

**CONCEPTUAL UNDERSTANDING AND CONTEMPORARY
RELEVANCE OF VISA SANKATA - A CRITICAL REVIEW****¹*Mekha Wilson, ²Anjali K.A.**^{1,2}Final Year MD Scholar, Department of Agadatantra, VPSV AVC Kottakkal.

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Corresponding Author*Mekha Wilson**

Final Year MD Scholar, Department
of Agadatantra, VPSV AVC
Kottakkal.



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ABSTRACT

Viṣa Saṅkaṭa is a classical concept of Ayurvedic toxicology describing a critical prognostic state in which multiple host, environmental, dietary, doṣic, and tissue-related factors converge to intensify toxicity and produce a potentially fatal systemic crisis. This article explores five determinants of Viṣa Saṅkaṭa—Prakṛti, Kāla, Anna, Doṣa, and Dūṣya—and their possible correlation with contemporary toxicology, using anaphylactic shock as a model of acute systemic collapse. Pitta Prakṛti is considered particularly susceptible due to the shared uṣṇa, tīkṣṇa, laghu, sūkṣma, and vyavāyi attributes of Pitta and Viṣa, which may facilitate rapid systemic dissemination. Constitutional differences in genetic, epigenetic, metabolic, and inflammatory responses may provide a possible scientific basis for variations in individual susceptibility. Seasonal changes

during Varṣā ṛtu may influence physiological homeostasis, metabolism, and immune responsiveness, potentially modifying toxic effects. Dietary factors, particularly allergens such as Sarṣapa, may further intensify toxicity or independently trigger severe hypersensitivity reactions. Pitta dominance may promote rapid progression, while Rakta Dhātu represents an important medium for absorption, transport, distribution, and vascular interaction of toxic substances. In anaphylaxis, mast-cell and basophil activation causes mediator release, resulting in vasodilatation, increased vascular permeability, bronchoconstriction, and circulatory collapse. Thus, Viṣa Saṅkaṭa can be viewed as a multidimensional model of host-toxin interaction in which converging biological and environmental factors amplify systemic toxicity. Its interpretation through modern pathophysiology may provide a useful framework for understanding individual susceptibility,

early risk recognition, and severe toxicological emergencies.

KEYWORDS: Agadatantra, Viṣa Saṅkaṭa, Anaphylactic shock.

INTRODUCTION

The severity and outcome of poisoning are determined not only by the inherent properties of a toxic substance but also by dose host condition, environmental circumstances, and interactions with other agents. Āyurvedic toxicology expresses this dynamic relationship through the concept Viṣa Saṅkaṭa. Viṣa Saṅkaṭa represents a grave prognostic state in which constitutional, seasonal, dietary, doṣic, and tissue-related factors converge and markedly intensify toxicity.

Viṣa Saṅkaṭa is a classical concept in agadatantra that translates to a medical emergency in poisoning or a highly fatal critical period. It is described by acharya Vagbhata in Ashtangahridaya. It refers to a worst case scenario where multiple poisonous and physiological factors overlaps simultaneously, leaving a survival rate where, only one out of hundred people survive. This means when the nature of the poison allings perfectly with the patients body constitution(prakriti), season(kala), food consumed(anna), and affected humour(dosha), and bodily tissues(Dhātu), it results in an inescapable toxic crisis.^[1]

Understanding Viṣa Saṅkaṭa is vital for bridging ancient Ayurvedic emergency protocols with modern clinical toxicology, disaster medicine, and personalized healthcare. Anaphylactic shock is a severe, life-threatening allergic reaction that triggers a systemic, multi-organ crisis within minutes.^[2] Correlating Viṣa Saṅkaṭa with anaphylactic shock reveals that this ancient concept was effectively a framework for recognizing a hyper-acute, systemic physiological collapse where multiple internal and external vulnerabilities collide to cause sudden death.

The five overlapping features of Viṣa Saṅkaṭa and how they contribute to this toxic crisis and its contemporary relevance is explained in the light of pathophysiology of anaphylactic shock.

INFLUENCE OF PRAKRITI

Here pitta prakriti is mentioned since poison naturally shares ushna, and Tīkṣṇa properties of pitta. Viṣa spread instantaneously in pitta dominant individuals. Identical properties of Viṣa and pitta are ushna, Tīkṣṇa, Sūkṣma, laghu, vyavāyi. Since properties are similar these two

forces multiply each others strength as in synergistic amplification theory.

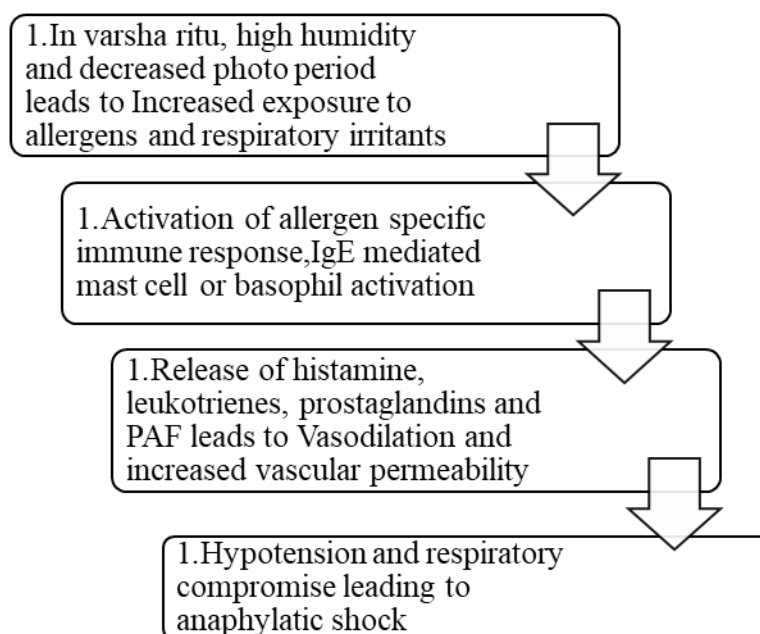
The epigenetic studies shows that, pitta dominant individuals are thought to be more susceptible to inflammatory, acid peptic and metabolic disorders potentially through the mechanisms involving oxidative stress, cytokine signaling, enzymatic activity and energy metabolism. The classical observation that pitta predominant individual may exhibit greater susceptibility to the adverse effects of visa can be hypothetically interpreted through modern immunology as a constitution associated modulation of inflammatory and metabolic responsiveness.^[3]

In anaphylaxis an exaggerated mast cell or basophil response results in release of vasoactive mediators such as histamine, leukotrienes, and platelet activating factors(PAF), producing systemic vasodilation ,increased vascular permeability and circulatory collapse. Emerging prakriti associated epigenetic findings provide a possible molecular framework for inter-individual variations in inflammatory responses. The extensive metabolizer (EM) genotype (*1/*1, *1/*2, *1/*3) was found to be predominant in *Pitta Prakriti* (91%)⁽⁴⁾ There for pitta prakriti persons have constitutional metabolic and immune characteristics, causes potential difference in inflammatory signalling and oxidative stress response.

INFLUENCE OF KĀLA

In rainy season atmospheric moisture causes toxins to liquify and circulate rapidly through the body. According to vagbhata in Varṣā ṛtu, poison becomes highly moist, soft and soluble resembling the consistency of melted jiggery.^[1] This moisture make the toxin fluid and enabling it to dissolve spread and infiltrate biological systems. Deranged agni and tridosha dusti in Varṣā ṛtu also leads to increased Viṣa suscepibility in Varṣā ṛtu.

The rainy season alters gene expression through epigenetic modifications, which temporarily change how DNA is read to accelerate toxin absorption and distribution. The combination of high humidity, sudden temperature shifts, and environmental stress downregulates metabolic detoxification genes (CYP450) while upregulating vascular permeability and inflammatory signaling pathways.^[5]



Various study shows that in rainy season, increased humidity and decreased photo period causes 23% changes in gene expression which leads to activation of proinflammatory pathways. This in turn results in increased cellular stress.^[6]

INFLUENCE OF ANNA

If the individual consumes food having properties like katu, amla or lavna (Sarsapadi), it may mimic the properties of Viṣa and fuel the poisoning of toxin. The probable mechanisms may be:

1. Vasodilation and increased blood flow

Certain foods which are hot and spicy, alcohol, caffeine can cause blood vessels to dilate and increase heart rate. Thus the ingested toxin is pumped through the blood stream to the vital organs such as brain, liver and kidney at much faster rate.^[7,8]

2. Enhanced intestinal permeability

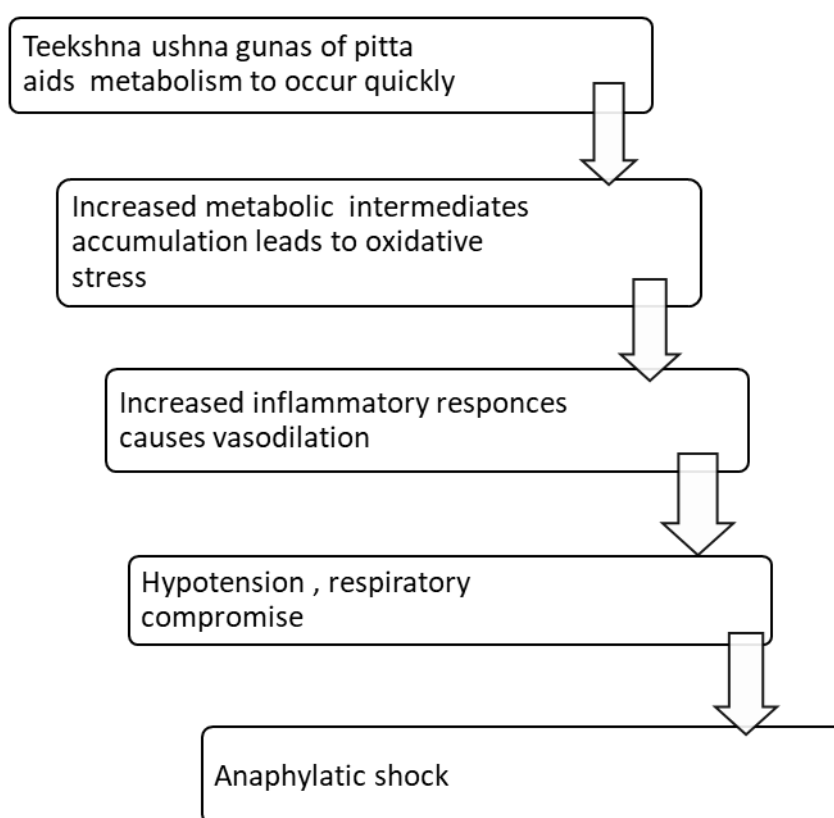
Some food like highly processed foods, artificial additives, carbonated beverages, alcohol etc. weakens the gut barrier by causing irritation and inflammation in gut lining this opens up the microscopic gaps in intestine allowing the toxins to bypass normal digestive filtration and dump directly into systemic circulation.^[9]

Food causes anaphylactic shock when your immune system mistakenly treats a harmless food protein as a dangerous invader, triggering a life-threatening drop in blood pressure and swelling of airways. Mustard (Sarsapa), explained by Acharya as an example for food causing

Viṣa Saṅkaṭa is such a proven food allergen. Four major allergens from yellow mustard have been identified and characterized by their Ige binding ability (sin a 1, sin a 2, sin a 3 and sin a 4).^[10]

INFLUENCE OF DOSHA

The dominant humour active during the Viṣa Saṅkaṭa is pitta dosha. Pitta dosha enhance the spread of poison through the core principle of samanya. When the substance enter the body humour sharing the exact same physiological and metabolical trait. It faces zero resistance and act as a massive biological acceleration.



INFLUENCE OF DŪṢYA

Rakta Dhātu act as the primary vehicle and biological catalyst for poison.. it is considered as the most favourable Dūṣya for toxic action, because it shares similarity with qualities of both Viṣa and pita dosha. The blood carries toxins directly to Hridaya and vital centres within seconds causing rapid systemic failure.

Rakta Dhātu may be considered as a important determinant of the systemic manifestation of Viṣa because blood serves as a major medium for absorption, transport and distribution of

xenobiotics and also participate in inflammatory, immune and vascular responses. Alteration in plasma protein binding, vascular permeability, circulatory volume, antioxidant capacity and immune mediator activity can modify the bioavailability and tissue effects of toxic substances.

CONCLUSION

Viṣa Saṅkaṭa represents a comprehensive Āyurvedic concept of severe toxicological crisis in which multiple determinants collectively influence the intensity, progression, and outcome of poisoning. The interaction of Prakṛti, Kāla, Anna, Doṣa, and Dūṣya demonstrates that toxicity is not determined solely by the intrinsic nature of a poison, but also by the susceptibility and physiological state of the host. The predominance of Pitta, the influence of Varṣā ṛtu, consumption of substances possessing Viṣa-similar properties, Pitta-mediated acceleration of toxic effects, and the role of Rakta as a principal medium for systemic distribution together provide a coherent explanation for rapid toxic manifestation. Correlation with anaphylactic shock illustrates how converging immunological, vascular, and inflammatory mechanisms can result in sudden systemic deterioration, providing a contemporary perspective to the classical description of Viṣa Saṅkaṭa. Although these correlations remain largely interpretative and require validation through clinical and experimental research, the concept offers a valuable framework for understanding host–toxin interactions, identifying high-risk situations, and emphasizing early recognition of rapidly progressive poisoning. Integration of classical toxicological principles with modern pathophysiology may therefore contribute to a more individualized and comprehensive approach to the assessment and management of severe toxicological emergencies.

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