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AYURVEDIC MANAGEMENT OF FOOD ALLERGY AND SHEETPITTA (URTICARIA) MIMICKING ALPHA-GAL SYNDROME (AGS): SINGLE CASE STUDY SHOWING GUT-IMMUNE-KRIMI PERSPECTIVE

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ABSTRACT

Background: Alpha-Gal Syndrome (AGS) is an emerging allergic disorder characterized by a delayed hypersensitivity reaction to mammalian meat and dairy proteins, caused by IgE antibodies against galactose-α-1,3-galactose (α-gal). Alpha-gal is a carbohydrate epitope present in mammalian meat. The condition manifests with urticaria, various gastrointestinal disturbances, and systemic allergic symptoms, often appearing hours after ingestion (typically after 3-6 hours). Not all patients with clinical features of Alpha-Gal Syndrome (AGS) test positive for Alpha-gal IgE antibodies. This highlights Alpha-Gal syndrome (AGS), where immune sensitization may be present but undetectable by conventional assays, possibly due to a delayed IgE response, low circulating titers, or immune tolerance mechanisms. From an Ayurvedic perspective, such presentations correspond to Sheetpitta and Krimi Roga manifestations, where systemic hypersensitivity occurs independent of measurable antibody levels. **Objective:** While management of AGS (Alpha-Gal syndrome) is largely limited to dietary restriction, Ayurveda offers a more comprehensive approach. To present the Ayurvedic management of a patient with suspected AGS, highlighting correlations with Sheetpitta, Ahara Asatmyata (food incompatibility), and Krimi Roga (gut microbial or immune dysregulation), and to demonstrate the potential of Ayurvedic therapy in restoring digestive-immune balance. **Materials and Methods:** A 56-year-old female presented with recurrent urticaria, nausea, vomiting, and hypersensitivity to mammalian foods and cooking fumes. Despite elevated total IgE, Alpha-gal IgE was negative. Ayurvedic assessment identified Sheetpitta and Ahara Asatmyata with an underlying Krimi Roga tendency, suggesting gut dysbiosis and immune overactivation. Treatment included Durva Swaras, Aahar Amrutham Capsules, Anthra Mithram Gulika No. 2, Triphala, and Bhoomi Amla, along with diet and lifestyle modifications. The patient also has a history of type 2 diabetes. **Results:** By six weeks, significant improvement in urticaria, gastrointestinal symptoms, and energy levels was noted. At three months, accidental meat consumption did not trigger hypersensitivity, suggesting improved tolerance. Clinical remission persisted despite intercurrent COVID-19 infection. Although there is mild constipation with Anthra Mithram Gulika No. 2 and Durva capsule. **Conclusion:** This case explained that AGS may conceptually align not only with Sheetpitta, Aahara Asatmayta, but also with Krimi Roga, reflecting gut dysbiosis and immune hyper-reactivity. This case also helps to understand that AGS may occur when the Alpha-Gal Syndrome (AGS) test is negative. Ayurvedic treatment achieved both symptomatic resolution and systemic correction, demonstrating Ayurvedic treatment value for food-induced hypersensitivity disorders.

KEYWORDS: Alpha-Gal Syndrome, AGS, Sheetpitta, Urticaria, Krimi Roga, Gut Dysbiosis, Food Allergy, IAFA.

1. INTRODUCTION

Alpha-Gal Syndrome (AGS) represents a unique face in allergy medicine. A delayed hypersensitivity reaction to mammalian-derived food products, mediated by IgE antibodies directed against galactose-α-1,3-galactose (alpha-gal). Unlike immediate-type food allergies, AGS symptoms may manifest 3–6 hours post ingestion, often with urticaria, angioedema, gastrointestinal upset, or systemic reactions. Despite AGS diseases' growing recognition, it is facing diagnostic challenges. Not all patients test positive for Alpha-gal IgE, yet clinical history strongly suggests hypersensitivity. Modern treatment remains largely symptomatic and preventive, centering on strict avoidance of mammalian foods.

Ayurvedic perspective

Ayurveda provides a broader conceptual framework for hypersensitivity disorders. Classically, recurrent urticaria

is described under Sheetpitta, where Vata and Kapha disturb Pitta, producing wheels, itching, and systemic reactivity. Simultaneously, Aahara Asatmayata is the intolerance to specific food combinations that explains food-triggered incompatibility. However, AGS also resembled Krimi Roga. While Krimi is often translated as "worms" or "parasites," Ayurvedic texts describe them more broadly as pathogenic entities arising from impaired Agni (digestive fire), accumulation of Ama (metabolic toxins), and weakened immunity. Krimi originates both externally by parasitic or microbial invasion and internally due to gut dysbiosis, overgrowth, and immune derangement. It is suggested that gut microbiota imbalance and immune overactivation may contribute to exaggerated allergic responses, including AGS. Chronic Ama (toxin) accumulation and intestinal barrier dysfunction promote hypersensitivity, aligning closely with current understandings of dysbiosis-driven food allergies. This case report illustrates the Ayurvedic management of a middle-aged female with AGS-like presentation, showing the relevance of Sheetpitta, Ahara Asatmyta, and Krimi Roga.

Is AGS possible with an Alpha Gal IgE test negative? Diagnostic validity and "false negatives"

A recent cross-sectional analysis found that using an alpha-gal sIgE threshold (≥ 0.1 kUA/L) gives high sensitivity and specificity overall, but it still does not catch every case. Some people with very convincing clinical symptoms of AGS may test below the threshold, especially if the test is done long after exposure, or when IgE levels have declined. The study included 33 individuals in Group 1 and 65 in Group 2, with a mean age of around 47 years. The analysis of internal validity parameters revealed a high sensitivity, specificity, and positive probability ratio, with higher sensitivity in men and higher specificity in women. The analysis of external validity parameters showed a high negative predictive value and global value in all populations and both sexes. However, the positive predictive value was relatively high in men, but low in women. Conclusions: Results suggest that sIgE levels ≥ 0.1 kUA/L may be a useful tool for the diagnosis of AGS, although other factors and diagnostic techniques should also be considered.

[**Reference:** Germán-Sánchez A, Alonso-Llamazares A, García-González F, Matala-Ahmed B, Melgar-Reyes CS, Antepara-Ercoreca I. Diagnostic validity of specific immunoglobulin E levels to alpha-gal in alpha-gal syndrome: a cross-sectional analysis. Allergy Asthma Clin Immunol. 2023 Nov 30;19(1):102. doi: 10.1186/s13223-023-00856-6. PMID: 38037176; PMCID: PMC10691071.]

Case reports of AGS-like symptoms with negative alpha-gal IgE

There is a published case of a 70-year-old woman with chronic urticaria triggered by red meat, but whose tests for alpha-gal IgE and for beef or pork, or poultry IgE were all negative. Yet, a food challenge confirmed the reaction. This suggests that negative serology does not completely exclude AGS or a red meat allergy-like reaction. [Reference- Kondo M, Matsushima Y, Iida S, Umaoka A, Nakanishi T, Habe K, Yamanaka K. A Case of α-Gal-Unrelated Red Meat-Induced Urticaria Treated by Omalizumab. Case Rep Dermatol. 2021 Sep 6;13(3):437-440. doi: 10.1159/000518421. PMID: 34720914; PMCID: PMC8460939.]

Limitations of the tests

Several factors affect whether the alpha-gal IgE test becomes positive.

Timing: IgE levels can wane over time, especially if the patient avoids exposure. Serology tested long after last exposure might be negative.

Test sensitivity: Different labs, different sensitivity thresholds, and different assays may detect different minimal levels. Some assays use 0.1 kUA/L as a threshold; others use 0.35 or higher. If the patient has IgE just below that threshold, the test will read negatively.

Clinical spectrum: Some people may have mild or subclinical forms, or only GI manifestations rather than full anaphylaxis or skin symptoms, so their immune response is not as strong. The test may not pick up a low-level sensitization.

Clinical guidelines and review articles

The CDC guidance emphasizes that diagnosis of AGS is not based solely on a positive alpha-gal IgE result. Clinical history, i.e., delayed reactions after red meat, tick exposure, etc., and physical examination are key, and in some cases, history outweighs a negative test. Also, some review articles highlight that patients with suspected AGS, but negative serology, may still benefit from dietary restrictions or further diagnostic work, e.g., repeat testing, challenge tests, because the test is not perfect.

2. MATERIALS AND METHODS

2.1 Study Type

This is a single-case observational study conducted under Ayurvedic clinical practice at the Institute of Applied Food Allergy (IAFA).

2.2 Inclusion Criteria

The patient was included based on the following selection criteria.

- Adult patient (>18 years) presenting with recurrent delayed hypersensitivity reactions (urticaria, gastrointestinal upset) after ingestion of mammalian meat and dairy products.
- History of symptom onset 3–6 hours post-exposure, suggestive of Alpha-Gal Syndrome (AGS).
- Exclusion of alternative causes (e.g., immediate food allergies, autoimmune disorders).
- Willingness to undergo Ayurvedic assessment and treatment protocol.

2.3 Diagnostic Tools

Detailed medical history, dietary history, and symptom chronology were recorded. Particular emphasis was placed on the delayed nature of symptoms following ingestion of beef, lamb, pork, or dairy.

Laboratory Investigations

- **Total IgE** (elevated at 1385 KU/L)
- **CRP:** 7 mg/L (mildly raised)
- **Cow whey-specific IgE** (low positive, 0.29 kUA/L)
- **Alpha-gal specific IgE** (negative)

Ayurvedic Diagnostic Framework

- The sheetpitta diagnosis is based on classical features of urticarial wheels, itching, and hypersensitivity.
- Aahara Asatmyata (food incompatibility) is considered due to recurrent intolerance to specific foods.
- Krimi Roga is considered due to underlying gut dysbiosis and immune activation, aligning with Ayurvedic descriptions of subtle (Suksham) pathogenic factors.
- (Type 2 diabetes) documented as comorbidity.

Exclusion Tools

Absence of immediate hypersensitivity on skin prick testing for common allergens.

3. Case Presentation

3.1 Patient Information

Age: 56 years
Gender: Female
Location: United Kingdom
First Consultation: 20th May 2024

3.2 Medical History

- Past adrenalectomy for a benign lump
- Type 2 diabetes, diet-controlled
- History of joint pain (resolved with dairy elimination)

3.3 Presenting Complaints

- Recurrent nausea, vomiting, and urticarial rashes after beef, lamb, pork, and dairy intake.
- Hypersensitivity to cooking fumes, with nasal and ocular (eyes) itching.
- Chronic constipation, partly relieved with Triphala.
- No history of childhood atopy.

Clinical Findings

Pigmented scars and urticarial wheels on limbs and trunks**.**

Investigations

- **Total IgE:** 1385 KU/L (markedly elevated)
- **CRP:** 7 mg/L (mildly raised)
- **Alpha-gal IgE:** Negative
- **Cow whey IgE:** Low positive (0.29 kUA/L)

3.4 Ayurvedic Assessment

- **Primary Diagnosis:** Sheetpitta (urticaria) i.e. cold dominant with Vata, Kapha provoking Pitta which results in wheels, itching, rashes, etc.
- **Secondary Diagnosis:** Ahara Asatmyata, i.e., incompatibility with animal proteins and dairy
- Tertiary Association, i.e., Krimi Roga, reflecting gut microbial imbalance and immune overactivation leading to hypersensitivity.

3.5 MATERIALS AND METHODS

Ayurvedic Treatment Protocol

Category	Medicine	Ingredients	Purpose
Herbal extract	Durva Swaras	Durva (*Cynodon dactylon*)	Pitta pacification, anti-inflammatory, immune modulation
Gut and digestion support	Aahar Amrutham capsules	Nirgundi (*Vitex Negundo)*, Shrifal (*Aegle marmelos*), Bhumi Amalaki (*Phyllanthus niruri*), Punarnava (*Boerhavia diffusa*), Changeri (*Oxalis corniculata*)	Enhances digestion, supports gut repair, and is an appetizer
Digestive care	Anthra Mithram Gulika No. 2	Kutaj (*Holarrhena antidysentrica)*, Bilva (*Aegle marmelos*), Dadima (*Punica granatum*)	Regulates bowel movements and intestinal healing
Detoxification and immunity	Triphala capsules	Amalaki (*Phyllanthus emblica*), Haritaki (*Terminalia chebula*), Bibhitaki (*Terminalia bellerica*)	Gentle detoxifier, immune balance, and digestion
Hepatic and metabolic support	Bhoomi Amla capsules	Bhumi Amalaki (*Phyllanthus niruri*)	Hepatoprotective, enhances metabolism

Lifestyle and Diet

Do's (Pathya)

- Non-dairy creamers (read labels to make sure)
- Light (Laghu) and easily digestible food
- Frequent intake of small amounts of lukewarm water
- More fiber-containing fruits and vegetables
- Take ragi, whole corn, millets, and oats.

- Take herbs like fennel seeds regularly. This will improve your agni as well as enhance absorption.
- Fruit or fresh juice of pomegranate daily in the morning.

Don'ts (Apathya)
- Dairy products.
- High-fat foods like butter, margarine, and cream, as well as fatty, fried, or greasy food.
- Packaged food that contains food additives, dyes, and artificial sweeteners.
- Yeast-fermented food and fermented beverage items.
- Citrus Fruit, Lemon, Tomato, Tamarind.
- Complete avoidance of beef, lamb, pork, and processed foods during treatment.
- All leftovers
- Stop using Shilajeeta.

4. RESULTS

Follow-up 1 (6th July 2024)
- Marked reduction in urticaria
- Resolution of nausea and vomiting
- Improved digestion and energy

Follow-up 2 (2nd September 2024)
- Accidental red meat consumption is tolerated without allergic reaction
- Mild constipation, resolved with adjustment
- Sustained remission despite concurrent COVID-19 infection

DISCUSSION

Linking Alpha Gal syndrome with Ayurvedic frameworks

The patient's presentation aligned with.
- Sheetpitta i.e., recurrent urticaria, itching, wheels.
- Ahara Asatmyata i.e., incompatibility with animal-derived foods.
- Krimi Roga i.e., deeper pathology of gut dysbiosis and immune overactivation.

Classical texts describe Krimi as both visible parasites and invisible entities (Drishya and Adrishya Krimi) generated from deranged Agni and Ama. This interpretation aligns with modern views of gut dysbiosis, i.e., imbalance of gut flora, intestinal barrier dysfunction, and chronic immune stimulation.

Krimi Roga and Gut Dysbiosis

Ayurveda's description of Krimi includes both visible and invisible organisms. Modern microbiome science aligns with this view. Dysbiosis, endotoxin release, and gut permeability mirror the classical concept of Ama and Krimi. The formulation used here includes herbs that possess proven antimicrobial, immunomodulatory, and anti-inflammatory properties.

Immune Activation and Allergy Modulation

AGS is mediated by IgE, mast cell activation, and cytokine release. Ayurveda modulates these pathways indirectly by correcting Agni, reducing Ama, and balancing Doshas. Rasayana herbs like Amalaki have been shown to enhance regulatory T-cell activity and suppress inappropriate immune responses.

Strengths of the Case
- Multidimensional Ayurvedic interpretation (Sheetpitta, Asatmyata, Krimi).
- Integration of gut health, immunity, and allergy mechanisms.
- Clear patient improvement with sustainable outcomes.

Limitations

Single-case documentation without laboratory correlation (IgE, microbiome analysis). Need for controlled studies to validate efficacy.

Therapeutic
- **Durva Swaras:** Cooling, anti-inflammatory, Pitta pacifying
- **Aahar Amrutham Capsule:** Restores gut mucosa, regulates Agni
- **Anthra Mithram Gulika No. 2:** Improves bowel clearance, prevents toxin accumulation
- **Triphala:** Detoxifies, modulates immunity, prevents Ama accumulation
- **Bhoomi Amla:** Hepatoprotective, supporting digestion and metabolism

Ayurvedic Mechanism of Action

Agni Deepana and Ama Pachana restored digestive function. Krimighna herbs acted on gut dysbiosis, suppressing pathogenic microbes. Raktashodhaka drugs purified circulating toxins and reduced Pitta-Kapha-mediated inflammatory conditions. Rasayana therapy rejuvenated tissues, stabilized immunity, and reduced hypersensitivity.

CONCLUSION

This case suggests that AGS may be better understood not just as Sheetpitta but also as Krimi Roga. The gut-immune axis explains why some patients remain Alpha-gal IgE negative yet experience strong hypersensitivity. This case also demonstrates that Ayurvedic therapy can achieve better results in AGS-like hypersensitivity through multi-level correction of gut function, immunity, and Dosha balance. Integrating the concepts of Sheetpitta, Ahara Asatmyata, and Krimi Roga with modern ideas of gut dysbiosis and immune activation provides a route for managing complex allergic conditions. Future research should investigate gut microbiota modulation in Ayurveda-based allergy management, exploring Krimi Roga as a conceptual model for AGS and dysbiosis-driven 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.

REFERENCES

1. Sushruta, Sushruta Samhita, Sutrasathana, edited with Ayurveda-Tattava-Sandipika, commentary by Kaviraj Dr Ambika Dutt Shastri, Reprint edition 2007; Chaukhambha Publications; New Delhi.
2. Charka Samhita by Agnivesha, revised by Charaka and Dridhabala with Hindi commentary by Pt. Kashinath Pandey and Dr. Gorakhnath Chaturvedi, Part I, II, Chaukhamba Bharati Academy, Varanasi; Reprint Year, 2013.
3. Srimad Vagbhata, Astang Hridyam; Sutrasthan, "Jeevan" Edited with Hindi commentary by Dr. Shailaja Srivastava, Chaukhamba Orientalia, Varanasi; Edition-1st, 2009.
4. Bhavaprakasa Nighantu of Sri Bhavamishra, Commentary by Prof. K.C. Chunekar, Chaukhambha Bharati Academy, Varanasi; Reprint, 2013.
5. Ashtanga Sangraha of Vagbhata, edited by Kaviraj Atrideva Gupt, Chaukhambha Prakashan, Varanasi. Reprint Edition, 2016.
6. Kondo M, Matsushima Y, Iida S, Umaoka A, Nakanishi T, Habe K, Yamanaka K. A Case of α-Gal-Unrelated Red Meat-Induced Urticaria Treated by Omalizumab. Case Rep Dermatol, 2021 Sep 6; 13(3): 437-440. doi:10.1159/0005-18421. PMID: 3472-0914; PMCID: PMC-8460939.
7. Germán-Sánchez A, Alonso-Llamazares A, García-González F, Matala-Ahmed B, Melgar-Reyes CS, Antepara-Ercoreca I. Diagnostic validity of specific immunoglobulin E levels to alpha-gal in alpha-gal syndrome: a cross-sectional analysis. Allergy Asthma Clin Immunol, 2023 Nov 30; 19(1): 102. doi:10.1186/s13223-023-00856-6. PMID: 3803-7176; PMCID: PMC-1069-1071.
8. Macdougall JD, Thomas KO, Iweala OI. The Meat of the Matter: Understanding and Managing Alpha-Gal Syndrome. Immunotargets Ther, 2022 Sep 15; 11: 37-54. doi:10.2147/ITT.S27-6872. PMID: 3613-4173; PMCID: PMC-9484563.
9. Commins SP. Diagnosis & management of alpha-gal syndrome: lessons from 2,500 patients. Expert Rev Clin Immunol, 2020 Jul; 16(7): 667-677. Doi: 10. 1080/1744666X. 2020. 1782745. Epub 2020 Jul 8. PMID: 3257-1129; PMCID: PMC-8344025.
10. Lesmana E, Rao S, Keehn A, Edwinson AL, Makol A, Grover M. Clinical Presentation and Outcomes of Alpha-Gal Syndrome. Clin Gastroenterol Hepatol, 2025 Jan; 23(1): 69-78. doi:10.1016/j.cgh.2024.06.044. Epub 2024 Jul 26. PMID: 3906-7555.
11. Bernal M, Huecker M, Shreffler J, Mittel O, Mittel J, Soliman N. Successful Treatment for Alpha Gal Mammal Product Allergy Using Auricular Acupuncture: A Case Series. Med Acupunct, 2021 Oct 1; 33(5): 343-348. doi: 10. 1089/acu. 2021. 0010. Epub 2021 Oct 18. PMID: 35003502; PMCID: PMC 8729907.
12. https://jaims.in/jaims/article/view/2298/3514
13. Bellutti Enders F, Elkuch M, Wörner A, Scherer Hofmeier K, Hartmann K. Alpha-gal syndrome initially misdiagnosed as chronic spontaneous urticaria in a pediatric patient: a case report and review of the literature. J Med Case Rep, 2023 Jan 8; 17(1): 6. doi:10.1186/s13256-022-03718-8. PMID: 36611183; PMCID: PMC-9826568.