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# AYURVEDIC MANAGEMENT OF EOSINOPHILIC ESOPHAGITIS (EOE): A SINGLE CASE STUDY FROM THE INSTITUTE OF APPLIED FOOD ALLERGY (IAFA)

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#### ABSTRACT

Eosinophilic Esophagitis (EoE) is a chronic, allergen-induced, immune-mediated esophageal disorder characterized by esophageal eosinophilia (≥15 eos/hpf), food intolerance, and functional disturbances such as dysphagia and reflux. Modern interventions, including corticosteroids and dietary elimination, offer variable remission and carry long-term adverse risks. This case series presents a biopsy-confirmed pediatric EoE patient who is managed with individualized Ayurvedic protocols at IAFA®. The patient had a prior history of steroid dependence and persistent allergic symptoms. A comprehensive therapeutic approach focused on Agnideepana, Ama Pachana, Doshaaspecific Chikitsa, and Rasayana therapy, supported by Pathya-Apathya and Nasya procedures. Remarkable clinical improvements were observed, including symptomatic relief, histopathological recovery, and enhanced immune tolerance. Follow-up evaluations revealed sustained remission without corticosteroid use. These findings underscore the potential of Ayurvedic management as a viable, holistic alternative in chronic allergic esophageal disorders. Objective: To document and evaluate the outcomes of individualized Ayurvedic management of biopsyconfirmed EoE patients at the Institute of Applied Food Allergy (IAFA), focusing on symptom regression, immunological moderation, digestive correction, and overall quality of life. Methods: This case series examines a 10-year-old patient with EoE who underwent exclusive Ayurvedic management at IAFA. Clinical profiles were assessed using both modern diagnostic tools (endoscopy, biopsy, eosinophil counts, IgE levels) and Ayurvedic parameters (Dosha, Ama, Agnimandya, and Srotodusti). Treatment involved an Ayurvedic regimen comprising Ama-pacana, Agnideepana, Pitta-Kapha Shamana, and Rasayana therapies using herbal extracts, polyherbal formulations, medicated Ghee, and mucosal healers. Supportive Nasya, diet regulation (Pathya-Apathya), and Yoga-based breathing therapies were integrated to address systemic allergies, gut-immune dysfunction, and esophageal tissue repair. Results: The case study demonstrated significant clinical improvement within 8-12 weeks. Patient 1 (pediatric male) achieved complete remission of vomiting and dysphagia, normalization of eosinophil counts, and histological recovery (5 eos/hpf on follow-up).

**KEYWORDS:** Eosinophilic Esophagitis, Ayurveda, Food Intolerance, IAFA, EOE, Aahara Amrutam Rasa, EOE Ayurvedic treatment.

#### 1. INTRODUCTION

Eosinophilic Esophagitis (EoE) is an increasingly recognized condition globally, marked by chronic, immune-mediated esophageal inflammation primarily triggered by food allergens. Despite rising incidence among children and adults, standard treatments, including corticosteroids and elimination diets, often yield incomplete remission and lead to long-term side effects. In Ayurveda, EoE correlates closely with Amlapitta involving Pitta-Kapha vitiation, Agnimandya, and Srotodusti in Annavaha Srotas. The Institute of Applied Food Allergy (IAFA) in India has pioneered a unique integrative approach, combining traditional Ayurvedic interventions with modern diagnostic insights to manage complex allergic disorders. This paper

presents two clinically documented EoE cases to evaluate the safety and efficacy of Ayurvedic treatment.

# 2. MATERIALS AND METHODS

#### 2.1 Study Type

Retrospective case series conducted at IAFA® (Institute of Applied Food Allergy),

#### 2.2 Inclusion Criteria

- Biopsy-confirmed EoE (≥15 eosinophils/hpf)
- Patient not on steroids during Ayurvedic therapy
- Minimum 6-month follow-up post-treatment initiation
- Documented food intolerance/allergy background

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# 2.3 Diagnostic Tools

- Clinical symptoms
- Endoscopic biopsy reports
- CBC with eosinophil count
- Ayurvedic Dosha, Srotas, and Agni evaluation
- Detailed dietary and allergy history

#### 2.4 Treatment Plan

- Internal herbal formulations (Swaras, Gulika, Chai, Capsules)
- External therapies (*Nasya*, oil application)
- Pathya-Apathya (dietary regulations)
- Supportive yoga and home remedies
- Symptom tracking and periodic reassessment

#### 3. Case Presentations

#### 3.1 Demographic and Clinical Details

- **Patient ID:** Case 1 Pediatric Male
- Age/Sex: 10 years / MaleLocation: United States
- UID (Clinical Record Number): 9024
- Date of Case Initiation: 20/12/2024
- **Treating Institution:** Institute of Applied Food Allergy® (IAFA®), India
- Consent: Written informed consent for case publication and anonymized data usage was obtained from the legal guardian.

# 3.2 Clinical History and Presenting Complaints

**Case- 1:** The patient presented with a 4-year history of persistent acid reflux exacerbated by wheat and dairy consumption, chronic constipation, and seasonal nasal allergies since the age of 5. Food allergies to peanuts,

tree nuts, and eggs had been previously diagnosed. Despite treatment with proton pump inhibitors (PPI) and oral Budesonide, symptom resolution was inadequate, prompting the initiation of Ayurvedic care.

#### 3.3 Diagnosis

# CASE 1

# **Modern Diagnostic Summary**

**Histopathology:** Biopsy-confirmed Eosinophilic Esophagitis (EoE)

#### **Serological Findings**

**Total IgE:** 4648 IU/mL (Normal: <90 IU/mL) – Severe elevation

**Specific IgE:** Positive for multiple food allergens (tree nuts, peanuts, sesame, egg white, chickpea)

#### **CBC Findings**

**WBC:**  $9.0 \times 10^{3}/\mu L$ 

**Absolute Eosinophil Count:** 0.30 ×10<sup>3</sup>/μL (Upper-

normal)

ESR: 8 mm/hr (Mildly elevated)

**CRP:** <3.0 mg/L (Normal)

#### 3.4 Ayurvedic Diagnostic Framework

*Vyadhi:* Amlapitta (hyperacidity / inflammatory GI disorder)

Hetu (Causative factors): Ahara-Asatmyata (incompatible food substances), Mandagni, and Ama Utpatti

**Dosha Involvement:** Pitta Pradhana with Kapha and Rakta Anubandha

Srotas Affected: Annavaha, Rasavaha, Pranavaha

#### 4. Treatment Protocol

#### 4.1 Internal Medications (Swarasa and Herbal Formulations)

Formulation used	Main ingredients	Action	Dose
Aahar Amrutham Ras	Euphorbia thymifolia, Phyllanthus niruri, Aegle marmelos, Vitex negundo	GI healing, <i>Ama-</i> <i>Pachcana</i> , anti- inflammatory	7.5–15 mL BID post- meal
Pitpapra Swaras	Fumaria indica	Pittahara, anti-allergic	5–7.5 mL BID before a meal
Shishu Laxoherb	Revand Chini, Saunf, Anjeer, Amaltas	Mild purgative, relieves constipation	2.5 mL HS
Anthra Mithram Gulika	IAFA proprietary formula	Anti-inflammatory, food allergy modulation	1 tablet BID
Aahar Amrutham Gulika	Vacha, Musta, Bilva, Shati, Parpataka, Dadima	Deepana-Pachana, Rasayana	1–2 tablets BID
Aahar Amrutham Chai	Parushaka, Sariva, Kamal, Amla, Kharjura	Soothing, mucosal protection	2 tsp BID with warm water

## 4.2 External Therapy

Pratimarsha Nasya with Nasa Yoga Ghritam (4 drops

bilaterally + 2–4 drops in navel) **Ingredients:** *Yashtimadhu*, *Go-Ghrita* 

Purpose: Stabilization of Pranavaha Srotas, modulation

of allergic respiratory pathways

# **5. Pathya-Apathya (Diet and Lifestyle Management) Recommendation (Pathya)**

- Light, digestible meals including *moong dal, arhar dal*, and old basmati rice
- Seasonal fruits (e.g., pomegranate, apple)
- A2 cow ghee, cumin, fennel, curry leaves
- Green leafy vegetables (steamed), lukewarm water

Mold-free, dust-free indoor environment

#### To Avoid (Apathya)

- Gluten, dairy, butter, cream, cheese
- Spicy, sour, fried, fermented, or processed foods
- Meat, eggs, seafood, nuts (especially peanuts, almonds, cashews, sesame)
- Pulses like chickpeas, vegetables like eggplant, ladyfinger
- Bananas and avocados

# 6. Clinical Monitoring & Follow-Up Follow-Up 1 (February 2025)

Mild relapse of reflux was observed despite strict diet Compliance.

**Symptoms:** Significant improvement in reflux; appetite improved; mild constipation remained.

## Follow-Up 2 (June 2025)

#### Findings

**Biopsy:** Complete resolution of eosinophils in mid and proximal esophagus; eosinophils persisted in the distal esophagus.

Improvement: +2 pounds weight gain; appetite and digestion stable; bowel movements regular.

7. Laboratory Investigations Summary

Parameter	Pre-treatment	Post-treatment	Interpretation
Absolute Eosinophil Count	$0.30 \times 10^{3}/\mu$ L	$0.18 \times 10^{3}/\mu L$	Decreasing trend
ESR	8 mm/hr	6 mm/hr	Mild inflammation resolving
Total IgE	4648 IU/mL	Not reassessed yet	Hyper-IgE syndrome confirmed
Endoscopy Biopsy	32 eos/hpf (distal), mid/proximal also affected	Eosinophils are absent in mid/proximal, reduced in distal	Histological improvement

#### 8. CLINICAL DISCUSSION

This case represents a pediatric manifestation of Amlapitta compounded by Aahara-Asatmyata, Rakta dushti, and Doşaja Srotodusti. The excessive antigenic load from incompatible foods (nuts, dairy, egg proteins) triggered Pitta-Kapha inflammation within the Annavaha Srotas. Laboratory findings of elevated IgE and specific food allergen reactivity affirm the Ayurvedic framework of Asātmyata and Mandāgni, leading to Ama utpatti and Srotorodha.

The therapeutic strategy centered on.

- Pitta Shamana: Pitpapra, Parpataka, Dadima Ama Pachana and Deepana: Musta, Vacha, Shati

- Gastrointestinal mucosal repair: Sariva, Kharjura, Amla
- Immune regulation and Rasayana: Boerhavia diffusa, Triphala, Yashtimadhu

External therapies like Nasya played a key role in restoring the balance of *Pranavaha Srotas* and mitigating upper respiratory symptoms.

#### 9. Outcome Measures

Parameter	Status	
Acid Reflux	Reduced by 70% within 3 months	
Constipation	Resolved by 6 weeks	
Appetite & Growth	Weight gain of 2 pounds, improved hunger cues	
Endoscopy	Eosinophils absent in mid/proximal; reduced distally	
Quality of Life	Significant improvement; medication tapering initiated	

#### 10. DISCUSSION

EoE, though defined in modern science only recently, resonates with classical Ayurvedic understanding of diseases like Amlapitta and Grahani. The holistic approach at IAFA focused not only on symptom relief but also on deeper correction of immune dysfunction, Dosha imbalance, and digestive restoration. Herbal drugs like Aahar Amrutam, Bilwa, Shatavari, and Yashtimadhu have proven anti-inflammatory, mucosal-healing, and

Rasayana properties validated by pharmacological studies. IAFA's integrated Rasayana therapy enhanced tolerance and improved systemic immunity in the patient. These outcomes illustrate Ayurveda's potential in chronic allergic and inflammatory conditions where modern medicine often resorts to long-term steroids.

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#### 11. CONCLUSION

These case studies reinforce the relevance of Ayurvedic management in addressing the root cause and systemic manifestations of EoE. Personalized, *dosha*-specific interventions at IAFA® led to sustained remission without dependency on corticosteroids. This study helps in future clinical trials to establish Ayurveda as a validated system in allergic gastrointestinal disorders.

#### **Ethical Approval and Patient Consent**

Written informed consent was obtained from the patient (or guardians in pediatric cases) for publication of the case details. No invasive procedures beyond standard care were performed. Ethical standards of IAFA Clinical Governance were adhered to.

#### **Conflict of Interest**

The authors declare no conflicts of interest. This manuscript is a non-sponsored academic report from IAFA®□'s Ayurvedic clinical practice.

#### **Clinical Relevance**

This article showcases the successful application of Ayurvedic therapeutics in EoE, a chronic, poorly managed allergic esophageal condition. It serves as a reference for integrative practitioners, allergists, and researchers exploring complementary therapies in chronic immune diseases.

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