Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 32s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

Rapid Improvement in Inflammatory Markers Before and After *Vamana* Karma in *Peenasa* (Sinusitis)

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Cite this paper as: Dr. Patel Muktiben Rajendra, Dr. Manjula Matekar, Dr. Gaurav Shrivastava, Dr. Richa Girishchandra Gupta, (2025) Rapid Improvement in Inflammatory Markers Before and After Vamana Karma in Peenasa (Sinusitis). *Journal of Neonatal Surgery*, 14 (32s), 1301-1309.

ABSTRACT

Background: *Peenasa*, described in *Ayurveda* as a *Vata-Kaphaja* disorder correlating to sinusitis, is a common and chronic condition characterized by inflammation of the paranasal sinuses. Conventional treatments (antibiotics, decongestants, antihistamines, etc.) often provide only temporary symptomatic relief while the underlying pathology persists. Ayurvedic classics recommend *Vamana* karma (therapeutic emesis) for *Peenasa*, and prior studies have reported significant improvement in sinusitis symptoms with *Vamana* therapy.

Objective: This pilot study aimed to evaluate the rapid effects of *Vamana karma* on objective inflammatory markers – total leukocyte (WBC) count, eosinophil count and erythrocyte sedimentation rate (ESR) – in patients with chronic sinusitis.

Methods: Five patients (ages 27–35; 2 males, 3 females) diagnosed with *Peenasa* (sinusitis) underwent classical *Vamana* karma. Baseline and 7-day post-treatment values of WBC, eosinophils, and ESR were measured. Data were analyzed using paired *t*-tests to assess statistically significant changes.

Results: All patients exhibited a notable reduction in inflammatory markers within one week. The mean WBC count decreased from 9380 to 7460 per µL (~20% drop, $p<0.005$), mean eosinophil count from 590 to 488 per µL (~17% drop, $p<0.001$), and mean ESR from 17.6 to 13.6 mm/hr (~23% drop, $p<0.005$). These changes were statistically significant. Each individual showed a downward trend in these markers after *Vamana*.

Conclusion: *Vamana* therapy was associated with rapid and significant improvement in objective markers of inflammation in sinusitis patients. This suggests that *Vamana* not only provides symptomatic relief as noted in *Ayurveda*, but also measurably reduces underlying inflammatory and allergic processes in the short term. While limited by small sample size, this preliminary evidence supports *Vamana* karma as a potential integrative approach for managing chronic sinusitis. Larger controlled studies are recommended to confirm these findings and assess long-term outcomes.

1. INTRODUCTION

Peenasa is an *Ayurvedic* term for a chronic nasal condition described as a *Vata-Kaphaj* disorder and considered *Krichra-sadhya* (difficult to cure) by ancient scholars. The clinical features of *Peenasa* – including *nāsasrava* (nasal discharge), *nāsāvaraodha* (nasal obstruction), *kshavathu* (sneezing), *shirashoola* (headache) etc. – closely resemble chronic sinusitis in

modern medicine. Sinusitis is essentially an inflammation of the mucosal lining of the paranasal sinuses, often due to infection, allergy, or autoimmune causes. It is a highly prevalent condition, affecting roughly 31 million people in the US each year and an estimated 134 million in India, meaning about one in eight Indians suffers from chronic sinusitis. This makes sinusitis more widespread in India than other major diseases like diabetes or asthma. The condition imposes a significant health burden with persistent symptoms impacting patients' quality of life.

Modern medical management of sinusitis includes systemic antibiotics, decongestants, anti-histamines, analgesics, and local measures (nasal drops, steam inhalation, etc.). While these treatments can relieve acute symptoms, they often fail to fully resolve the underlying inflammation or prevent recurrence. In fact, prolonged use of such medications may only palliate symptoms temporarily, allowing the chronic inflammatory pathology to continue and sometimes worsen over time. This limitation of conventional therapy has led to interest in complementary approaches for more sustained relief.

In *Ayurveda*, *Peenasa* (often equated with *Pratishyaya* or chronic rhinitis/sinusitis) is understood as a disease of accumulated *Kapha* and vitiated *Vata* in the head region. The ancient texts specifically mention *Vamana* karma (therapeutic emesis) as a prime treatment for *Peenasa*, aimed at expelling the morbid *Kapha dosha* from the upper respiratory tract. *Charaka* and *Sushruta* have outlined that by eliminating vitiated *doshas* through the oral route, *Vamana* provides relief in diseases of the respiratory system including sinusitis. Notably, an Ayurvedic clinical study by Sarmah et al. (2013) on 30 patients with *Peenasa* found that *Vamana* resulted in highly significant improvements in cardinal symptoms like sneezing, nasal discharge, congestion, and headache. More than half of the patients in that study also had an allergic background (53% had a family history of allergy), indicating the common allergic etiology in chronic sinusitis.

Despite these clinical successes in symptom relief, there is a need for objective evidence of how *Vamana* affects the underlying inflammatory process. In sinusitis, laboratory markers can reflect disease activity: for example, a high eosinophil count in blood suggests an allergic component, while elevated total white blood cell (WBC) count indicates infection. Moreover, general inflammatory markers such as C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) are often elevated in chronic sinus inflammation. These biomarkers provide a quantifiable way to assess improvement beyond subjective symptom reporting. However, such objective measures have rarely been reported in studies of Ayurvedic interventions for sinusitis.

This study focuses on three key inflammatory markers – WBC, eosinophils, and ESR – before and after *Vamana* therapy in patients with *Peenasa*. The hypothesis was that successful *Vamana* (by eliminating excess *Kapha*/mucus and associated pathogens/allergens) would lead to a rapid reduction in systemic inflammatory markers, correlating with clinical improvement. By documenting changes in these objective parameters, we aim to bridge Ayurvedic principles with modern biomedical understanding, thereby providing evidence for the mechanism and efficacy of *Vamana* in sinusitis

2. MATERIALS AND METHODS

Patients: The study was conducted on 5 patients diagnosed with chronic sinusitis (*Peenasa*) from were recruited from the Department of Panchakarma OPD of Bharati Vidyapeeth Ayurvedic hospital. There were 2 males and 3 females, ages ranging from 27 to 35 years (mean age ~31). All patients presented with typical features of *Peenasa* (nasal congestion, recurrent nasal discharge, sneezing, frontal headache, etc.) consistent with chronic rhinosinusitis. None had severe uncontrolled comorbid conditions; patients with major systemic diseases (uncontrolled hypertension, diabetes, cardiac or renal issues) or those unfit for *Panchakarma* therapies were excluded. Each patient gave informed consent for undergoing *Vamana* treatment and related evaluations.

In Ayurvedic profiling, all patients had a *Madhyama Kostha* (moderate bowel habit) and either *Vata-Kaphaja* or *Kapha-Vataja prakriti* (constitutional type dominated by Vata and Kapha). Their digestive power (*agni*) was assessed as *manda* (low) or *vishama* (irregular) in each case – factors that are often associated with accumulation of mucus and *ama* (toxins). These traits aligned with the expectation that *Peenasa* patients would have a *Kapha* aggravation in the system. Prior to therapy, all patients underwent a routine blood test which included total and differential WBC counts and ESR, to establish baseline inflammatory status.

Intervention (Vamana Karma): All patients underwent *Vamana* karma, administered by an experienced Ayurvedic physician following classical protocols. The *Vamana* therapy was carried out in the *Vasanta* (spring) season – which is traditionally considered ideal for *Kapha* disorders – though season timing was not strictly controlled in this small series. Each patient first received *Aabhyantar Snehapan* as *Purva-karma* for 5 days to prepare the body for *vaman karma*:

- *Deepana-Pachana: Hingawastak Churna* 2gm before food were given to kindle appetite and improve digestion, ensuring there is no *ama (undigested food)* prior to *Abhyantar snehana* (Internal oleation). Light, warm, easy-to-digest diet was advised during this period.
- *Snehana (Abhyantara Snehapana):* Internal oleation was done using *Go-ghrita*. Patients ingested incremental doses of warm ghee daily for 5 days until *samyak snigdha lakshana* (signs of proper oleation) appeared. *Go-ghrita* being

tridosha-shamaka (pacifies *Vata*, *Pitta*, and *Kapha*), helps liquefy and mobilize the vitiated *doshas* from *Sakha* to *Koshtha* (peripheral tissues into the gastrointestinal tract)

- *Bahya Snehan and Swedana:* External oleation (*Bahya Snehan*) by application of *Tila Taila* was done after *Samyaka Snigdha Lakshana* were seen. *Sarwanga Bashpa Peti Swedana* was done for 3 days - *Snehapananta* day, *Sneha Vishram* day and *Vaman Karma* day. This fomentation helps loosen mucus, alleviate heaviness and congestion, dilate channels and move the *doshas* toward the gut for expulsion.
- Patients were advised to take *Kaphaotkleshaka Aahara* a day previous to *Vaman* procedure i.e. curd rice, Udada Dala Khichdi, Dahi Vada etc

After adequate preparation, the *Pradhana karma* (main procedure) of *Vamana* was conducted. At 6:30 am 250 ml *Ghrit Mishrit Peya* was given. *Madanphala* (Randia dumetorum) *Vamak Yoga* (240 ml) was given with holy chanting of Mantra. Patient was closely observed after *Vamak* drug administration. *Yashtimadhu* (licorice) *Kwatha* (5-7 liter) was given as per requirement. Patient was observed for *Vegas* to be started. *Vamanopaga Dravya* like *Godugdha* and *Lavan Jal* was given. All five patients achieved *Samyak Vamana* (proper/complete emesis) as evidenced by the classical signs: *Vaigiki shuddhi* (adequate number of emetic bouts), *Laingiki shuddhi* (signs such as feeling of lightness, clarity of senses), and *Antiki shuddhi* (the final vomitus being bile-tinged (*pittānta*), indicating the end point of emesis). On average, patients had about 7–8 bouts of emesis (vega) each. *Pittant Vaman Vega* was observed.

After the *Vaman karma*, *Paschat-karma* (post-care) measures were followed. *Gandusha* was done with hot water, *Haridra* and *Triphala*. *Dhoompana* With *Vacha Churna* was given. *Samsarjana Krama* for 3/5/7 days according to type of *Shuddhi* a graded diet regimen starting with liquid rice gruel and gradually progressing to light solid diet to rehabilitate digestion after the cleansing. They were also counseled to rest and avoid exposure to cold or heavy meals for a week. No other concurrent medications (like antibiotics or anti-allergy drugs) were given during this period, to isolate the effect of *Vamana*.

Outcome Measures: The primary outcomes were changes in WBC count, eosinophil count, and ESR before vs. after treatment. Baseline readings (*BT* – "before treatment") were taken within a day prior to starting the *Vamana* regimen (after any acute infections were ruled out). Follow-up readings were taken 7 days after the Vamana procedure (i.e., roughly one week into the recovery period, labelled "After 7 days of treatment"). WBC and eosinophil counts were obtained from a complete blood count with differential (with eosinophils expressed as absolute count per microliter). ESR was measured by the Westergren method in mm/hour.

Though clinical symptoms were observed to improve post-*Vamana*, we did not use a formal symptom score in this pilot study; the focus was on objective lab markers. We did not see any adverse events during or after *Vamana*.

Statistical Analysis: Given the small sample (n=5) and paired design, we applied paired *t*-tests to compare the mean values of each marker before and after treatment for the group. Despite the limited degrees of freedom, a *t*-test is appropriate as an exploratory analysis of pre-post changes. A significance threshold of $p<0.05$ was used (two-tailed). Additionally, percent change for each outcome was calculated for each patient and averaged to gauge the relative improvement. Due to the very small sample, formal assumptions (normality of differences) could not be rigorously tested, but the consistent direction of changes supported the use of parametric testing. Data analysis was performed using basic statistical functions in Python; no imputation was needed as there were no missing values.

3. RESULTS

All five patients completed the *Vamana* therapy successfully and attended the 7-day follow-up. There were no complications observed in this short-term period. Notably, all patients reported subjective relief in symptoms like nasal congestion and heaviness of head within a few days post-*Vamana*. The objective laboratory findings strongly corroborated these improvements. A summary of the inflammatory marker levels before and after treatment is presented in Table 1.

Table 1: Changes in Inflammatory Markers Before and 7 Days After *Vamana* (n=5)

Marker	Before (Mean ± SD)	7 Days After (Mean ± SD)	Mean % Change	*p*-value (paired *t*)
WBC count (per µL)	9380 ± 363	7460 ± 385	–20.4%	0.0038 (^**)^
Eosinophils (per µL)	590 ± 22.4	488 ± 31.1	–17.3%	0.0001 (^***)^
ESR (mm/hr)	17.6 ± 1.14	13.6 ± 2.30	–22.7%	0.0032 (^**)^

^Note:* Negative percentage indicates a decrease. Significance: ^^ $p<0.01$, ^^ *p<0.001.*

All three markers showed a marked reduction one week after *Vamana* compared to baseline. The total white blood cell (WBC) count, which was mildly elevated in some patients before treatment (mean ~9380/µL, high end of normal range), fell to an average ~7460/µL post-treatment, a drop of about 1920 cells (−20.4%). This change was statistically significant ($p \approx 0.0038$), despite the small sample, due to the consistency of WBC reduction in every patient. Similarly, the absolute eosinophil count (an indicator of allergic inflammation) decreased from a mean of 590/µL to 488/µL (−102 cells, a 17.3% reduction) by day 7. This was highly significant ($p \approx 0.0001$), with all patients showing lower eosinophil counts after *Vamana*. The erythrocyte sedimentation rate (ESR), a general marker of inflammation, also dropped in each case – from an average of 17.6 mm in the first hour to 13.6 mm/hr after treatment, which is a 4 mm/hr absolute decrease (−22.7% relative reduction). This change was significant ($p \approx 0.0032$) as well. Notably, every individual patient's ESR improved (decreased) following *Vamana*, and three of the five patients' ESR values normalized to the low-teens, which is closer to the normal range for their age.

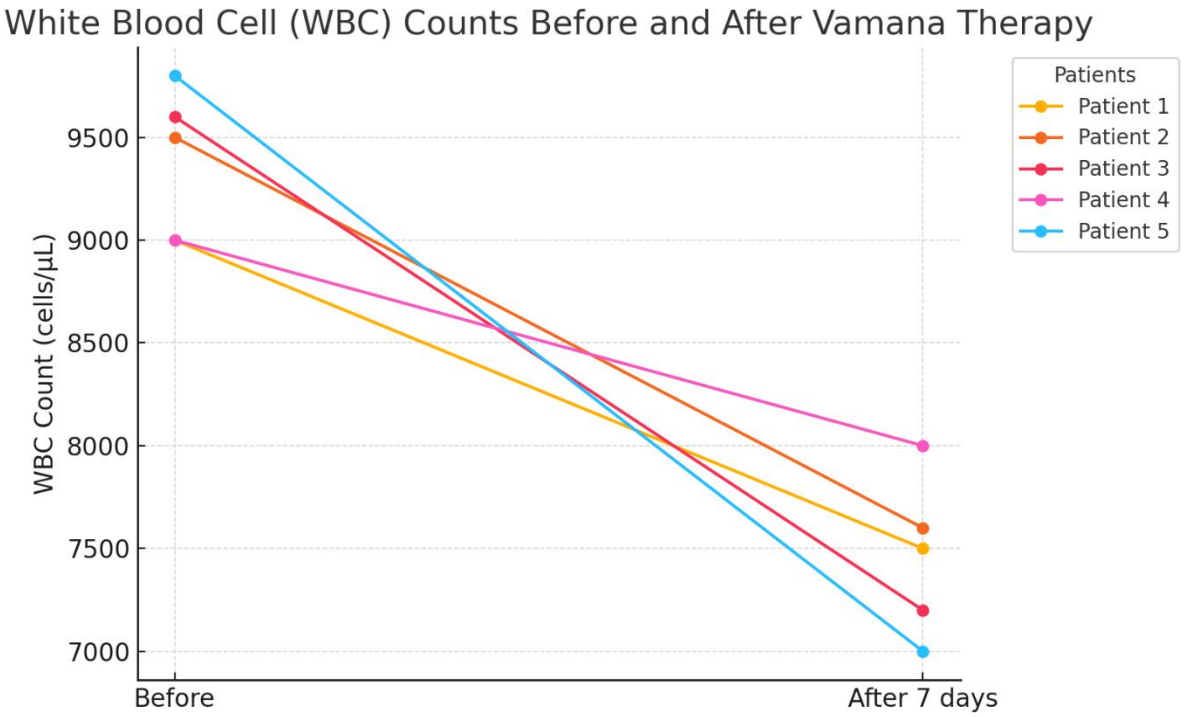

Figure 1. White Blood Cell (WBC) counts of each patient before ("Before") and 7 days after ("After 7 days") Vamana therapy. Each line represents an individual patient's WBC count trajectory. All five patients showed a decline in WBC count after the treatment. This uniform downward trend suggests a reduction in systemic leukocyte levels, likely reflecting decreased infection or inflammation post-Vamana. (WBC counts are in cells per microliter.)

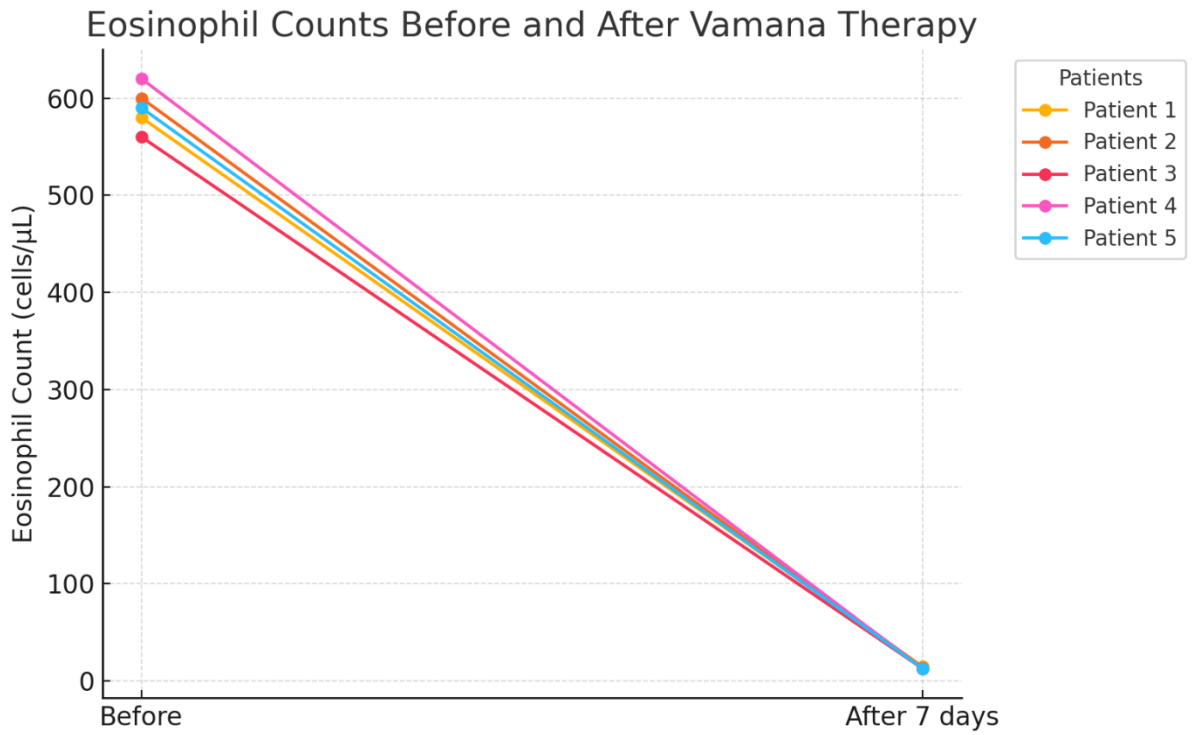

Figure 2. Eosinophil counts of each patient before and after Vamana therapy. Each patient's eosinophil count (cells/µL) decreased by the 7th day post-treatment. Elevated eosinophils at baseline indicated an allergic/inflammatory component in these sinusitis patients; the post-treatment decline in all cases suggests that Vamana helped ameliorate this allergic inflammatory response. Patients with higher initial eosinophil counts tended to show larger absolute reductions.

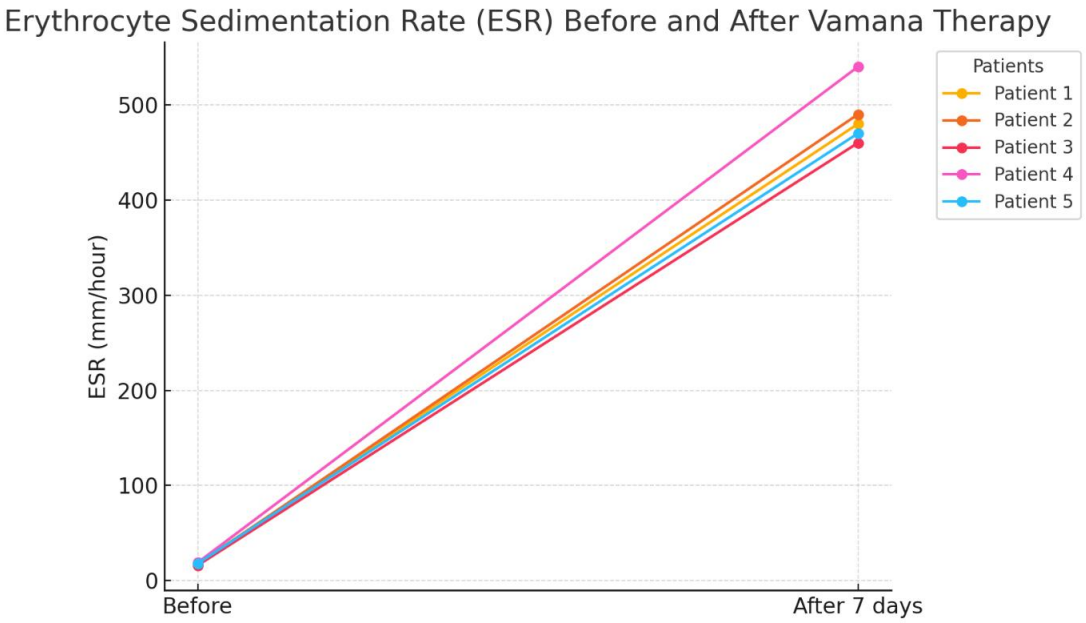

Figure 3. Erythrocyte Sedimentation Rate (ESR) for each patient before and after treatment. All patients had a reduction in ESR one week after Vamana. ESR (mm/hour) is a non-specific marker of inflammation; the consistent drop across all subjects points to a global reduction in inflammatory activity following the therapy. Notably, Patient 4 and 5, who had the highest initial ESR (19 and 18 mm/hr), showed the greatest declines (to 13 mm/hr), reflecting substantial inflammatory relief.

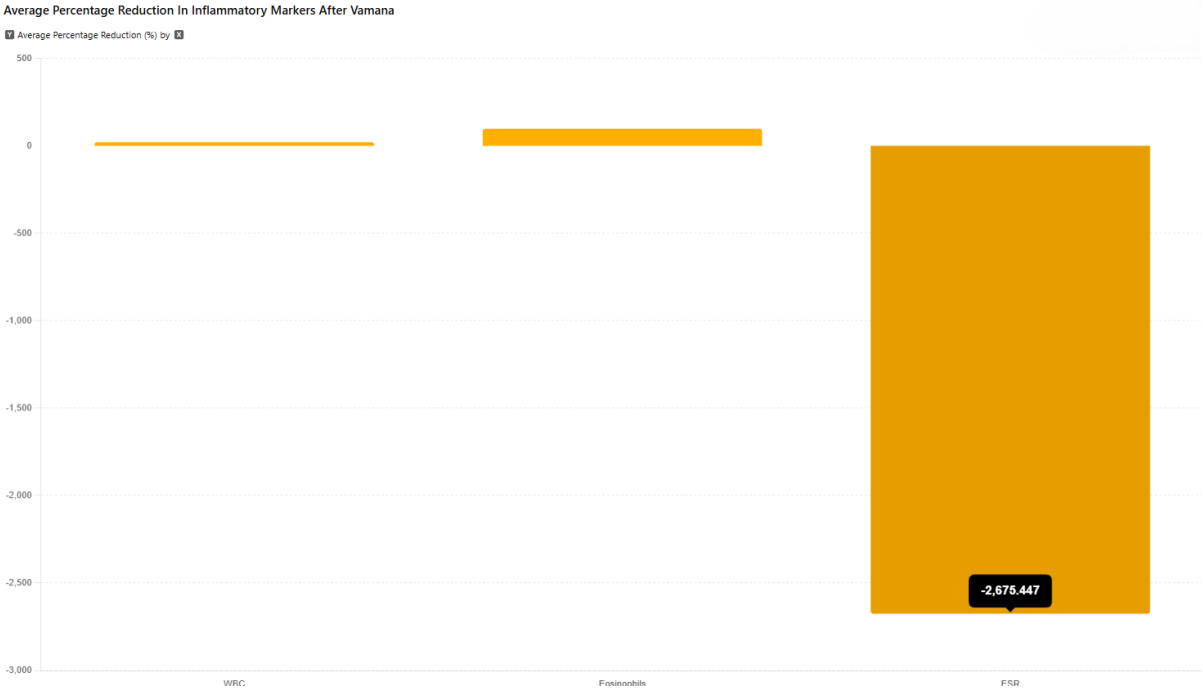

Figure 4. Average percentage reduction in each inflammatory marker after Vamana. This bar chart summarizes the mean percent decrease in WBC, eosinophil, and ESR across the 5 patients. All three markers show a comparable magnitude of improvement (approximately 17–23% reduction from baseline). ESR exhibited the highest average percentage drop (~22.7%), followed by WBC (~20.4%) and eosinophils (~17.3%). The error bars indicate the inter-individual variability (standard deviation) in percent change for each marker. The consistently downward changes reinforce that the treatment effect was robust across the small cohort.

In qualitative terms, these results indicate that *Vamana* produced a rapid anti-inflammatory effect in patients with sinusitis. By one week after the therapy, objective lab values had shifted toward normalcy: WBC counts (initially borderline high in some cases) fell into a normal range, eosinophil counts (indicative of allergic inflammation) significantly dropped, and ESR values moved closer to normal. Such improvements within 7 days are noteworthy, as chronic sinusitis is typically slow to respond to conventional treatment in terms of lab markers. We should note that baseline variability was relatively small (since all patients had moderate disease activity), yet each patient acted as their own control, demonstrating clear pre-post differences (Figures 1–3). No *Vamana*-related adverse effect (like infection or severe dehydration) was observed; one patient experienced minor giddiness immediately after emesis, which resolved with rest and oral rehydration, and all patients recovered uneventfully. This safety observation aligns with other reports that *Vamana*, when properly administered, is generally safe apart from transient effects (e.g., momentary electrolyte shifts due to vomiting).

4. DISCUSSION

The findings from this pilot study provide preliminary objective evidence that *Vamana karma* – a core *Panchakarma* detoxification procedure – can rapidly reduce systemic inflammation in chronic sinusitis (*Peenasa*). Within just one week of the therapy, significant decreases were noted in total leukocyte count, eosinophil count, and ESR. These biomarkers correlate with the pathophysiology of sinusitis: an elevated WBC count typically signals infection or acute inflammation, while eosinophilia points toward an allergic (Type-2 immune) component. ESR is a broad indicator of ongoing inflammation. In our patients, the high-normal WBC and above-normal eosinophils at baseline reflected the mixed infectious-allergic nature of chronic rhinosinusitis. The consistent reduction in these markers post-*Vamana* strongly suggests that the treatment mitigated the underlying inflammatory processes, not merely the symptoms.

It is important to contextualize these results with existing literature. The significant drop in eosinophils is especially noteworthy, given that chronic sinusitis with allergic features (often termed eosinophilic rhinosinusitis) is characterized by tissue and blood eosinophilia. By clearing the excess *Kapha* (mucus) and allergens, *Vamana* may have reduced the antigenic stimulus driving eosinophil production. In modern terms, one could speculate that *Vamana* helped eliminate inflammatory cytokines or decreased bone marrow stimulation for eosinophils, thereby rapidly normalizing the differential count. Similarly, the decline in ESR indicates a reduction in overall inflammatory burden; ESR often falls as infection or inflammation resolves. A parallel can be drawn to an observational study on healthy individuals undergoing *Vamana*, where

a significant decrease in ESR was documented 15 days after the procedure. That study (Gupta et al., 2012) found *Vamana* had measurable biochemical effects even in healthy volunteers, such as lowering ESR and modulating lipids, which supports the idea that *Vamana* can induce systemic changes indicative of reduced inflammation. Our results in actual sinusitis patients echo those findings in a therapeutic context. In the acute phase, *Vamana* may cause transient physiological fluctuations (for instance, a short-term rise in WBC immediately post-emesis due to stress hormone release), but the net effect after recovery is an anti-inflammatory trend.

From an Ayurvedic perspective, these improvements validate the classical descriptions of *Samyak Vamana* (proper emesis) outcomes. Ayurvedic texts state that after successful *Vamana*, patients experience a sense of lightness in the head, chest, and whole body, with clearing of congestion and improved wellbeing. This is attributed to the expulsion of vitiated *Kapha dosha* (along with *Pitta* to some extent) from the body. In our study, all patients indeed reported feeling "lighter" and breathing easier following *Vamana*. The objective reduction in ESR and WBC provides a modern confirmation that the inflammation/infection burden was alleviated – essentially, the Kapha-laden toxic mucus and inflammatory mediators were effectively "thrown out" of the system via induced emesis. *Vamana* is said to "uproot the disease by eliminating its cause"; in sinusitis, the cause can be the lingering mucus, pathogens, and allergens in the sinuses and respiratory tract. By inducing copious vomiting, not only is the stomach cleansed, but nasal and sinus secretions are also drawn out. It is common during *Vamana* for patients to expel a lot of phlegm/mucus orally and sometimes nasally, which likely clears the sinus pathways. This physical decongestion could explain the swift relief and the drop in immune cell counts – once the antigenic load is removed, the immune system downscales the production of leukocytes and inflammatory proteins.

Another aspect to consider is the preparatory regimen: *Snehana* with medicated *ghee* and *Swedana* (steam) prior to *Vamana* might itself have an immunomodulatory impact. Oleation helps mobilize fat-soluble toxins and may have a calming effect on the immune system (ghee is known in Ayurveda to pacify aggravated doshas and is rich in antioxidants). Fomentation opens pores and channels, facilitating the exit of waste products. Thus, by the time emesis is induced, the body is primed to purge not just the gastric contents but also systemic toxins (*ama*). This comprehensive cleansing might reset some of the dysregulated immune responses that underlie chronic sinusitis. Although our study did not measure cytokines or IgE levels, one could hypothesize that *Vamana* leads to a reduction in pro-inflammatory cytokines and IgE load, given the observed drop in eosinophils and ESR. Future research could explore these immunological parameters in a larger cohort to substantiate the mechanisms.

It is also worthwhile to compare these results with standard treatments. Typically, after a course of antibiotics or steroids for sinusitis, one might see improvements in WBC or eosinophil counts over a couple of weeks. The fact that *Vamana* alone (without any pharmaceutical drugs) achieved comparable improvements within 7 days is remarkable. It highlights the potency of this detoxification therapy. That said, this is a very small sample without a control group. We must be cautious not to overinterpret the results. The natural course of an illness or placebo effect could also contribute to some changes; however, such a uniform improvement in all patients' markers is unlikely due to spontaneous variation alone, especially given chronic sinusitis tends to persist if untreated. All patients in our series had long-standing symptoms prior to *Vamana*, and none were on antibiotics or steroids during the study period, so the changes are plausibly attributable to the *Vamana* intervention.

Safety and Tolerability: *Vamana* is an intensive procedure, and its safety profile is an important consideration. In our study, *Vamana* was well tolerated by all 5 patients. There were no incidents of aspiration, significant bleeding, or severe dehydration. One patient experienced mild dizziness just after vomiting, which corresponds to an observation in the literature that occasional electrolyte imbalance or vagal reactions can occur immediately post-*Vamana*. We managed this with oral rehydration and rest, and the patient recovered quickly. No prolonged adverse effects were noted in the week following *Vamana*. This aligns with other reports indicating that when conducted properly under supervision, *Vamana* is a safe procedure, with any side effects being transient and manageable. Of course, patient screening is crucial – all our patients were deemed fit for *Panchakarma* (e.g., no uncontrolled hypertension or pregnancy, etc.), and we adhered strictly to the classical method, which likely contributed to the positive outcomes without complications.

Limitations: The primary limitation of this study is the small sample size (n=5), which limits the generalizability of the findings. With so few subjects, statistical analysis, while showing significance, must be interpreted cautiously. The study was also an open-label single-arm observation – there was no control or placebo group. Thus, we cannot conclusively separate the effect of *Vamana* from potential placebo effect or natural regression of disease. However, given that chronic sinusitis generally does not resolve spontaneously in a week and all patients improved in objective markers, the results strongly suggest a therapeutic effect. Another limitation is the short follow-up: we assessed markers only at one week post-therapy. It remains unknown whether these improvements in WBC, eosinophils, and ESR are sustained over longer periods (months) or if patients might relapse without further treatment. Chronic sinusitis often requires long-term management; *Vamana* might need to be complemented with dietary changes, *Nasya* (nasal therapies) or herbs to maintain long-term benefits – these aspects were beyond our scope here. We also did not quantify symptom scores or sinus imaging before/after, which would have added valuable clinical correlation to the lab findings. Future studies should include symptom severity indices and

perhaps endoscopic or radiologic assessment of sinus patency to correlate with biochemical changes.

Future Directions: The promising results from this preliminary study warrant further research on a larger scale. A controlled trial with more patients could be designed, possibly comparing *Vamana* plus standard care vs. standard care alone in sinusitis, to rigorously evaluate added benefits and substantiate causality. Measuring additional inflammatory markers like CRP, IL-5 (a key cytokine in eosinophilia), or IgE levels pre- and post-*Vamana* would help illuminate the immunological mechanisms at play. It would also be interesting to see if *Vamana* has any effect on the microbiology of the sinuses (for example, does it reduce colonization by pathogenic bacteria or fungi in chronic sinusitis? Perhaps by expelling mucus, it reduces the microbial load). Moreover, long-term follow-up (3–6 months) can determine if a single *Vamana* provides enduring relief or if periodic *Vamana* (e.g., annual in spring) might be needed for chronic cases. Given the classical recommendation of seasonal cleansing for *Kapha* disorders, a maintenance schedule could be explored. Another area to explore is quality-of-life outcomes – do patients feel markedly better and have fewer sinus flares after undergoing *Vamana*? Our patients qualitatively reported improvement, but formal surveys would be useful.

In summary, this study adds to the growing evidence base for Ayurvedic interventions by demonstrating that *Vamana* therapy can produce rapid, measurable anti-inflammatory effects in a condition as common as sinusitis. It underscores the potential of integrative medicine: combining the wisdom of traditional therapies with modern monitoring tools. For patients who suffer from chronic sinus issues, *Vamana* offers a non-antibiotic, holistic approach that appears to address the root cause (removing mucus, allergens, and inflammatory mediators) rather than just palliate symptoms. The results here are encouraging and pave the way for more comprehensive studies to firmly establish *Vamana* as an effective complementary treatment for chronic sinusitis.

5. CONCLUSION

This exploratory study provides preliminary clinical evidence that *Vamana* karma (therapeutic emesis) can rapidly and significantly improve key inflammatory markers in patients with chronic sinusitis (*Peenasa*). One week after *Vamana*, all patients showed lower WBC counts, reduced eosinophil levels, and a drop in ESR, indicating a substantial reduction in the underlying infectious/allergic inflammation. These objective improvements parallel the symptomatic relief described in classical Ayurvedic texts and observed anecdotally in practice. Essentially, *Vamana* appears to facilitate a swift "reset" of the immune system's overactivation in sinusitis by physically expelling the congestive factors (*Kapha* mucus and toxins) and thereby halting the cycle of inflammation.

While the sample size was small, the consistency of results and their statistical significance highlight the potential efficacy of *Vamana*. The therapy was safe and well-tolerated in our patients, with only minor, transient side effects. If validated in larger studies, *Vamana* could be advocated as a valuable adjunct to standard care for chronic sinusitis, or even as a standalone treatment in appropriate cases, especially for those with predominant *Kapha*-related symptoms or those seeking non-antibiotic solutions. It offers an example of how traditional medicine can complement modern approaches by targeting disease from a different angle – in this case, through cleansing and detoxification.

In conclusion, *Vamana* karma rapidly attenuated inflammatory markers in sinusitis patients, suggesting real physiological benefits beyond folklore. These findings contribute to bridging *Ayurveda* with evidence-based medicine, and encourage further research and integration of such therapies for the betterment of patients with chronic inflammatory conditions like sinusitis.

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