



IMMUNOMODULATORY EFFECTS OF CONSTITUTIONAL HOMOEOPATHIC MEDICINE BY REDUCING ALLERGIC BIOMARKERS IN ALLERGIC RHINITIS: A CASE REPORT.

TR Beena Das^{1*}, KR Mansoor Ali², Prasad Arya B³, Prasad Aghosh B⁴

Article Type:	Case Study
Timeline:	Received: [23-02-2026] Revised: [01-04-2026] Accepted: [01-04-2026] Published: [21-05-2026]
ORCID ID	0009-0009-8668-6288
Corresponding Author * Email address	drbeenadas@gmail.com,

1 Dept. of Materia Medica, Govt. Homoeopathic Medical College,

Thiruvananthapuram, India

2 Dept. of Homoeopathic Repertory & Case Taking, Govt. Homoeopathic Medical College, Kozhikode, India

3 Dept. of Psychiatry, National Homoeopathy Research Institute in Mental Health, Kottayam, India

4 White Memorial Homoeopathic Medical College, Attoor, Kulasekaram, India

ABSTRACT

Background: Allergic rhinitis (AR) is a prevalent inflammatory condition of the upper respiratory tract often associated with immune dysregulation. Homoeopathic Constitutional medicines are frequently employed for long-term management.

Objective: This case study evaluates the clinical effectiveness of a Constitutional Homoeopathic remedy in managing recurring AR symptoms and reducing systemic immunomarkers.

Methods: This single-case observational study was conducted in the Outpatient wing of the Materia Medica Department. The intervention consisted of the Constitutional Homoeopathic remedy, *Calcarea carbonica*, along with integrated supportive medicines administered over a six-month follow-up period. Primary outcome measures included symptom relief assessed via the Total Nasal Symptom Score (TNSS) and changes in immune markers, specifically serum Immunoglobulin E (IgE) and Absolute Eosinophil Count (AEC).

Results: Immediate symptomatic relief, based on TNSS, was achieved in approximately 6 days. Significant reductions were observed in both IgE and AEC levels over the follow-up period, correlating with a decrease in symptom recurrence.

Conclusion: Constitutional prescribing may take longer to alleviate immediate symptoms than acute remedies, but it appears to have a deeper impact on the underlying pathology. While these results show a marked reduction in immune markers and recurrence, causal inference cannot be established due to the single-case design.

Keywords: Allergic Rhinitis; Constitutional medicine; Immunoglobulin E; Absolute Eosinophil Count; Case Report.

1. Introduction

Allergic rhinitis (AR) is a significant global health burden, estimated to affect approximately 4 billion

people by 2050 ⁽¹⁾. Characterized by sneezing, rhinorrhoea, and nasal congestion, AR is primarily driven by an Immunoglobulin E (IgE) mediated

inflammatory response to inhaled allergens^(2, 3). This immune dysregulation often involves an elevated Absolute Eosinophil Count (AEC) and is frequently linked to the "hygiene hypothesis," where reduced microbial exposure in early life hinders the development of normal regulatory mechanisms⁽⁴⁾. While current ARIA guidelines categorize AR by duration and severity, conventional management often focuses on symptomatic relief rather than long-term immune modulation, leading to frequent recurrences and a diminished quality of life^(5, 6).

In Homoeopathy, individualised Constitutional treatment is employed to address underlying susceptibility and modulate the immune response to prevent such recurrences. However, there remains a significant gap in the literature regarding the specific immunomodulatory effects of constitutional medicines on measurable blood markers. While clinical improvement is frequently reported, objective evidence demonstrating a concurrent reduction in IgE and AEC levels remains limited. This case study aims to describe the clinical and immunological response to Constitutional Homoeopathic treatment (*Calcarea carbonica*) in a patient with chronic AR. By documenting both symptomatic relief and changes in immunomarkers, this report seeks to provide preliminary evidence of a deeper therapeutic impact and to generate hypotheses for future large-scale studies.

2. Case Presentation and Methods

This single-case observational study was conducted in the Outpatient Department of Materia Medica at a Government Homoeopathic Medical College in South India. The patient was a male child (under 18 years of age) diagnosed with Allergic Rhinitis (AR) based on clinical ARIA-like features (persistent sneezing, rhinorrhoea, and nasal obstruction) and laboratory

confirmation of elevated Serum IgE. Symptom severity was evaluated using the Total Nasal Symptom Score (TNSS). Assessments were performed by the consulting physician at baseline and during each follow-up. Quantitative analysis of Serum IgE and Absolute Eosinophil Count (AEC) was conducted at baseline and at the conclusion of the 6-month follow-up. Blood draws were standardized (morning fasting) to ensure consistency. Notably, no strict allergen-avoidance measures or specific lifestyle modifications were imposed during the follow-up period. This allowed for the observation of the constitutional remedy's effect under the patient's standard environmental conditions without the confounding variable of improved environmental control.

Patient Information:

An 11-year-old male, residing in a city in South India, presented on February 13, 2023, with chronic respiratory complaints. The patient had experienced daily allergic symptoms for two years before presentation. Previous consultations with a paediatrician led to prescriptions of conventional antihistamines and corticosteroids; however, symptoms consistently recurred upon cessation of the medication. At the time of the Homoeopathic consultation, all conventional medications were discontinued.

Presenting complaints

- Sneezing, primarily in the morning upon waking, lasting until noon. Followed by watery nasal discharge, nasal irritation, and severe obstruction. Aggravation: Bathing, rainy season, eating ice cream, exposure to smoke and dust.
- Intense itching of the nose (+++) and throat.
- Red, watery eyes.
- Pain in both ears, aggravated by lying down.

- Itching eruption on the left big toe, aggravated during the rainy season.

History of Presenting Complaints

The patient had experienced these allergic symptoms almost daily for the past two years. He had previously consulted a paediatrician and was prescribed conventional medications. However, sneezing consistently recurred upon cessation of the conventional drugs. At the initiation of Homoeopathic treatment, the patient discontinued conventional antihistamines and corticosteroids. No strict allergen avoidance measures or specific lifestyle modifications were implemented during the follow-up period, allowing for the observation of the constitutional remedy's effect under standard environmental conditions. The skin eruptions appeared one month before the consultation, for which no medication had been taken.

History of Previous illness

- Pneumonia when 4 years old. Treated and resolved with conventional medicine.

Family History

- Father – has asthma
- Sister – has allergic rhinitis

Personal History

- Born at – S.India
- Milestones - Normal
- Educational status – Vth STD
- Vaccination status – good

Physical Generals

- Appetite – good, craving for sweets, ice-creams
- Thirst: ++, prefer cold water
- Bowel: constipated
- Perspiration: Profuse (++) , predominantly on the head.

- Sleep: Disturbed due to nasal obstruction and snoring.

Psychic features

- Prefers company,
- Talkative

Regionals

- Head – Headaches often occur after sneezing.
- Mouth – breathes through an open mouth.

Physical Examination

- **General:** No Clubbing, no anaemia, no lymphadenopathy

Examination of the nose

- Nasal mucosa congested; turbinates swollen. No other lower respiratory symptoms present.

Provisional Diagnosis

- Allergic rhinitis

Clinical and Immunological Outcomes

The patient’s progress was monitored over a 6-month period, with a follow-up assessment of blood markers and symptom scores. The constitutional treatment led to a significant reduction in both subjective symptoms (TNSS) and objective laboratory markers (IgE and AEC).

Table 1: Comparison of Clinical and Laboratory Parameters (Baseline vs. 6-Month Follow-up)

Parameter	Baseline (Feb 2023)	Follow-up (Aug 2023)	Reference Range	Percentage Change
TNSS	12/12 (Severe)	2/12 (Mild)	0–12	↓ 83.3%
Serum IgE	6000 IU/ml	536 IU/ml	< 100 IU/ml	↓ 91.1%
AEC	544 cells/μL	280 cells/μL	40–400 cells/μL	↓ 48.5%

Symptom severity was assessed using the Total Nasal Symptom Score (TNSS) ⁽⁷⁾, a validated clinical tool evaluating four symptoms (rhinorrhoea, nasal

congestion, nasal itching, and sneezing) on a scale of 0 to 3, yielding a maximum score of 12. The assessment was performed by the consulting physician.

Laboratory Findings

At baseline, the Serum IgE was markedly elevated at 6000 IU/ml (confirmed by recheck), reflecting a high degree of allergic sensitization. By the end of the 6-month intervention with *Calcarea carbonica*, this value dropped significantly to 536 IU/ml. Similarly, the Absolute Eosinophil Count (AEC) normalized from 544 cells/ μ L to 280 cells/ μ L, falling within the healthy reference range.

Impact on Quality of Life (QoL)

Beyond the reduction in symptom scores, the patient reported significant improvements in daily functioning:

- **Sleep Quality:** The cessation of snoring and nasal obstruction led to restorative sleep, a marked improvement from the disturbed sleep reported at baseline.
- **School and Daily Activities:** Improved sleep and the absence of morning paroxysms allowed for better concentration and regular school attendance.
- **Secondary Complaints:** The itching eruptions on the toe resolved entirely, and the frequency of headaches following sneezing episodes reduced to zero.

Final diagnosis

- Allergic rhinitis

Totality of symptoms

The case analysis followed classical Homoeopathic principles, focusing on individualisation and the totality of symptoms

- Sneezing on awakening, bathing, rainy season, eating ice-creams, smoke, dust

- Pain in both ears, during sneezing, < lying.
- Itching eruption on the left big toe. < rainy season
- prefer sweets, ice-creams
- prefer cold water
- constipated
- Sweat more on the head.
- Sleep is disturbed due to nasal blockage and snoring
- Prefers company, and is talkative
- Headache after sneezing.
- Mouth is open to take breath

Repertorisation

Key rubrics were selected for repertorisation using Kent's Repertory, as illustrated in the repertorisation chart in Figure 1. *Calcarea carbonica* emerged as the leading remedy, covering the highest number of rubrics with the greatest symptomatic weight.

Remedy Selection and Justification

The final selection of *Calcarea carbonica* was based on its profound alignment with the patient's constitutional type. While remedies like *Phosphorus* and *Sulphur* appeared in the repertorial result, *Calcarea carbonica* was chosen due to specific classical indications:

- Profuse head sweat and constipation: Recognized by Hahnemann as hallmark indicators for this antipsoric remedy⁽⁸⁾.
- Aggravation from cold, damp air and bathing: A key modality emphasized by Kent in his *Lectures on Homoeopathic Materia Medica*⁽⁹⁾.
- Craving for sweets and ice cream: Characteristic physical generals noted in modern and classical materia medica^(10,11).

The patient was prescribed the constitutional remedy *Calcarea carbonica* in 200C potency. The medicine was administered in powder form, prepared by a licensed Homoeopathic pharmacy, HOMCO. Medicine was administered orally morning and evening. Following the administration of the first dose, no discernible Homeopathic aggravation was observed. The patient began to report gradual symptomatic relief with treatment without any temporary intensification of existing symptoms or the appearance of new medicinal symptoms.

The treatment aimed to address the underlying miasmatic susceptibility to achieve long-term immunomodulation rather than mere symptomatic palliation. To ensure that observed clinical and immunological changes could be attributed to the Homoeopathic intervention, no conventional anti-allergic medications (such as antihistamines or intranasal corticosteroids) were administered during the entire six-month follow-up period. This strict adherence to a single intervention strengthens the discussion regarding the remedy’s role in the observed reduction of IgE and AEC levels.

Repertorised result

Remedy	Calc	Phos	Lyc	Nux-v	Cham	Merc
Covered	5	4	5	4	3	4
Totality	10	10	8	9	8	7
1.MIND, TALKS, humming			I	II		
2.HEAD, PERSPIRATION, sc...	III		II		II	II
3.EYE, LACHRYMATION, d...			I			
4.EAR, PAIN, headache, du...		I				I
5.NOSE, CORYZA, dischar...				III		
6.NOSE, SNEEZING, morni...	I					
7.NOSE, SNEEZING, dust c...						
8.RECTUM, INACTIVITY OF...	II	III	II	III	III	I
9.STOMACH, DESIRES, col...	II	III	II	I	III	III
0.STOMACH, DESIRES, ic...	II	III				

Figure (1) Repertorisation Chart indicating *Calcarea carb* as the highest-scoring remedy.

Baseline Blood Values and TNSS

Baseline Investigations (13/02/2023) are given in Figure (2):

- TNSS: 12/12 (Severe)
- Serum IgE: 6000 IU/ml (Reference: <100 IU/ml) - rechecked
- AEC: 544 Cells/cumm (Reference: 40-400 Cells/cumm)

Test Description	Observed Value	Reference Range & Units
HAEMATOLOGY		
BLOOD ROUTINE EXAMINATION		
Haemoglobin	13.0 gm/dL	11.5 - 16.0 gm/dL
Total W.B.C Count	6,800 Cells/cumm	4,000-11,000 Cells/cumm
DIFFERENTIAL COUNT		
Neutrophils	46 %	40 - 65 %
Lymphocytes	45 %	25 - 40 %
Eosinophils	08 %	02 - 06 %
Monocytes	01 %	01 - 04 %
E S R	35 mm/hour	< 15 mm/hour
Absolute Eosinophil Count (AEC)	544 Cells/cumm	40-440 Cells/cumm
ENDOCRINOLOGY		
Allergy IgE		
IgE	6,000 IU/ml Re checked	11.2 - 172.0 IU/ml

Figure (2)- Baseline laboratory reports showing elevated Serum IgE and AEC values.

Post-treatment laboratory investigations

Post-treatment investigations conducted six months post-initiation (10/08/2023) demonstrated significant clinical improvement, with the Total Nasal Symptom Score (TNSS) decreasing to 3/12. Corresponding laboratory results revealed a 45.2% reduction in Serum IgE to 3286 IU/ml and a 30.1% reduction in the Absolute Eosinophil Count (AEC) to 380 cells/cumm, effectively returning to the normal physiological range, as shown in Figure 3.

Follow-up and Treatment Timeline

Dates	Observation	Medicines Given
13/02/23	Sneezing, <-morning, Eyes- redness and lachrymation, Itching of the nose, obstruction	Calc. carb 200/1d Sac Lac – 2d (1-0-1)
14/02/23	Sneezing persists, lachrymation present, nose feels blocked, itching present	BT – 3d Sac Lac – 2d (1-0-1)
15/02/23	Slight relief for sneezing, itching and lachrymation persists. The nose feels blocked	Sac Lac – 2d (1-0-1) BT – 3d
10/03/23- 13/03/23	Symptoms < after taking ice creams	Sac Lac – 2d (1-0-1) BT – 3d
26/04/23 - 29/04/23	Sneezing and coryza +++ Severe nasal block+++	Calc. carb 200/1d Sac Lac – 2d (1-0-1)
17/07/23	Mild sneezing, lachrymation, Itching of the throat	Sac Lac – 2d (1-0-1) BT – 3d
18/07/23	Sneezing, throat itching	Sac Lac – 2d (1-0-1) Calc. carb 200/1d
10/08/23	Sneezing on waking with lachrymation	Calc. carb 1M/1d Sac Lac – 2d (1-0-1)
02/09/2023	Sneezing+++ , nasal obstruction+++ , Hoarseness, pain in ears, coryza	SL/3d (1-1-1) BT /3d(1-1-1)
16/09/2023	Sneezing > , no ear pain, mild nasal blockage at night	Sac lac 2d (1-0-1) BT 3d (1-1-1)
25/03/2024	Symptoms of allergic rhinitis as had exposure to dust	Cal. Carb 1M /1d (1-0-0) BT 3d(1-1-1)
04/10/2024	Occasional sneezing in the morning. Gen>	Cal. Carb 1M /1d (1-0-0) BT 3d(1-1-1)

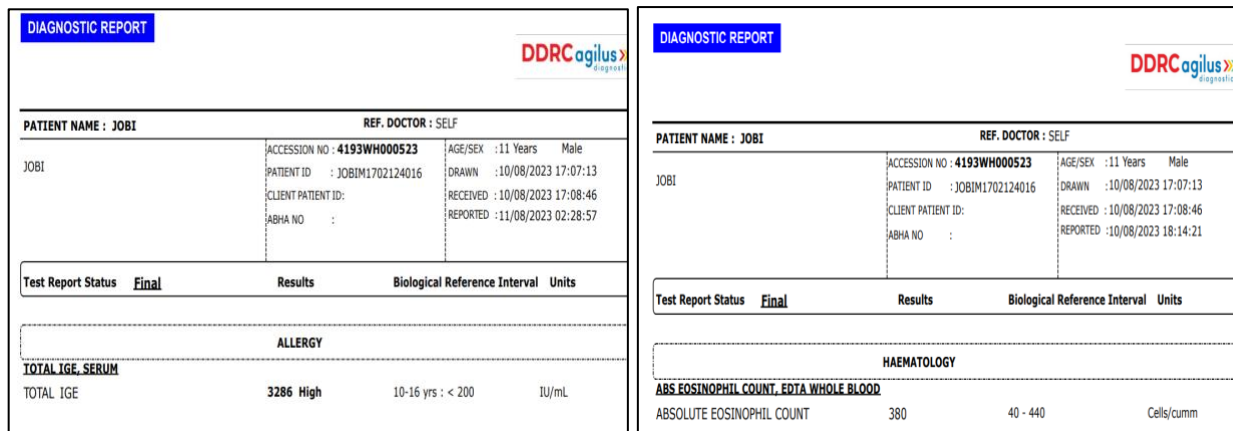


Figure (3): Blood Values Post-Treatment, indicating a reduction in Serum IgE and normalization of AEC

3. Discussion

The likelihood of a causal relationship between the administration of *Calcarea carbonica* and the patient's clinical improvement was evaluated using the

MONARCH (Modified Naranjo Criteria for Homeopathy) inventory. The case achieved a MONARCH score of +9 (out of a possible +13). This high score was driven by the clear temporal

relationship between the intervention and symptom relief, the specific improvement in physical generals (head sweat and constipation), and the objective reduction in laboratory immunomarkers.

While the single-case design inherently limits definitive causal claims, the application of the MONARCH criteria supports a likely, though not definitive, causal relationship between the constitutional remedy and the observed clinical and immunological response. The rationale for this attribution is strengthened by the fact that no lifestyle modifications or allergen-avoidance measures were implemented, and no conventional anti-allergic drugs were used during the follow-up period. This suggests that the significant reduction in IgE and AEC levels was a direct result of the Homoeopathic intervention rather than external confounding factors or the natural history of the disease.

Summary of the MONARCH Scoring of +9.

1. Symptomatic improvement (+2): Clear reduction in TNSS.
2. Temporal relationship (+1): Improvement followed the remedy.
3. Initial aggravation (0): The patient got briefly worse first.
4. Effect on physical generals (+2): Improvement in head sweat/constipation.
5. Effect on well-being (+1): Improved sleep and school attendance.
6. Direction of cure (Hering's Law) (+1): Symptoms moving from within outward.
7. No other interventions (+2): No antihistamines or lifestyle changes.
8. Previous recurrence (0): Symptoms used to return quickly; now they haven't.

The clinical and immunological results observed in this case offer a noteworthy perspective on the

management of Allergic Rhinitis (AR). The substantial reduction in Serum IgE (91.1%) and AEC (48.5%) over six months is very significant. In this case, the marked decline in biomarkers following a single Constitutional Homoeopathic intervention, suggests a response that warrants further investigation within the broader evidence base of AR management. In Homoeopathic philosophy, AR is viewed as a manifestation of underlying susceptibility, often categorized under the "Psora" miasm—a persistent, multifaceted state of dysregulation described by Hahnemann ⁽¹²⁾. Rather than merely addressing the "exciting causes" like pollen or dust, constitutional treatment with *Calcarea carbonica* aims to modulate this fundamental sensitivity. The alignment of the patient's physical generals—such as profuse head sweat, chilliness, and specific cravings—with the remedy's profile facilitated a selection rooted in classical individualization ⁽⁹⁾.

While the laboratory parameters mirrored the clinical improvement (TNSS dropping from 12 to 2), these findings are suggestive of possible immunomodulatory activity rather than definitive proof. The dramatic percentage decrease in IgE, despite remaining above the standard reference range, correlates closely with the patient's improved quality of life and reduced recurrence. This suggests that Constitutional medicines may exert a deeper influence than simple symptomatic palliation.

4. Limitations

As a single-case observational study, several limitations must be acknowledged:

- Study Design: Causal inference cannot be definitively established from a single case.
- Seasonal Variation: AR symptoms often fluctuate based on pollen counts and weather

changes, which may coincide with the treatment period.

- Natural History: The possibility of spontaneous disease fluctuation or "waxing and waning" of allergic symptoms cannot be entirely excluded.
- Environmental Variables: Unmeasured or unmonitored changes in allergen exposure in the patient's home or school environment could act as confounding factors.

5. Conclusion

This case demonstrates a significant correlation between Constitutional Homoeopathic prescribing and the reduction of key allergic immunomarkers. However, these results should be viewed as hypothesis-generating rather than conclusive. To validate these findings, well-powered Randomized Controlled Trials (RCTs) or prospective cohort studies utilizing TNSS, IgE, and AEC as primary outcome measures are necessary. Such research would clarify the role of Homoeopathy in immune modulation and help inform future trial designs for chronic allergic disorders.

6. Informed Consent and Ethical Approval

Informed consent was obtained from the patient's legal guardian before case taking. This case study was conducted after receiving ethical approval from the Institutional Ethics Committee of the Government Homoeopathic Medical College (Clearance No. 4202/C3/2021/GHMCT (2)/30, dated 17/12/2021).

7. References

- 1.Manda S. Literature Review: Rising Allergy Rates Caused by Gut Dysbiosis. University of Toronto's Journal of Scientific Innovation. 2023 Dec 11;33–51.
- 2.Savouré M, Bousquet J, Jaakkola JJK, Jaakkola MS, Jacquemin B, Nadif R. Worldwide prevalence of rhinitis in adults: A review of definitions and temporal

evolution. *Clinical and Translational Allergy*. 2022;12(3):e12130.

3.Bousquet J, Anto JM, Bachert C, Baiardini I, Bosnic-Anticevich S, Walter Canonica G, et al. Allergic rhinitis. *Nat Rev Dis Primers*. 2020 Dec 3;6(1):1–17.

4.Paolo Maria Matricardi, MD,a Francesco Rosmini, DSc,b Valentina Panetta, DSc,a. Hay fever and asthma in relation to markers of infection in the United States. *Journal of Allergy and Clinical Immunology*. Volume 110, Issue 3, September 2002.

5.Van Hoecke H, Vastesaegeer N, Dewulf L, Sys L, Van Cauwenberge P. Classification and management of allergic rhinitis patients in general practice during pollen season. *Allergy*. 2006 Jun;61(6):705–11.

6.Jáuregui I, Dávila I, Sastre J, Bartra J, Del Cuavillo A, Ferrer M, et al. Validation of ARIA (Allergic Rhinitis and its Impact on Asthma) classification in a pediatric population: The PEDRIAL study. *Pediatric Allergy Immunology*. 2011 Jun;22(4):388–92.

7. Tamasauskiene L, Gasiuniene E, Sitkauskiene B. Translation, adaption and validation of the total nasal symptom score (TNSS) for Lithuanian population. *Health Qual Life Outcomes*. 2021 Feb 11;19:54.

8.Stephenson H Jamez. *Helping Yourself with Homoeopathic Remedies*. Fifth Impression 1982. Thorsons Publication Limited, Wellingborough, Northamptonshire; 92 p.

9.Allen Henry. J. *The Chronic Miasms with Repertory*. Revised edition, 15th impression 2020. B Jain Publishers (P) Ltd, New Delhi; 339 p.

10.Allen H.C, *Allen's Keynotes Rearranged and classified with leading Remedies of Materia Medica and Bowel Nosodes*, 10th edition, B Jain Publishers (P) Ltd. p. 73.

11.Robin Murphy, *Lotus Materia Medica*, 1400Homoeopathic and Herbal remedies,Third edition, B.Jain Publishers(P) Ltd, p. 411

12. Hahnemann Samuel. *The Chronic Diseases. Their Peculiar Nature and Their Homoeopathic Cure*. 13th impression., B Jain Publishers (P) Ltd, New Delhi; 9 p. (Nature of chronic Disease).