

Traditional Formulation and Evaluation of Vishamjwarantak Vati: An Ayurvedic Approach to Antimalarial Treatment

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Abstract: *Background : The research focuses on the formulation and evaluation of Visham Jwarantak Vati, an Ayurvedic antimalarial treatment. The study aims to develop a stable, effective, and safe herbal product by utilizing selected ingredients known for their therapeutic properties. Key objectives include ensuring safety and compatibility, establishing quality control measures, maximizing therapeutic efficacy through enhanced absorption, and promoting consumer acceptance through desirable product attributes.*

Method : The Ayurvedic formulation of Visham Jwarantak Vati, includes various herbal ingredients such as, Godanti Hartal Bhasma, Karanj Churna, Saptaparna Tvak, Pippali Churna, Kasis Bhasma, Fitkari, Gairik (Geru) and Mahajwarankush Ras. It is prepared according to the Ayurvedic Pharmacopoeia of India with modern techniques of tableting. The Evaluation test performed on the formulation of Visham Jwarantak Vati under the official guidelines described in Pharmacopoeia, which they would be subjected into Physiochemical characterization, Phytochemical, and Pharmaceutical parameters..

Result :. Phytochemical test indicates the presence of alkaloid, flavonoids, tannins, saponin and carbohydrates in Visham Jwarantak Vati formulations. Physiochemical test parameters are within the acceptable standard limits for total ash, water soluble extractive, loss on drying and pH values are documented. Pharmaceutical parameters, such as hardness, friability, dissolution test and disintegration time, all these are within the acceptable values.

Conclusion : From the result, it was concluded that the polyherbal formulation of Visham Jwarantak Vati passes all the evaluation parameters and has meets high standards of quality, safety, and efficacy..

Keywords: Vishamjwarantak Vati, intermittent fever, antimalarial traditional medicine

I. INTRODUCTION

Ayurveda, the ancient system of medicine from India, offers various remedies for different health issues, including fevers. One such remedy is Vishamjwarantak Vati, a traditional herbal formulation specifically designed to treat Visham Jwara, which refers to intermittent fevers. This condition can be similar to what we recognize today as malaria, typhoid, and other fever-related illnesses.

Vishamjwarantak Vati is made from a blend of powerful herbs known for their ability to reduce fever, boost the immune system, and detoxify the body. The formulation is based on Ayurvedic principles, ensuring that the ingredients work together effectively to alleviate fever symptoms like chills and body aches while helping to restore the body's natural balance. The list of nutrients present in vati is as follows: Alkaloids, Carbohydrates, Flavonoids, Tannins.

The selection of herbs in this formulation is carefully considered based on their taste, properties, potency, and how they affect the body after digestion. This thoughtful approach helps ensure that the remedy is both effective and easily absorbed by the body.

To ensure that Vishamjwarantak Vati is safe and effective, it undergoes various scientific evaluations. These include tests to analyze its physical and chemical properties, pharmacological effects, and stability over time. Such assessments



are crucial in modern research, as they help establish quality standards for Ayurvedic products and support their use in evidence-based medicine.

This study aims to formulate and evaluate Vishamjwarantak Vati using standardized methods, ensuring that it is reproducible, safe, and effective for managing fever.

MALARIA

The bite of an infected female Anopheles mosquito can spread Plasmodium parasites, which cause malaria, a potentially fatal infectious disease. In tropical and subtropical areas, where warm, humid weather encourages mosquito breeding, it continues to be a major global health concern. Plasmodium species that naturally infect humans and cause malaria in large areas of

the world are limited to five—*P. falciparum*, *P. vivax*, *P. malariae*, *P. ovale* and *P. knowlesi*. [1,2]

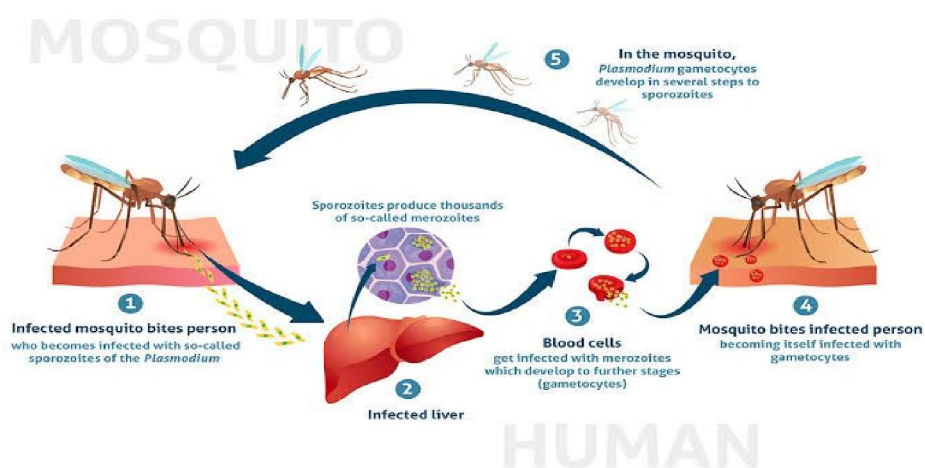


Fig 1. Life cycle of plasmodium

Active Herbal Ingredients use in formulation:

1. Godanti Hartal Bhasma

Godanti bhasma is cold in nature. For the treatment of Pitta imbalance problems, it is there for recommended. The ingredients and preparation of Godanti bhasma are, Purified Godanti (Gypsum / Calcium Sulfate) is triturated with aloe vera juice or lemon juice, thin cakes are prepared and heated in a closed container under 300 - 500degree celcius to obtain Godanti Bhasma.[3]

Benefits of Godanti Bhasma [3]

- It has been shown to be effective, particularly in cases of fever, urticaia rashes, and jaundice.
- It is used to treat fever with a high body temperature and headaches because to its coplant characteristics.
- Its improves strength and immunity. and heated in a closed container under 300 - 500degree celcius to obtain Godanti Bhasma.[3]



2. Karanj Churna

Ayurvedic medicine makes considerable use of Karanja [Pongamia pinnata (Linn.) Merr.], one of the most widely used herbs. It is part of the Fabaceae family. It helps treat Visham Jwara (intermittent fever), which includes malaria, because of its antipyretic, antimalarial, antibacterial, and immunomodulatory qualities. [4,5]

Benefits of karanj churna [4,5]

- It may help reduce inflammation and alleviate pain.
- It has shown antimicrobial properties, which can help in fighting infection
- It has shown effectiveness against Plasmodium species, the parasites responsible for malaria. Its antiplasmodial activity can help in managing and preventing malaria infections.



3. Saptaparni Bark

The medium-sized evergreen saptaparni tree (Alstonia scholaris, family: Apocynaceae) is native to the Himalaya's extremely damp forest. It having echitamine, new glycoside renoterpine, glucoside triterpenes, aamyring acetate, echitamidine, echitenine, Ditamine.

Benefits of Saptaparni Bark [6]

- Alstonia scholaris (Saptaparni) has several uses, particularly in the treatment of fever, respiratory conditions, digestion, and immunity.
- Traditional medicine uses it as a natural antimalarial and immune-boosting treatment because of its strong bioactive components.



4. Pippali Churna

Pippali Churna is a potent Ayurvedic herb that has several uses for immunity, digestion, fever control, and respiratory health. Its propensity to increase the potency of other herbs makes it a common ingredient in traditional formulas.

Benefits of pippali churna[8,9]

- Pippali is an effective herb in managing cold and cough. Pippali is used as a main ingredient in various formulations, to cure respiratory, digestive disorders and numerous *Kaphaja Vikar*.
- Pippali controls cough, releases mucus and clears the air passages, so that the patient gets to breathe freely.
- The pharmacological activities of Pippali is cough suppressants, neuroprotective, anti inflammation, analgesic and many more.





5. Kasis Bhasma

An Ayurvedic medication called Kasis Bhasma is made from ferrous sulphate, often known as green vitamin. Anemia, fever, spleen disorders, and other conditions are treated with it in Ayurveda.

Benefits of Kasis Bhasma [10,11]

Kasis is used to treat iron deficiency anemia.

Kasis helps to increase hemoglobin levels and alleviates symptoms such as fatigue and weakness.

Kasis Bhasma's antipyretic properties help to reduce body temperature and alleviate fever symptoms.

Kasis Bhasma improves liver function and reduces fat accumulation in the liver.



6. Fitkari (Alum)

Fitkari, often called alum, is a naturally occurring mineral compound that has been used for millennia for its astringent, antibacterial, and antiseptic qualities. It has several applications in personal care and cosmetics. Alum is used in Ayurveda to treat a number of ailments, including pain, fever, and irritation [12].



Benefits Of Fitkari [12]

- It is used in traditional remedies for cough relief because it has soothing properties that can help alleviate throat infection.
- Some report has shown that fitkari (alum) have antiplatelet effects, which can help to prevent blood clot formation.



- Alum is known for its larvicidal properties, particularly against mosquito larvae. It helps to reduce the spread of mosquito-borne diseases.

7. Gairika (Geru)

Gairika is a naturally occurring mineral that is mostly made of iron oxide (FeO_3), sometimes referred to as Geru or red ochre. Its therapeutic, cosmetic, and medical qualities have led to its widespread usage in Ayurvedic, Siddha, and Unani medicine. In Ayurveda, Gairika (Geru) is occasionally used to treat skin conditions, wounds, and cooling effects; nevertheless, it is not a common therapy for malaria. Its cooling, astringent, and hemostatic (blood-stopping) properties, gairika is frequently used to treat wounds, ulcers, bleeding disorders. [13]

Benefits of gairika [13]

It helps to balance the three doshas in Ayurveda – Vata, Pitta and Kapha, which considered to promote overall health and well-being.

It is beneficial for respiratory health and can help manage conditions like cough.

It contains iron, which is commonly used in Ayurvedic treatments to help manage anaemia and promote healthy blood production



8. Mahajwarankush Ras

An Ayurvedic remedy called Mahajwarankush Ras has long been used to treat fever and associated symptoms. The purified mercury (Parada), sulfur (Gandhaka), and other herbal and mineral elements are included in this Rasaushadhi (herbo-mineral preparation). The Ingredient Sonth (Zingiber officinale), Kali Mirch (Piper nigrum), Pippal (Piper longum), Adrak Ras (Zingiber officinale), Sudh Para, Sudh Gandhak, Sudh Vish, and Sudh Dhatura beej (Datura).

Benefits Of Mahajwarankush Ras [14,15]

- Indicated in vomiting, high temperature and malaria.
- Helps to relieve arthritic fever and rheumatis.
- It is effective against Visham Jwara (intermittent fevers), malaria and chronic fevers.



Table 1. Ingredients used in Vishamjwarantak Vati

SR. No.	Ingredient	Quantity	
		Tola	Gram
1	Godanti Hartal Bhasma	4	46.64
2	Karanj Churna	3	34.98
3	Saptaparni Bark	2	23.32
4	Pippali Churna	1	11.66
5	kasis Bhasma	2	23.32
6	Fitkari (Alum)	2	23.32
7	Gairika (Geru)	1	11.66
8	Mahajwarankh Ras	1	11.66

METHOD OF PREPARATION

- Sufficiently weigh and grind all of the ingredients separately in a mortar and pestle until finely powdered, then pass through a sieve No.80
- Combine the ground Pippali, Karanj and Saptaparni powders in a pot and soak them in water for a 24 hours.
- Boil the mixture until the volume reduces to half, then strain the liquid to obtain a concentrated decoction.
- In a clean bowl, combine Godanti Hartal Bhasma, Kasis Bhasma, Fitkari, Gairik and Mahajwarankush Ras, mix them thoroughly.
- Gradually, add the decoction to the powdered ingredients and mix thoroughly to form a uniform paste.
- Shape the mixture into small, uniform tablets (Vati).
- Place the tablets on a clean surface and allow them to air dry in a shaded area until completely hard.
- Store the dried Visham Jwarantak Vati in an airtight container, away from moisture and sunlight.



Fig 2. VISHAMJWARANTAK VATI

SR NO.	CHARACTERS	VISHAM JWARANTAK VATI
1	Colour	Brown
2	Taste	Pungent
3	Texture	Slightly rough
4	Odour	Pungent
5	Appearance	Spherical
6	pH	5.99

Table 2. Organoleptic characteristics



Table 3: Pharmaceutical Evaluation

SR NO.	PARAMETERS	VISHAM JWARANTAK VATI
1.	Hardness (kg/cm ²)	5.6 kg/cm ²
2.	Friability (%)	0.32%
3.	Dissolution time (min)	15 min
4.	Disintegration time (min)	15 min
5.	pH	5.98



Fig 3. Dissolution test



Fig 4. Friability test



Fig 5. Hardness test



Fig 6. pH test

Label:-

VISHAMJWARANTAK VATI (80 vati)

Ingredients –

Weight: 1 gram

Godanti Hartal Bhasma

karanj churna

saptaparni churna

4 Tola

3 Tola

2 Tola



Pippali Churna	1 Tola
Kasis Bhasma,	2 Tola
Fitkari,	2 Tola
Gairik (Geru)	1 Tola
Mahajwaran kush Ras	1 Tola
Storage- Store in a cool and dry place away from direct sunlight and heat. Do not refrigerate.	
Direction-1 to 2 tablets twice a day or as directed by the Physician.	
Uses – Boost platelet count in chikungunya, malaria & typhoid. Its also help to relieve bodyache & burning sensation in upper & lower extremities.	



Fig 7. Visham Jwarantak Vati

II. RESULT AND CONCLUSION

Visham Jwarantak Vati offers a promising Ayurvedic method for addressing malaria, using a combination of traditional ingredients recognized for their healing properties. The meticulous choice of elements such as Pippali churna, Karanj churna, and Saptaparni churna underscores the formulation's capacity to tackle the intricate nature of malaria. By focusing on both the symptoms and root causes of the illness, this formulation embodies a holistic strategy that corresponds with Ayurvedic values. The synergistic impacts of these ingredients intend to fight the malaria parasite while simultaneously enhancing the overall health and wellness of patients.

The thorough assessment of Visham Jwarantak Vati further highlights its potential as a feasible treatment choice. Through sensory, physical, pharmaceutical, and phytochemical evaluations, we can confirm that the formulation adheres to high criteria for quality, safety, and effectiveness. These assessments validate the existence of active components and the formulation's capability to function effectively in a clinical environment. As the worldwide battle against malaria persists, incorporating traditional Ayurvedic formulations like Visham Jwarantak Vati into contemporary healthcare could offer valuable alternatives and improve treatment choices for patients. Future studies should concentrate on clinical trials to affirm these results and investigate the comprehensive potential of this formulation in the realm of malaria management.

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गुप्त सिद्ध जयोगांक

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२-२ वास

प्रयोग-विषय—१-प्राकृतिकज्वर

“श्री० वैद्य जी संस्कृत एवं आयुर्वेद के उच्च शिक्षा प्राप्त, कार्य-कुशल एवं सफल चिकित्सक हैं। आपने जयपुर की आयुर्वेदाचार्य तथा नि० भा० आयु० विद्यापीठ की आयुर्वेदाचार्य-परीक्षा में सर्व-प्रथम उत्तीर्ण होकर ‘श्री० भूतपापेश्वर पनवेल पारितोषक’ प्राप्त किया है। गत सात वर्षों में उपर्युक्त धर्मार्थ औषधालय में प्रधान-चिकित्सक रह कर परिश्रम, बुद्धि एवं अपने सुख-भाव के कारण पर्याप्त सम्मान पाते हुए संस्था की भी आशातीत उन्नति की है। महाराष्ट्रीय प्रथम वैद्य-सम्मेलन से सर्वोत्तम निबन्ध लिखने पर आपको स्वर्णपदक प्राप्त हुआ है। आप आयुर्वेद के योग्य अध्यापक, प्रोढ़ वक्ता, संस्कृत व हिन्दी के सुकवि तथा त्रैमासिक ‘चिकित्सक’ के सफल सम्पादक, नि० भारतवर्षीय आयुर्वेद महा-मंडल के संयुक्त मंत्री एवं नव-शक्ति आयुर्वेद लिमिटेड के गवर्निंग डाइरेक्टर हैं।”

—सम्पादक। लेखक

विषम चरान्तक वटी—

(मलेरिया पर रामबाण)

गौदन्ती हरताल भस्म	४ तोला
करंज चूर्ण	३ तोला
मन्तपर्ण त्वक	२ तोला
पीपल चूर्ण	१ तोला
कसीस भस्म	२ तोला
फिटकरी फूर्ला हुई	२ तोला
गैरिक (गेरू)	१ तोला

महाज्वरान्कुश^१ रस १ तोला

—इनको कूट छान कर बूँध बना लें और निम्न क्वाण की भावना देकर जेर के समान गोली बना लें।

१—शु० पारद, शु० गन्धक, शु० वत्सनाभ १-१ तोले
शु० घृत्ने के बीज ३ तोले, सोड, कालीमिर्च,
पीपल ४-४ तोला।

—कूट-पीस कपड़-छन कर लें और नीबू के अर्क तथा अद्रक के रस की भावना देकर गोली बना लें। यही ‘महा ज्वरान्कुश रस’ है।

