

On an age group up to 12 month one was affected with acute bronchitis and significantly improved with *Calcarea Carbonica*. On an age group of 1-12 years 5 female children were affected with acute bronchitis , one female child with chronic bronchitis , one female child with lobar pneumonia and one with rhinitis and 7 were affected with URTI and got significantly improved with *Calcarea Carbonica*.

(2)Margret Tyler in her homoeopathic drug picture wonderfully explains the action of *Calcarea Carbonica* over children and women, she also explains about its action over respiratory system specially over glandular affections and mucous productions. (3)Cyrus Maxwell Boger explains its action over children and tendency to take cold .my study makes a strong evidence of these literatures.

In an age group of 1-12, one male child was affected with acute bronchitis, one was with bronchial asthma, two were affected with chronic bronchitis and got significantly improved with *Calcarea Carbonica*. (8)John henry Clarke MD says about the abundant accumulation of mucus in larynx and in the bronchia.

One male child was affected with acute rhinitis, one was with bronchial asthma, one was with deviated nasal septum and two were affected with URTI, and got significantly improved with *Calcarea Carbonica*. (3)In children tendency to take cold easily according to C.M Boger

On an age group of 22-35 females, 1 was affected with URTI

On an age group of 36-60 females, 3 were affected with bronchial asthma. (4) Rattling of mucus , bronchitis, sensation of dust in throat and lungs bronchocele according to the guiding

symptom of our materia medica by Constantine Hering , 2 were affected with bronchitis and 2 were with chronic sinusitis and got significantly improved with Calcarea Carbonica.

(8)Catarrh in sinus frontalis, pressive pain in forehead above the root of nose swelling of cheek after face ache according to the guiding symptom of our materia medica by Constantine Hering.

## CONCLUSION

Out of 100 cases where Calcarea Carbonica showed improvement, 36 were associated with respiratory system issues, with 26 cases occurring in females. Among children aged 1-12 years, 7 females experienced upper respiratory tract infections (URTI) and 5 females experienced acute bronchitis. (2)Margret Tyler, in her homoeopathic drug picture, eloquently elucidates Calcarea Carbonica's efficacy for children and women. She particularly emphasizes its impact on the respiratory system, highlighting its effectiveness in addressing glandular affections and excessive mucous production.

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