

Exploring Malaria Fever (*Vishama Jwara*) Through an Ayurvedic Lens: A Comprehensive Review

Gaytri Dhaker^{1*}, Sarvesh Kumar Singh², Kshipra Rajoria³, Rahul Dandiya⁴

Abstract

Malaria fever, known as Vishama Jwara in Ayurveda, is a significant global health challenge caused by the Plasmodium species transmitted via Anopheles mosquitoes. While conventional medicine has advanced in diagnosing and treating malaria, exploring it through the Ayurvedic perspective offers valuable insights into its holistic understanding and management. Ayurveda describes Vishama Jwara as a fever with irregular patterns, aligning with the cyclical febrile episodes seen in malaria. This review delves into Ayurvedic texts to analyze the etiology, pathology, and therapeutic approaches to Vishama Jwara. The Ayurvedic framework attributes the condition to imbalances in the Tridoshas – Vata, Pitta, and Kapha – aggravated by factors like poor digestion, environmental influences, and lifestyle choices. Key concepts, such as Ama (toxins), disrupted Agni (digestive fire), and impaired Ojas (vital essence) are discussed as foundational to disease progression. Classical formulations like Sudarsana Churna, Maha Sudarsana Kadha, and interventions involving antipyretic, detoxifying, and immune-boosting herbs, including Guduchi (Tinospora cordifolia), Kalmegh (Andrographis paniculata), and Tulsi (Ocimum sanctum), are explored for their therapeutic relevance. Additionally, preventive measures rooted in Ayurvedic principles, such as lifestyle modifications, dietary adjustments, and the use of mosquito-repellent herbs, are emphasized. Integration with modern biomedical approaches, such as antimalarial drugs and vector control strategies, is highlighted to enhance outcomes. This comprehensive review underscores Ayurveda's potential in offering a personalized, preventive, and adjunctive approach to malaria management. By bridging traditional and contemporary paradigms, it aims to inspire further research and collaborative frameworks for addressing malaria as a complex, multifaceted disease.

Keywords: Malarial Fever, Plasmodium Vivax, *Vishama Jwara*, Ayurvedic Lens

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INTRODUCTION

Malaria is a serious and often fatal infectious disease prevalent in regions, such as Asia, Africa, and the Americas. The global incidence of malaria is approximately 250 million cases annually, with over one million deaths attributed to the disease each year. The elimination of malaria is one of the United Nations' Millennium Development Goals. According to the World Malaria Report 2015, nearly 80% of the global burden of Plasmodium vivax malaria is concentrated in three countries, including India. Furthermore, India accounts for approximately 70% of the malaria cases in the South-East Asia region [1].

Plasmodium vivax malaria is widespread across many regions of the world and is believed to affect

a larger number of individuals compared to *Plasmodium falciparum* malaria [2]. In *Ayurvedic* texts, malaria fever is referred to as *Vishama Jwara* (intermittent fever). Historical references to fever can be found in Vedic literature, where it is called *Takma* in the *Atharvaveda*. The significance of fever treatment in Ayurveda is highlighted by the fact that the *Caraka Samhita*, the foundational *Ayurvedic* text, begins its section on therapeutics with the management of *Jwara* (fever). *Ayurveda* recognizes and classifies several types of fever, including *Santata Jwara* (continuous fever), *Sannipata Jwara* (fever caused by the imbalance of all three *dosha*), *Vishama Jwara* (intermittent fever), *Abhishanga Jwara* (fever caused by infection), and *Abhighataja Jwara* (fever due to trauma) [3]. *Vishamajwara* (intermittent fever) is characterized by irregular onset (*Vishama arambha*) and remission (*Visarga*). According to *Kashyapa Samhita*, this condition arises when two or all three *dosha* become vitiated and affect the *Rasavaha Dhamanis*, the channels that carry *rasa* (nutritive fluid). Due to its unpredictable onset and resolution, *Vishamajwara* can be likened to malaria. The clinical manifestations of *Vishamajwara* (malaria) include fever with fluctuating patterns of onset and remission, intense thirst, a sensation of heaviness in the body, headache, chills, nausea, vomiting, and widespread body pain [4].

METHODOLOGY

The information on *Vishamajwara* and malaria was compiled from a range of reputable scientific literature sources, including AYU, PubMed, and other credible academic databases.

Vishama Jwara

In his chapter on *Jwar*, *Acharya Sushruta* outlines *Samanya Nidana*, the common etiological factors shared by all types of fever. This concept is not explicitly mentioned in the *Charaka Samhita*. Several sources identify various underlying causes of *Jwara* (fever), including factors, such as *Kashta* (trauma from weapons or blunt objects), *Atiyoga* (excessive physical exertion), *Mityayoga* (improper therapeutic practices), trauma related to *Sastra* (surgical instruments), *Dhatukshaya* (depletion of tissues or body constituents), *aruchi evam avipaka* (impaired digestion), and *Visha* (toxins, including mineral or plant-based poisons and metabolic byproducts). Additionally, environmental factors like seasonal changes, *Asatmya Sevana* (consumption of incompatible foods), *Mityahara-Vihara Sevana* (unhealthy dietary and lifestyle habits), and *Prapakatha* (inflammatory processes) contribute to the onset of fever [5]. Improper childbirth, the influence of *Abhichara Karma* (black magic or malevolent rituals), or curses from deities, teachers, or emotional disturbances, such as *Kama* (desire), *Krodha* [6] (anger), *Bhaya* (fear), and other parapsychological factors, are believed to contribute to certain health conditions. *Abhishangaja Jwara* (fever caused by evil spirit possession or infections) can also occur under these circumstances. Additionally, specific practices followed by women after childbirth, such as those related to the appearance of breast milk, are considered indicative of underlying health or emotional distress. *Rituvyapad*, or seasonal illnesses, is discussed in the *Ritucharya Adhyaya* (chapter on seasonal regimens) by *Acharya Sushruta*, which outlines how changes in seasons can affect health and contribute to disease [7].

Nidana

In medical terminology, the term *Nidan* refers to the etiological agent or causative factor of a disease. It can be understood both as a diagnostic marker and as a causative factor, depending on the context. In the framework of *Nidan Panchama*, which outlines the five key factors of disease, *Hetu* (cause) is identified as the agent responsible for the onset of illness, either abruptly or gradually. According to *Acharya Sushruta*, “*Yogo Nidana Parivar Janam Sankshapataha Kriya*,” meaning that the most effective and quickest therapeutic approach is to eliminate or avoid the causative factors. Therefore, *Nidan* plays a critical role in understanding both the underlying patho-physiology of the disease and the specific factors that lead to its development. In the concept of *Shat Kriyakala*, *Nidan* is identified as the earliest stage of disease formation, falling under the *Sanchaya* phase, which involves the accumulation of causative factors. Each disease is associated with a unique *Nidanatamak Hetu*, or specific causative agent, that contributes to its development. Thus, the identification and removal of the *Nidan* (causal agent) is fundamental to disease prevention and treatment [8].

According to *Charak*, all forms of *Vishama Jwara* (irregular or intermittent fever) are fundamentally caused by an imbalance of the *Tridosha* (*Vata*, *Pitta*, and *Kapha*). On the other hand, *Sushruta* attributes *Vishama Jwara* to *Agantuka Karana* (external or secondary causes), with *Tridosha* and *Vata* being the primary *dosha* involved in its onset.

In his commentary, *Dalhana*, in the role of *Bhutabhishtanga* (one who explains the causes of diseases), elaborates on these external factors contributing to the fever. *Vagbhata*, in the *Astanga Hridaya*, emphasizes the role of *Mandagni* (diminished digestive fire) during the *Adanakala* (phase of food intake) as a crucial factor in the development of *Vishama Jwara*. *Vagbhata* also highlights that the condition can arise in debilitated patients who, despite their convalescence, continue to follow an irregular diet, particularly when there is still a residual imbalance of *dosha* in the body.

Thus, *Vishama Jwara* may result from internal imbalances (*Tridosha* and *Vata*) and external factors (such as improper diet or impaired digestion), particularly in individuals with weakened constitutions or during recovery phases [9].

Roopa

Poorvaroopa refers to the early signs or prodromal symptoms that indicate the onset of a disease, appearing before the full manifestation of more severe symptoms. These initial symptoms, often subtle, serve as indicators that an illness is about to develop. In the context of disease progression, *Kriyakala* identifies the *Sthansanshrya Awastha* (stage of localization) as the first phase in the pathogenesis (*Samprapti*) of a disease.

Poorvaroopa can provide valuable clues or indications about the disease, allowing for early detection. There are two types of *Poorvaroopa*:

- *Samanya Poorvaroopa*: These are general early symptoms that signal the impending illness but do not offer specific information about which *Dosha* is disturbed or involved in the disease process.
- *Vishishhta Poorvaroopa*: These early signs are more specific, providing insight into the *Dosha* imbalance (*Vata*, *Pitta*, or *Kapha*) that is responsible for the disease, offering a clearer understanding of the pathophysiology.

By identifying *Poorvaroopa*, clinicians can potentially predict the onset of disease and intervene earlier in its course [10].

The *Roopa* refers to the clinical manifestation or distinguishing signs of a disease, which serve as its confirming symptom. It is essentially the expression of the disease's specific characteristics, making it identifiable. After the completion of the pathological process involving the interaction of *Dosha* and *Dushya* (tissues), the disease reaches its *Vyaktawastha* (observable stage), where its symptoms become evident. The onset and progression of the disease are typically followed by the appearance of its *Roopa*. The identification of *Roopa* plays a critical role in formulating the appropriate *Vyadhi Pratyantik Chikitsa* (disease-specific therapeutic approach). Once the *Roopa* appears, the disease becomes more clearly understood, facilitating accurate diagnosis and targeted treatment planning [11].

Samprapti

The development of a disease is influenced by the activity of specific *Dosha*, and understanding this progression is termed *Samprapti*. *Samprapti* encompasses the entire pathophysiological process of a disease, from the initial causative factors (*Nidan Sevan*) to the manifestation of clinical symptoms (*Roopa*). There are two main types of *Samprapti*: *Samanya Samprapti* and *Vishista Samprapti*.

- *Samanya Samprapti* describes the general stages and mechanisms of disease progression, including the six critical phases of disease manifestation, known as *Shatkriyakala*.
- *Vishista Samprapti* focuses on specific disease processes and includes distinct elements, such as

Sankhya (quantification of the disease), *Pradhanya* (dominance of factors), *Vidhi* (the mode of disease onset), *Vikalpa* (alternatives or variations in disease expression), *Bala* (strength or vigor of the disease), and *Kala* (the time factor or stage of disease). Each of these components contributes to the breakdown (*Vighatana*) of the disease process and helps identify the underlying factors driving the condition.

Together, these aspects provide a comprehensive understanding of the disease's Etio-Pathogenesis and progression (Figure 1) [12].

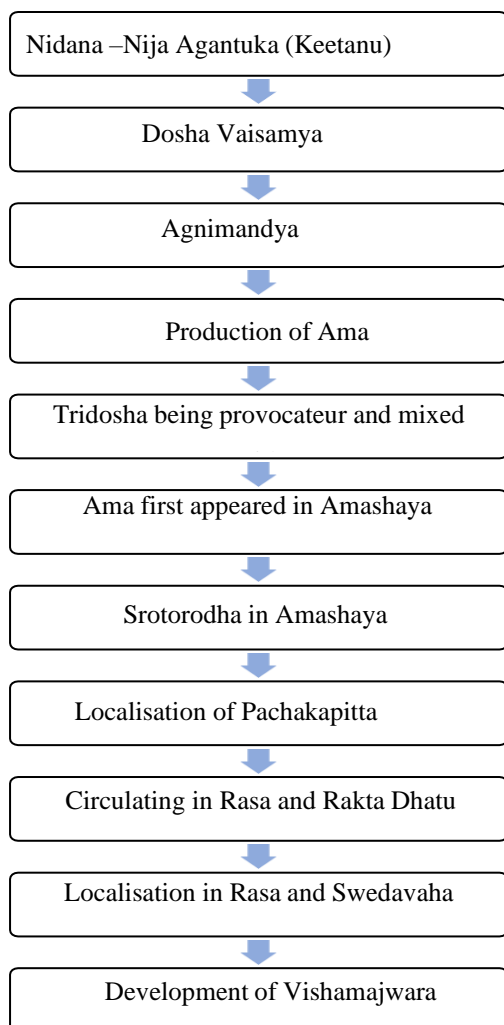


Figure 1. Schematic Diagram of *Vishamajwara Samprapti*.

Classification of *Nidana*

Vishama Jwara (irregular fever) arises when any of the bodily tissues (*Dhatu*) are disturbed, coupled with a mild aggravation of the *Dosha* due to improper dietary habits and lifestyle choices. This imbalance leads to a deregulation of physiological processes, resulting in the manifestation of fever with fluctuating intensity [13].

Viprakishta Hetu

Factors, such as excessive physical exertion (*Vyayama*), daytime sleeping (*Divaswapna*), consumption of astringent foods (*Kashaya Sevana*), and similar lifestyle behaviors – such as eating irregular or inappropriate foods, prolonged inactivity, or overexertion – do not cause immediate illness. However, their cumulative effects or delayed consequences can lead to the development of health issues

over time. These behaviors may disrupt physiological balance gradually, contributing to the onset of disease after prolonged exposure [14].

Vyabhichari Hetu

The expression of a disease in an individual is influenced by the interplay of *Dosha* (bioenergetics forces), *Dooshya* (tissues or substrates affected), and etiological factors. If a disease does not manifest, presents slowly, appears in a mild form or exhibits subtle or poorly expressed symptoms, it may be due to an imbalance or disturbance in the equilibrium of *Nidana* (causal factors), *Dosha*, and *Dooshya*. This could also result from a lack of synergy among these factors or their diminished strength over time. Conversely, when these three elements are in a favorable or supportive relationship, the disease may be present more readily, acutely, or in a more pronounced manner. In other words, the disease may manifest more swiftly, completely, or intensely depending on the degree of harmony between *Dosha*, *Dooshya*, and the causative factors [15].

DISCUSSION

When physicians employ the appropriate diagnostic approach, they are more likely to achieve successful treatment outcomes. The five components of *Nidan Panchaka* provide a comprehensive framework for making an accurate diagnosis. By utilizing this method, clinicians can identify the condition early and implement targeted interventions to prevent potential complications. *Nidan Panchaka* serves as a diagnostic tool that encompasses the entire progression of a disease, from its onset to its resolution. While disease nomenclature may be secondary, understanding the underlying causes, *dosha* imbalances, etiology, and the disease's progression is critical for effective diagnosis and early intervention [16].

The core principle of treatment is *Nidan Parivarjana*, which emphasizes the avoidance of causative factors. For *Vishama Jwara* (malaria), it is essential to prevent exposure to triggers, such as large meals, improper diets, *Apathaya-plan* (unhealthy practices), and other detrimental factors that can lead to the onset of the disease. Early identification of the *Hetu* (causes) is critical to prevent the progression of the illness. In the second phase, *Poorvaroopa* (early signs), early intervention is beneficial for partially developed diseases, as they often require less intensive treatment. While *Vishama Jwara* does not have a specific *Poorvaroopa*, the *Poorvaroopa* of *Jwara* (fever) is considered relevant in this context. The *Roopa* stage, which represents the full manifestation of the disease and its symptoms, marks the completion of the pathogenesis and is essential for formulating a focused and effective treatment plan [17].

Vishama Jwara (malaria) can be classified into five subtypes: *Santata*, *Satata*, *Anyedushka*, *Triteeyak*, and *Chaturthaka Jwara*, each characterized by distinct symptoms and fever patterns. A thorough understanding of the *Roopa* (clinical manifestations) of each subtype is crucial for accurate differential diagnosis and selecting the appropriate treatment approach. The *Samprapti* (pathogenesis) offers a comprehensive understanding of the disease process, with the *Samprapti Ghatak* (pathogenesis factors) playing a key role in the progression of the illness, thereby informing therapeutic strategies. Additionally, the *Samprapti* provides insights into the disease's trajectory, the tissues (*Dhatu*) involved, and the affected bodily channels (*Srotas*). In cases of residual fever, factors, such as *Aagantuja Nidana* (external causes) and *Mithya Ahara Vihara* (improper diet and lifestyle) are significant contributors to the *Samprapti* of *Vishama Jwara* [18].

In the context of diagnosing, differentiating, and treating diseases, the concept of *Upashaya* (symptom relief or therapeutic response) plays a critical role. For conditions, such as *Vishama Jwara* (irregular fever), the use of purgatives and emetics is contraindicated, while herbal remedies with bitter properties – such as *Kirat*, *Guduchi*, *Bharangi*, and *Nimba*—can be beneficial. Each component of the *Nidana Panchaka* (the five diagnostic factors: *Nidana*, *Purvarupa*, *Rupa*, *Samprapti*, and *Chikitsa*) provides essential insights into the disease process. The identification of a disease based on one element of *Nidana Panchaka* is further substantiated by the corroboration of other diagnostic factors, enhancing

the overall accuracy of the diagnosis. This principle is particularly relevant in *Vishama Jwara*. A precise diagnosis forms the foundation for an effective treatment plan, which not only ensures better therapeutic outcomes but also bolsters the physician's professional credibility and fosters patient trust [19].

CONCLUSIONS

A correct diagnosis is essential before initiating any treatment. The application of *Nidan Panchaka*, an *Ayurvedic* diagnostic framework, allows clinicians to accurately identify a patient's condition, leading to more effective care. *Nidan Panchaka* is considered one of the most reliable methods for diagnosing diseases, including *Vishama Jwara* (malaria). Various classical texts have explored the use of *Nidan Panchaka* for diagnosing this condition. By correctly diagnosing the illness and adhering to the principles of *Nidan Panchaka*, physicians can optimize treatment outcomes and improve patient care.

Conflict of Interest

The authors declare that there is no conflict of interest.

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