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Review Article

PRELIMINARY EVALUATION OF THE PAAM ASSESSMENT TOOL FOR PERSONALIZED AYURVEDIC ALLERGY ASSESSMENT

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ABSTRACT

The PAAM (*Prakriti*-Aligned Ayurveda Medicine) Model incorporates these domains into a structured digital assessment tool intended to support individualized Ayurvedic allergy assessment and physician-led clinical decision-making. **Aim**: To preliminarily evaluate the clinical applicability and interpretability of the PAAM assessment tool in patients presenting with different allergic phenotypes. **Objectives**: To examine the clinical information captured by the PAAM assessment, evaluate the differentiation of individualized patient profiles, assess the correspondence between documented clinical characteristics and PAAM-generated findings, and identify practical limitations encountered during real-world assessment. **Materials and Methods**: Three patients representing different clinical presentations were selected for qualitative evaluation. PAAM assessment data, including constitutional profile, current *Dosha* status, *Agni, Ama, Strotas* involvement, trigger sensitivity, clinical risk, disease trajectory, and patient-specific clinical information, were compared with the documented clinical presentation and available consultation records. **Results**: The PAAM assessment generated differentiated individualized profiles across the three cases, despite variation in age, clinical presentation, allergic triggers, chronicity, and organ-system involvement. The assessment captured multiple constitutional and functional domains, including *Prakriti*, current *Dosha* status, *Agni–Ama, Strotas* involvement, trigger sensitivity, and clinical risk characteristics. **Conclusion**: This preliminary three-case evaluation suggests that the PAAM assessment tool can organize multidimensional Ayurvedic and clinical information into individualized patient profiles that are clinically interpretable within physician-led allergy care. The findings support further systematic evaluation of the tool; however, they do not establish diagnostic accuracy, therapeutic efficacy, or formal validity. Larger studies are required to assess reliability and reproducibility.

INTRODUCTION

Allergic disorders are common chronic conditions that can affect multiple systems and may present differently from one individual to another. Food allergy and hypersensitivity, allergic rhinitis, asthma, atopic dermatitis, urticaria, and other allergic manifestations may differ in their onset, severity, triggers, associated symptoms, recurrence, and response to treatment.[1]

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This clinical variation makes a detailed assessment of the individual important in addition to identifying the immediate trigger or disease diagnosis. In contemporary healthcare, increasing attention has been given to personalized approaches because patients with the same clinical diagnosis may have different risk factors, associated conditions, lifestyle patterns, treatment requirements, and responses to intervention. A useful clinical assessment tool therefore needs to capture more than the presenting complaint. It should help organize relevant information about the individual, identify associated physiological and lifestyle factors, and provide a consistent record that can be reviewed during subsequent consultations. [2,3]

Ayurveda has traditionally approached the patient as an individual rather than treating disease as an isolated entity. Assessment includes consideration of constitutional characteristics such as *Prakriti*, the current state of *Dosha, Agni, Ama, Ojas, Bala, Satva, Sara,* and *Strotas,* together with *Ahara, Vihara*, sleep, bowel habits, environmental influences, and other patient-specific factors. Such assessment can provide a broader description of the patient's physiological status and may be relevant not only to allergic disorders but also to the assessment of patients with other chronic and non-communicable conditions.[4]

However, translating this multidimensional Ayurvedic assessment into routine clinical practice presents practical difficulties. A large number of clinical variables may need to be collected, and the depth of assessment may vary according to the physician, patient age, presenting complaint, sex, disease history, and associated conditions. In addition, important information may be missed when assessment is performed through unstructured history taking or conventional paper-based documentation. A structured digital assessment tool may help organize these clinical domains in a consistent manner while still allowing the physician to interpret the findings in the context of the individual patient.[5]

The PAAM assessment application was developed at IAFA as an institution-specific digital tool to support this process. Its purpose is not to replace clinical examination or physician judgment, but to facilitate systematic collection and organization of patient information. The assessment incorporates constitutional, functional, dietary, lifestyle, environmental, and disease-related information and can accommodate additional questions according to the patient's clinical profile. Thus, the assessment is not limited to a single disease category or a uniform questionnaire for every patient.

An important feature of such an assessment is its ability to accommodate patient-specific history. For example, assessment requirements may differ substantially between a child, an adolescent, an adult, a woman with menstrual or reproductive considerations, or an older adult with multiple comorbidities and medication use. Similarly, a patient presenting primarily with allergic symptoms may require detailed trigger and exposure history, whereas a patient presenting with another disease may require greater emphasis on the affected *Strotas*, digestive status, lifestyle, constitutional characteristics, or associated systemic findings. A structured tool can therefore provide a common assessment base while allowing clinically relevant information to be captured according to the individual patient.

The value of such a tool, however, cannot be assumed merely from its digital implementation. Before larger clinical studies are undertaken, it is important to examine whether the assessment can be completed in actual clinical practice, whether the collected information provides a clinically meaningful patient profile, whether the assessment captures important patient-specific domains, and whether the resulting information can assist the physician during clinical evaluation and treatment planning. A preliminary evaluation using real clinical assessments can provide an initial understanding of these practical aspects.

The present study therefore evaluates the practical use of the PAAM assessment application in a small series of clinical cases. The purpose is not to establish diagnostic accuracy or therapeutic efficacy, but to examine whether the structured assessment captures relevant constitutional, functional, lifestyle, environmental, and disease-related information and whether the resulting assessment profile provides useful information for subsequent physician-led clinical management.

Importantly, the present evaluation focuses on the assessment utility of the application rather than disclosure or testing of its proprietary scoring methodology. The underlying assessment logic and institutional clinical methodology remain part of the PAAM system, while this study examines the observable clinical utility of the assessment process in real-world patient documentation. The findings from this preliminary work may provide an initial basis for refinement of the assessment tool and for designing larger studies examining its content validity, reliability, inter-observer agreement, usability, and clinical utility in larger and more diverse patient populations.

Table 1: Clinical Need for a Structured PAAM Assessment

Clinical challenge	Need in practice	Potential contribution of PAAM assessment
Multidimensional patient history	Information from multiple clinical domains needs to be captured	Structured collection of relevant patient information
Individual variation	Patients with similar diseases may have different profiles	Individualized assessment
Variable Ayurvedic assessment	Depth and documentation may differ between consultations	More consistent assessment

Age- and sex-specific requirements	Clinical history differs across patient groups	Patient-specific assessment sections
Multiple associated factors	Diet, lifestyle, environment and systemic features may interact	Integrated clinical profile
Follow-up documentation	Changes need to be compared over time	Structured longitudinal records
Clinical research	Standardized information is required for future studies	Organized clinical data

AIM AND OBJECTIVES

Aim

The present study aimed to preliminarily evaluate the practical use and clinical utility of the PAAM assessment application in real-world Ayurvedic clinical practice, with particular emphasis on its ability to systematically capture constitutional, functional, disease-related, dietary, lifestyle, and patient-specific information.

Objectives

The specific objectives were:

1. To assess the feasibility of using the PAAM digital assessment application during routine clinical consultations.
2. To examine whether the assessment captures relevant Ayurvedic clinical domains, including *Prakriti, Vikriti, Dosha, Agni, Ama, Ojas, Bala, Satva, Sara, Srotas, Ahara, Vihara,* and other relevant clinical factors.
3. To evaluate the ability of the assessment to capture patient-specific information according to age, sex, presenting complaint, disease history, and associated clinical conditions.
4. To examine the clinical relevance of the information generated through PAAM assessment in understanding the individual patient profile.
5. To assess whether PAAM-generated assessment findings provided useful information for subsequent physician-led clinical evaluation and management.
6. To identify practical gaps, incomplete responses, or areas requiring refinement in the assessment during its use in actual patients.
7. To explore the potential applicability of the assessment methodology beyond allergic disorders, particularly for comprehensive Ayurvedic assessment of patients presenting with other clinical conditions.
8. To generate preliminary observations for future formal validation studies involving larger patient populations and appropriate measures of reliability, validity, usability, and clinical utility.

Study Question

Can the PAAM assessment application systematically capture clinically relevant constitutional and functional information in individual patients and provide information that is useful for subsequent physician-led Ayurvedic assessment and management?

MATERIALS AND METHODS

Study Design

The present study was designed as a retrospective exploratory case-series evaluation of the PAAM digital assessment application in real-world Ayurvedic clinical practice. The study focused on the practical use of the assessment tool and the clinical information generated from its application in individual patients. It was not designed to establish diagnostic accuracy, therapeutic efficacy, predictive performance, or formal psychometric validity.

The assessment findings were examined in relation to the patients recorded clinical presentations and subsequent physician-led management.

Study Setting

The study was conducted using clinical assessments generated through the IAFA Ayurveda allergy-care system, where the PAAM assessment application is used as part of routine patient evaluation. The application is intended for institutional clinical use and is not presented in this study as a universally available or independently validated diagnostic instrument.

Case Selection

Three previously assessed patients were selected for this preliminary evaluation to represent different clinical presentations and patient characteristics.

The selected cases included variation in:

- Age group
- Sex
- Presenting complaints
- Allergic triggers and manifestations
- Duration and chronicity of symptoms
- Organ systems involved
- Associated gastrointestinal and lifestyle factors
- Constitutional and functional assessment findings.

The purpose of selecting clinically different cases was to examine whether the PAAM assessment could generate individualized profiles rather than producing a similar assessment pattern across patients.

Source of Clinical Information

For each case, information was obtained from the available clinical documentation associated with the patient's PAAM assessment.

The following sources were considered:

Table 2: Various sources of clinical information

Source	Information considered
PAAM assessment	Patient-entered responses and assessment findings
PAAM-generated report	Constitutional and functional profile generated by the application
Clinical history	Presenting complaints, duration, triggers, associated symptoms and relevant history
Clinical examination	Findings documented by the treating physician
Investigation records, where available	Relevant laboratory or diagnostic information
Prescription/management record	Physician-led treatment and subsequent clinical recommendations

The PAAM-generated output was not treated as an independent confirmation of diagnosis. Instead, its clinical relevance was examined by comparing the assessment information with the documented patient presentation and management.

PAAM Assessment Procedure

The PAAM assessment begins with the collection of basic demographic and clinical information, followed by relevant clinical history and patient-specific questions.

The assessment incorporates multiple Ayurvedic and clinical domains, including:

- *Prakriti*
- *Vikriti*/current Dosha status
- *Agni*
- *Ama*
- *Ojas*
- *Satva*
- *Bala*
- *Sara*
- *Srotas*
- *Ahara*
- *Vihara*
- Sleep and bowel habits
- Allergies and trigger history
- Environmental factors
- Relevant gastrointestinal and systemic features

Additional information may be collected according to the individual patient's characteristics. Thus, the assessment is structured but not identical for every patient. For example, a pediatric patient may require developmental, feeding, and childhood-history information, whereas assessment of an adult woman may include menstrual, reproductive, or hormonal history when clinically relevant. Similarly, patients with different presenting diseases may require different disease-specific or organ-system information. This patient-specific approach was considered an important component of the preliminary evaluation.

Assessment Output

Following completion of the relevant assessment, the application organizes the entered information and generates a structured patient profile.

For the present study, the following outputs were examined:

1. Constitutional profile
2. Current *Dosha/Vikriti* profile
3. *Agni* status
4. *Ama* status
5. *Ojas/Bala*-related findings
6. *Satva*-related findings
7. *Sara* assessment
8. *Srotas* involvement
9. Trigger and sensitivity profile
10. Clinical risk-related findings
11. Disease trajectory-related information, where available
12. Other clinically relevant patient-specific findings
13. The assessment outputs were subsequently reviewed in the context of the patient's recorded clinical presentation by the treating physician.

Evaluation of Clinical Utility

Because this was a small exploratory study, clinical utility was evaluated qualitatively rather than statistically. For each patient, the following questions were examined:

- Did the assessment capture the major presenting clinical features?
- Did it identify relevant constitutional or functional characteristics?
- Did it capture important patient-specific information?
- Were the generated findings clinically interpretable?

- Did the assessment provide information that was considered relevant during physician-led management?
- Were there incomplete, unclear, or contradictory patient responses?
- Did the assessment identify domains requiring further clinical clarification?

This approach allowed assessment of the tool in actual clinical use without making unsupported claims of diagnostic or therapeutic validity.

Assessment-to-Management Comparison

A key component of the present study was comparison between the PAAM assessment profile and the subsequent physician-led management. The purpose was not to determine whether PAAM "proved" the treatment decision to be correct. Rather, the analysis examined whether information captured during assessment appeared clinically relevant to the management approach selected by the physician.

Table 3: Planned Case-Level Evaluation

Evaluation domain	Question examined
Clinical presentation	What was the patient's principal clinical problem?
Assessment completeness	Which PAAM domains were successfully captured?
Constitutional profile	What individual constitutional characteristics were identified?
Functional profile	What *Agni, Ama, Ojas, Satva, Sara* and *Srotas* findings were generated?
Patient-specific information	What additional age/sex/disease-specific information was captured?
Clinical correspondence	Which PAAM findings corresponded with documented clinical features?
Management relevance	Which findings were relevant to subsequent physician assessment or management?
Data limitations	Were responses incomplete, ambiguous, or inconsistent?

Handling of Incomplete or Ambiguous Responses

As the assessment was performed in routine clinical settings, incomplete or unclear patient responses were not excluded simply because they reduced data completeness. Where information was unavailable or uncertain, it was recorded as such. No missing response was retrospectively reconstructed or assumed to represent a particular clinical state. This was important because the study also aimed to identify practical limitations of patient-completed digital assessment and areas where clarification by the physician may be required.

Data Analysis

Given the exploratory nature and small number of cases, analysis was primarily descriptive and qualitative.

Individual patient profiles were compared across major assessment domains to identify:

- Similarities and differences between cases
- Variation in constitutional and functional profiles
- Patient-specific information captured by the tool
- Correspondence between assessment findings and clinical presentation
- Potential contribution of the assessment to physician-led clinical management.

No inferential statistical analysis was carried out.

Table 4: Overall Analytical Approach

Stage	Analysis
Patient assessment	Review of recorded PAAM responses
Profile generation	Review of PAAM-generated findings
Clinical correlation	Comparison with documented clinical presentation
Management correlation	Review of subsequent physician-led management
Data-quality assessment	Identification of incomplete/ambiguous responses
Cross-case comparison	Identification of similarities and differences
Interpretation	Preliminary assessment of clinical utility

RESULTS

Clinical Characteristics of the Evaluated Cases

Three cases were evaluated using the *Prakriti*-Aligned Ayurveda Medicine (PAAM) assessment framework. The evaluated population comprised one pediatric male and two adult females with heterogeneous allergic and immune-mediated clinical presentations. The cases differed in age, clinical phenotype, trigger profile, chronicity, associated gastrointestinal manifestations, and extent of systemic involvement. This heterogeneity allowed assessment of whether the PAAM framework generated differentiated patient-specific profiles rather than a uniform allergic-risk classification.

Table 5: Baseline Clinical Characteristics of the Evaluated Cases

Characteristic	Case 1	Case 2	Case 3
Age/Sex	12 years/Male	35 years/Female	37 years/Female
Principal clinical pattern	Food allergy dominant pattern	Multisystem immune-reactivity pattern	Multisystem immune-reactivity pattern.
Major documented triggers/features	Pollen, egg, hazelnut, gluten and dairy	Trigger not known; blistering involving mouth, nose and body.	Dust, pollen and pet exposure; respiratory symptoms.
Gastrointestinal involvement	No specific GI involvement stated in the clinical summary.	Constipation	Chronic digestive complaints.
Duration/chronicity	Chronic allergy history	Approximately 3 months of current blistering.	Long-standing allergic disease.
Current dominant *Dosha*	*Vata- Kapha* predominant pattern.	*Vata*-predominant inflammatory pattern.	*Vata-Pitta* predominant pattern with *Kapha.*
"PAAM allergy-risk band"	Low	Low	High

Comparative Constitutional and PAAM Assessment Profile

The PAAM assessment demonstrated differences across the three cases in *Prakriti*, current *Dosha* distribution, *Agni, Ama*, trigger sensitivity, chronicity, reversibility, and PAAM allergy-risk classification. Although all three patients presented with allergic or immune-mediated manifestations, their constitutional profiles and current assessed states were not identical.

Table 6: Comparative PAAM Assessment Findings

Parameter	Case 1: 12/Male	Case 2: 35/Female	Case 3: 37/Female
Dominant *Prakriti*	*Vata* 86.8%	*Pitta* 48.5%	*Vata* 66.2%
Current *Dosha* distribution	*Vata* 50%, *Kapha* 50%	*Vata* 100%	*Vata* 36.4%, *Pitta* 36.4%, *Kapha* 27.3%
Predominant *Vikriti* pattern	*Vata-Kapha* predominant	*Vata*-predominant inflammatory pattern	*Vata-Pitta* predominant with *Kapha* involvement
Agni	*Sama*	*Sama*	*Vishama*
Ama	Low	Moderate	High
Trigger sensitivity	High	High	Very high
Chronicity risk	Low	Moderate	High
Reversibility	Moderate	Low	Low
PAAM allergy-risk band	Low	Low	High

In case 1, *Vata* was strongly represented in the constitutional assessment (86.8%), while the current assessment showed an equal *Vata-Kapha* distribution. The resulting profile was therefore interpreted as a *Vata-Kapha* predominant current pattern, rather than assuming that the constitutional predominance represented the current clinical state.

In case 2, *Pitta* was the predominant constitutional component (48.5%), whereas the current assessment showed complete *Vata*

predominance. The clinical profile was therefore characterized as a *Vata*-predominant inflammatory pattern, demonstrating a clear difference between constitutional status and the currently assessed state.

In case 3, *Vata* was constitutionally predominant (66.2%); however, the current assessment showed a more distributed *Dosha* pattern, with *Vata* and *Pitta* each contributing 36.4% and *Kapha* 27.3%. This was interpreted as a *Vata–Pitta* predominant pattern with *Kapha* involvement.

Overall, the three assessments demonstrated that Prakriti and current *Vikriti* were not necessarily concordant. The PAAM assessment therefore provided information beyond constitutional classification by identifying differences in the currently assessed *Dosha* pattern and associated functional parameters such as *Agni* and *Ama*. The variation in trigger sensitivity, chronicity, reversibility, and PAAM allergy-risk bands further contributed to differentiation of the individual clinical profiles.

Importantly, the PAAM allergy-risk band represents an assessment output of the PAAM tool and should not be interpreted as a validated measure of biomedical disease severity, prognosis, or diagnostic certainty. In this preliminary evaluation, the findings were considered alongside the clinical history and presentation rather than used as an independent diagnostic measure. This distinction is important because the purpose of the present preliminary assessment was not to determine whether the PAAM classifications constitute a diagnostic test, but to examine whether the tool could generate differentiated, clinically interpretable patient profiles across heterogeneous cases.

Comparative Assessment of *Strotas* Involvement

Strotas assessment formed an important component of the PAAM clinical profile by extending the evaluation beyond the presenting allergic manifestation and documenting the broader distribution of assessed functional involvement. The three cases demonstrated clear differences in the number and pattern of *Strotas* identified.

In case 1 (12-year-old male), the assessment identified involvement of *Pranavaha, Annavaha,* and *Rasavaha Strotas*. In case 2 (35-year-old female), the assessed profile was broader and included *Udakavaha, Annavaha, Rasavaha, Raktavaha, Medovaha, Mutravaha,* and *Purishavaha Strotas*. Case 3 (37-year-old female) demonstrated the widest Srotas profile, with involvement of *Pranavaha, Udakavaha, Annavaha, Rasavaha, Mamsavaha, Medovaha, Asthivaha, Majjavaha, Shukravaha, and Purishavaha Strotas.*

Table 7: Case-wise *Strotas* Involvement Identified by the PAAM Assessment

Case	Age/Sex	*Strotas* identified in the PAAM assessment	Number identified
Case 1	12/Male	*Pranavaha, Annavaha, Rasavaha*	3
Case 2	35/Female	*Udakavaha, Annavaha, Rasavaha, Raktavaha, Medovaha, Mutravaha, Purishavaha*	7
Case 3	37/Female	*Pranavaha, Udakavaha, Annavaha, Rasavaha, Mamsavaha, Medovaha, Asthivaha, Majjavaha, Shukravaha, Purishavaha*	10

The findings demonstrate that the PAAM assessment generated different *Strotas* profiles for individual patients, rather than restricting assessment to the organ system associated with the presenting allergic condition. *Annavaha* and *Rasavaha Strotas* were identified across all three cases, whereas the remaining *Strotas* varied between individuals.

The widest distribution was observed in case 3, which also had the most extensive multisystem clinical presentation among the evaluated cases. This observation suggests that *Strotas* assessment may add clinically relevant information when constructing an individualized Ayurvedic profile.

Thus, in the present study, *Strotas* assessment is best understood as a descriptive component of multidimensional patient profiling, complementing *Prakriti, Vikriti, Agni, Ama, Satva*, dietary, lifestyle, and clinical assessment rather than serving as an independent measure of allergy severity.

***Agni, Ama* and Allergy-Trajectory Assessment**

Marked differences were also observed in the functional and trajectory-related components of the PAAM assessment. The 12-year-old male and 35-year-old female were both classified as having *Sama Agni*, whereas the 37-year-old female was classified as having *Vishama Agni*. *Ama* status progressed from low in the 12-year-old male to moderate in the 35-year-old female and high in the 37-year-old female.

Similarly, the three cases demonstrated different trajectory classifications:

- 12/Male: Stage 2 - Barrier Destabilization Phase; low chronicity risk and moderate reversibility.
- 35/Female: Stage 3 - Systemic Immune Dysregulation; moderate chronicity risk and low reversibility.
- 37/Female: Stage 4 - Chronic Structural Allergy Pattern; high chronicity risk and low reversibility.

Table 8: Allergy-Trajectory Classification

Parameter	12/Male	35/Female	37/Female
Agni	*Sama*	*Sama*	*Vishama*
Ama	Low	Moderate	High
Trigger sensitivity	High	High	Very high
Chronicity risk	Low	Moderate	High
Reversibility	Moderate	Low	Low
PAAM trajectory stage	Stage 2	Stage 3	Stage 4
Overall clinical risk	Low	Low	High

The findings demonstrate that the PAAM framework generated different functional and trajectory profiles despite the presence of allergic/immune-reactive presentations in all three cases. These stages should be interpreted as model-generated classifications, rather than independently validated disease stages.

Patient-Specific Assessment Domains

Another notable feature was the incorporation of age- and sex-specific assessment domains. For the 12-year-old male, the PAAM report included pediatric immune-development assessment. The report classified early immune programming as showing a moderate early immune imbalance and identified an Atopic March Stage 3- airway hyperreactivity phase.

For the 35-year-old female and 37-year-old female, female reproductive-health assessment was incorporated. The assessment included menstrual characteristics and screening domains related to PCOS, menstrual dysfunction, menopause and infertility. No significant PCOS, menstrual dysfunction, menopause or infertility-risk pattern was generated in the 35-year-old female.

The 37-year-old female's assessment additionally recorded thyroid history, fatigue, cold intolerance, hair fall, recurrent urinary symptoms and other female-health parameters.

This indicates that the PAAM assessment was not restricted to a single allergy phenotype but incorporated context-dependent assessment domains according to patient characteristics and reported clinical information.

Overall Pattern Observed Across the Three Cases

Taken together, the three cases demonstrated differentiation across multiple PAAM domains:

1. Constitutional profile: *Vata, Pitta*, and mixed constitutional influences differed across cases.
2. Current *Dosha* state: All three demonstrated current *Vata* predominance, but with different *Vata–Pitta–Kapha* distributions.
3. *Strotas* involvement: The number and type of affected *Strotas* varied substantially.
4. *Agni* and *Ama*: The cases ranged from *Sama Agni* with low *Ama* to *Vishama Agni* with high *Ama*.
5. Trigger sensitivity: High to very high trigger reactivity was identified.
6. Disease trajectory: The cases ranged from Stage 2 to Stage 4 classifications.
7. Reversibility: Moderate reversibility was observed in the youngest case, while both adult cases were classified as having low reversibility.
8. Clinical risk: Two cases were classified as low risk, whereas the chronic multisystem case was classified as high risk.

Therefore, the primary observation from this preliminary case evaluation was individualized multidimensional profiling rather than simple categorization of allergy status. At the same time, the findings should be interpreted cautiously. The sample consisted of only three cases, and the PAAM assessment is based partly on patient-provided responses and Ayurvedic analytical modelling. The reports themselves specify that the assessment does not replace direct physician evaluation. Accordingly, these results demonstrate the feasibility and descriptive differentiation of the PAAM assessment in three heterogeneous clinical cases, but they do not establish diagnostic accuracy, predictive validity, treatment efficacy, or clinical superiority.

Relationship Between PAAM Assessment and Clinical Management

The PAAM assessment findings were considered alongside the individual clinical presentation and treatment records to examine whether the information generated by the assessment provided clinically relevant support for individualized management. This comparison was descriptive and was not intended to determine treatment efficacy or establish a causal relationship between PAAM assessment and clinical outcome.

The assessment provided patient-specific information across constitutional status, current *Vikriti* pattern, *Agni, Ama, Strotas* involvement, trigger sensitivity, chronicity, reversibility, and other relevant clinical domains. These findings were reviewed in conjunction with the patient's presenting complaints

and available clinical information before management was planned. Because only three cases were included, no statistical assessment of concordance was performed. The purpose of this analysis was to determine whether the PAAM-generated profiles could provide clinically interpretable information that may assist the treating physician in individualized case management.

Table 9: Relationship Between PAAM Assessment Profile and Clinical Management

Case	Major PAAM assessment findings	Relevant clinical context	Clinical management
Case 1: 12/Male	*Vata-Kapha* predominant pattern, *Sama Agni*, low *Ama,* high trigger sensitivity, Stage 2, moderate reversibility	Food-allergy dominant presentation with multiple documented triggers.	Individualized management based on clinical presentation and physician assessment.
Case 2: 35/Female	*Vata*-predominant inflammatory pattern, *Sama Agni,* moderate *Ama,* high trigger sensitivity, Stage 3, low reversibility.	Multisystem mucocutaneous presentation with gastrointestinal involvement.	Individualized management based on clinical presentation and physician assessment.
Case 3: 37/Female	*Vata–Pitta* predominant pattern with *Kapha* involvement, *Vishama Agni,* high *Ama,* very high trigger sensitivity, Stage 4, low reversibility	Chronic multisystem allergic presentation with respiratory and gastrointestinal manifestations.	Individualized management based on clinical presentation and physician assessment.

The comparison indicated that the PAAM assessment generated different patient-specific profiles corresponding to heterogeneous clinical presentations. The assessment therefore provided information that could be considered during individualized clinical evaluation rather than producing a uniform assessment pattern for all patients. However, these observations should not be interpreted as evidence that the PAAM assessment determined the treatment prescribed or that the treatment produced a particular outcome. Clinical decisions remained under the responsibility of the treating physician and were based on the overall clinical assessment.

Preliminary Clinical Utility of the PAAM Assessment

Across the three cases, the PAAM assessment organized multiple domains of clinical information into a structured patient profile. In addition to allergy-related history, the assessment captured constitutional characteristics, current functional status, *Strotas* involvement, digestive and metabolic parameters, trigger sensitivity, clinical trajectory, and patient-specific information according to age and sex.

An important observation was the variation in the resulting assessment profiles despite the use of the same assessment system. This differentiation was evident in *Prakriti, Vikriti* pattern, *Strotas* involvement, *Agni, Ama,* chronicity, reversibility, and PAAM allergy-risk classification. The assessment therefore demonstrated preliminary practical utility in organizing complex patient information into a standardized format while allowing the resulting profile to remain individualized. This may be particularly relevant in clinical settings where multiple Ayurvedic assessment parameters need to be considered simultaneously.

Table 10: Assessment Domains Captured Across the Three Cases

Assessment domain	Case 1: 12/Male	Case 2: 35/Female	Case 3: 37/Female
Prakriti assessment	+	+	+
Current *Vikriti* assessment	+	+	+
Agni assessment	+	+	+
Ama assessment	+	+	+
Strotas assessment	+	+	+
Allergy and trigger assessment	+	+	+
Chronicity assessment	+	+	+
Reversibility assessment	+	+	+
Pediatric-specific assessment	+	–	–
Female-specific assessment	–	+	+

Gastrointestinal assessment	+	+	+
PAAM allergy-risk classification	+	+	+
Digital assessment report	+	+	+

Note: "+" indicates that the respective assessment domain was included or generated for the case; "–" indicates that the domain was not applicable based on the patient's demographic category. Presence of a gastrointestinal assessment does not necessarily indicate the presence of gastrointestinal disease.

Preliminary Interpretation of the Findings

The preliminary evaluation demonstrated that the PAAM assessment generated differentiated multidimensional profiles in three clinically heterogeneous cases. Differences were observed in constitutional status, current *Vikriti* pattern, *Strotas* involvement, *Agni, Ama*, trigger sensitivity, chronicity, reversibility, and PAAM allergy-risk classification. The assessment also demonstrated flexibility in incorporating patient-specific domains, including pediatric assessment in the 12-year-old male and female-specific assessment domains in the two adult female cases. A further observation was that the assessment extended beyond the primary allergic complaint and captured associated constitutional, functional, lifestyle, gastrointestinal, and systemic information. This broader profile may assist the physician in considering the patient as an individual rather than evaluating the allergic manifestation in isolation.

However, the findings should be interpreted strictly as preliminary descriptive observations. The study involved only three cases, without an independent reference standard, inter-rater reliability testing, statistical validation, or controlled assessment of clinical outcomes. Therefore, the present findings cannot establish the diagnostic accuracy, reliability, predictive validity, therapeutic effectiveness, or clinical superiority of the PAAM assessment. The primary outcome of this preliminary evaluation was therefore the feasibility of generating structured and differentiated patient profiles using the PAAM assessment in actual clinical cases. These findings provide a basis for subsequent formal validation of the assessment tool using larger samples, standardized reference criteria, inter-observer testing, and prospective clinical evaluation.

DISCUSSION

The present preliminary evaluation explored the practical application of the PAAM assessment in three clinically heterogeneous cases. The main observation was that the assessment generated differentiated patient profiles across constitutional status, current *Vikriti* pattern, *Strotas* involvement, *Agni, Ama*, trigger sensitivity, chronicity, reversibility, and PAAM allergy-risk classification. Thus, even within a small number of cases, the assessment did not produce a uniform profile for patients presenting with allergic or immune-mediated conditions. A notable finding was the difference between *Prakriti* and the currently assessed *Vikriti* pattern. The three cases showed different constitutional profiles, while their current patterns demonstrated additional variation. This distinction is important within an individualized Ayurvedic approach because constitutional characteristics represent the individual's baseline state, whereas the current clinical state may be influenced by disease, diet, lifestyle, environment, and other acquired factors. The PAAM assessment therefore attempts to retain both dimensions rather than using *Prakriti* alone to characterize the patient.

The assessment also demonstrated considerable variation in *Strotas* involvement. While *Annavaha* and *Rasavaha Strotas* were identified across all three cases, the overall *Strotas* profiles differed substantially. The broader distribution observed in the third case occurred in the setting of a more extensive multisystem clinical presentation. Although this observation cannot establish a relationship between the number of *Strotas* involved and disease severity, it demonstrates the ability of the assessment to document systemic information beyond the patient's primary allergic complaint.

Another relevant observation was the variation in *Agni* and *Ama*. The cases ranged from *Sama Agni* with low *Ama* to *Vishama Agni* with high *Ama*. Within Ayurvedic clinical reasoning, these parameters are considered relevant to individualized assessment and therapeutic planning. In the present study, however, their clinical significance should be regarded as descriptive because the study was not designed to validate *Agni* or *Ama* scoring against independent clinical or biological measures.

The incorporation of trigger sensitivity, chronicity, and reversibility further expanded the assessment beyond simple identification of an allergen. These parameters provided an indication of how the assessment characterized the patient's current clinical trajectory. The third case, for example, demonstrated very high trigger sensitivity, high chronicity risk, and low reversibility, whereas the younger case demonstrated lower chronicity risk and moderate reversibility. Such differentiation may be clinically useful for organizing follow-up and individualized management, although these classifications require prospective validation before they can be interpreted as predictive measures.

An important practical feature of the PAAM assessment was its ability to incorporate patient-specific information according to age, sex, and clinical context. Pediatric assessment in the 12-year-old patient and female-specific assessment domains in the two adult women demonstrate that the assessment is not restricted to a single standardized set of questions for every patient. This allows the core assessment to remain structured while permitting additional information to be collected when clinically relevant.

The digital implementation may further support this approach by bringing multiple assessment domains into a standardized clinical record. Rather than replacing physician assessment, the system organizes patient responses and generates a structured profile that can subsequently be interpreted in the context of clinical history and examination. This distinction is important because the present evaluation does not suggest that the PAAM output should function as an autonomous diagnostic system. The preliminary findings also highlight an important practical challenge of comprehensive patient assessment. A detailed constitutional assessment, particularly *Prakriti* assessment, requires patients to answer a relatively large number of questions. In routine practice, prolonged questionnaires may lead to respondent fatigue, reduced attention, difficulty recalling information, or inconsistent responses. Such factors may introduce variability into the generated profile and should be considered in future reliability and validation studies. This is particularly relevant when the assessment is completed directly by patients rather than through a physician-guided interview. [6,7,8]

The PAAM allergy-risk classification should similarly be interpreted within the limits of the present study. The low and high-risk classifications observed in these cases represent outputs of the PAAM assessment and should not be considered equivalent to validated biomedical measures of allergy severity, prognosis, or diagnostic certainty. Independent validation against appropriate clinical outcomes and established assessment tools will be necessary before such classifications can be given predictive significance. The present findings therefore provide an initial indication of feasibility and descriptive differentiation, rather than evidence of diagnostic or therapeutic effectiveness. The three cases demonstrate that the PAAM assessment can organize heterogeneous clinical information into individualized profiles, but they cannot establish reliability, inter-observer agreement, diagnostic validity, predictive validity, or clinical benefit. An additional consideration is the broader applicability of the assessment. Although the present study focuses on allergic and immune-mediated presentations, the PAAM assessment captures fundamental Ayurvedic clinical domains such as *Prakriti, Vikriti, Agni, Ama, Ojas, Satva, Bala, Dhatu, Strotas, Ahara,* and *Vihara*. These domains are not exclusive to allergic disorders. Therefore, the assessment methodology may have broader utility in Ayurvedic clinical profiling, although disease-specific applications beyond allergy would require separate development and validation.

Overall, the preliminary evaluation suggests that the PAAM assessment may provide a practical means of bringing comprehensive Ayurvedic patient profiling into a structured digital format. Its principal value at this stage lies in organization, individualization, and clinical documentation rather than in automated diagnosis or prediction. Larger prospective studies with predefined reference standards, assessment reliability testing, physician agreement analysis, and clinical outcome measures are required to determine its validity and clinical utility. In summary, the present three-case evaluation supports the feasibility of the PAAM assessment as a structured tool for differentiated Ayurvedic patient profiling, while emphasizing the need for formal validation before its assessment outputs can be interpreted as reliable clinical or predictive measures.

Strengths of the Preliminary Evaluation

The present evaluation has several strengths despite its small sample size. First, it included clinically heterogeneous cases rather than patients with an identical allergic presentation. This allowed observation of whether the PAAM assessment could generate differentiated profiles across age, sex, clinical presentation, constitutional characteristics, and extent of systemic involvement.

Second, the assessment incorporated multiple Ayurvedic domains within a single structured evaluation. The simultaneous documentation of *Prakriti*, current *Vikriti, Agni, Ama, Strotas*, trigger profile, chronicity, reversibility, and patient-specific characteristics provided a broader clinical profile based solely on the presenting allergic condition. Third, the assessment demonstrated flexibility according to patient characteristics. Pediatric-specific and female-specific domains could be incorporated when applicable, while maintaining the common core assessment. This is consistent with the individualized nature of Ayurvedic clinical assessment.

Fourth, digital implementation provided a standardized method for recording and organizing the assessment findings. This may be particularly useful for longitudinal documentation and future research, where consistent collection of multidimensional clinical information is required. Finally, the present evaluation deliberately distinguishes feasibility from validation. The observed differentiation between cases provides an initial basis for further investigation

without claiming that the PAAM assessment has already demonstrated diagnostic or predictive validity.

Table 12: Strengths Demonstrated in the Preliminary Evaluation

Strength	Observation in the Present Evaluation
Patient-level differentiation	Different PAAM profiles were generated across all three cases.
Multidimensional assessment	Constitutional, functional, *Strotas*, allergy, and trajectory domains were captured.
Individualized assessment	*Prakriti* and current clinical state were assessed separately.
Patient-specific flexibility	Pediatric and female-specific domains were incorporated where applicable.
Structured documentation	Assessment findings were organized into standardized digital reports.
Clinical interpretability	Generated profiles could be reviewed alongside the clinical presentation.
Scope for longitudinal use	Structured records may facilitate future follow-up and comparison.

Future Directions

The next stage of PAAM research should move from preliminary feasibility toward formal validation. Future studies should evaluate the reliability, reproducibility, clinical interpretability, and predictive utility of the assessment using larger patient populations. [9]

CONCLUSION

This preliminary three-case evaluation demonstrates the feasibility of applying the PAAM assessment to heterogeneous clinical presentations and generating differentiated, multidimensional patient profiles. The assessment was able to integrate constitutional status, current *Vikriti, Agni, Ama, Strotas* involvement, trigger sensitivity, chronicity, reversibility, and patient-specific clinical information within a structured digital assessment. The findings suggest potential utility for systematic Ayurvedic patient profiling and clinical documentation. However, the present findings are preliminary and do not establish diagnostic accuracy, predictive validity, reliability, or therapeutic effectiveness. The PAAM assessment should therefore be considered a promising structured assessment tool requiring formal validation, rather than a validated diagnostic instrument. The present work provides an initial clinical basis for subsequent larger-scale studies designed to determine whether the differentiated profiles generated by PAAM are reproducible, clinically meaningful, and associated with relevant patient outcomes.

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