



REVIEW ARTICLE

A critical review on *Vasaguduchyadi Kwatha*

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Abstract

The *Vasaguduchyadi kwatha* a formulation cited in the Ayurvedic classic Ashtanga Hridaya, in the context of addressing *Pandu* (anaemia) and which is also recommended for the treatment of *Kamala* (liver disorder) and *Raktapitta* (bleeding disorders). This article is aimed at analysing properties of individual components of this formulation and the probable mode of action. The specific attributes of the drugs in this formulation, including *tikta* and *kashaya* tastes, *seeta virya*, *madhura vipaka*, *laghu* and *rooksha guna*, collectively work to alleviate the vitiated Pitta and the other properties alleviates the subsidiary *Kapha* and *Vata* also. This corrective action aids in addressing diseases like *Pandu*, *Kamala* and *Rakta Pitta*. Additionally, the phytochemicals present in these herbs contribute to pacifying these conditions.

Introduction

Ayurveda is an ancient system of medicine often referred to as the "science of life." It is based on the concept of three bodily humours, known as *Vata*, *Pitta* and *Kapha*. In Ayurveda, a state of balance among these humours is considered healthy, while an imbalance is seen as the root of diseases. Ayurveda places a strong emphasis on maintaining health through appropriate dietary choices (*ahara*) and lifestyle practices (*vihara*). There are hundreds of drug combination and formulations mentioned in Ayurvedic classics for treating disease and maintaining health. Along with understanding pathogenesis of a disease, a deep understanding of drugs is also essential for a good physician. *Vasaguduchyadi kwatha* is such a formulation mentioned in the Ashtanga Hridaya, in the context of management of *Pandu* (anaemia)⁽¹⁾. This article is aimed at analysing properties of individual components of this formulation, their collective effect and the probable mode of action.

MATERIALS AND METHODS

Materials: Classical Ayurveda text books, lexicons, Ayurveda Pharmacopeia of India, Ayurvedic textbooks, Published articles.

Method: Conceptual review

Ingredients of the formulation

Vasaguduchyadi kwatha comprises eight key ingredients: *Vasa*, *Guduchi*, *Hareetaki*, *Vibhithaki*, *Amalaki*, *Katuki*, *Bhunimba*, and *Nimba*. Additionally, honey is recommended as an adjuvant.

Ingredients of *Vasaguduchyadi Kwatha* with their properties and chemical constituents are tabulated below.

Table 1: Ingredients of *Vasaguduchyadi Kwatha*

No	Drugs	Botanical name	Family	Part used
1	Vasa ⁽²⁾	<i>Adhatoda vasica</i> .L.Nees	Acanthaceae	Leaf
2	Guduchi ⁽³⁾	<i>Tinospora cordifolia</i> . Miers	Menispermaceae	Stem
3	Hareetaki ⁽⁴⁾	<i>Terminalia chebula</i> Retz	Combretaceae	Fruit
4	Vibhithaka ⁽⁵⁾	<i>Terminalia bellerica</i> Roxb.	Combretaceae	Fruit
5	Amalaki ⁽⁶⁾	<i>Phyllanthus emblica</i> .Linn	Euphorbiaceae	Fruit
6	Katuki ⁽⁷⁾	<i>Picrorhiza kurroa</i> . Royle ex Benth	Scrophulariaceae	Root
7	Bhunimba ⁽⁸⁾	<i>Swertia chirata</i> Buch. Ham	Gentianaceae	Whole plant
8	Nimba ⁽⁹⁾	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Bark

Table 1: Ingredients of *Vasaguduchyadi Kwatha*

Drugs	Rasa	Guna	Virya	Vipaka	Dosha karmas	Karmas	Indications
Vasa ^(2,10)	Kashaya Tikta	Laghu Teekshna	Seeta	Katu	Kapha Rakta Pitta samana	Raktasodhaka Stambhana Rasayana, Kshayahara Hrdya Balya, Deepana Rasayana	Kasa Swasa Jwara Kamala Kshaya Trt Kamala Pandu Prameha
Guduchi ^(11,3)	Tikta Kashaya	Laghu	Ushna	Madhura	Tri dosha samana	Sangrahi Vrshya Amahara Vayasthpana	Chakshuya Kasa Jwara
Hareetaki ^(4,12)	Kashaya Katu Tikta Amla Madhura	Laghu rooksha	Ushna	Madhura	Tri dosha hara	Varnya Sara, Medhya Lekhaneeya Pachana Rasayana Ayushya Anuloma	Kusta Gulma Pandu Pleeha Yakrit vikara Vatarakta Kamala
Vibhithaki ^(5,13)	Kashaya	Laghu, Rooksha	Ushna	Madhura	Kapha pitta samaka	Bhedanam Vaivarnya- nasana Krimi nasana Netryam	Trt, Chardi Vibandha Swarabheda Krimi Kasa
Amalaki ^(6,14)	Amla, Kashaya Madhura Tikta Katu	Laghu Rooksha	Seeta	Madhura	Tri dosha samaka	Rasayana Vrsya Kesya, Chakshusya Ruchya Daha hara	Prameha Jwara Pandu Kamala Raktapitta Chardi Sopha
Katuki ^(15,7)	Tikta Katu	Laghu Rooksha	Seeta	Katu	Kapha Pitta samaka	Bhedani Rechana Hrudya Asrajith Dahajith Deepana	Prameha Arochaka Vishama Jwara Kushta Vibanda Kasa Swasa
Bhunimba ^(8,16)	Tikta	Laghu Rooksha	Seeta	Katu	Kapha Pitta samaka	Sophahara Medohara Daha hara Nidrahara	Raktapitta Sopha Kasa Jwara Krimi Vrana Kushta Kasa
Nimba ^(9,17)	Tikta	Laghu Rooksha	Seeta	Katu	Pitta Kapha samaka	Agni krut Sramahara Ahrudya Grahi	Jwara Krimi Vruna Kushta Prameha
Madhu ⁽¹⁸⁾ (Adjuvant)	Madhura Kashaya	Laghu Visada Rooksha		Katu	Kapha Pitta samaka	Chedi, Chakshusya, Vruna sodhana, ropana, sandhana	Raktapitta Chardi Krimi Swasa Kasa

Table 3: Important Chemical constituents of the ingredients

Drugs	Chemical constituents	Actions
1. <i>Vasa (Adhatoda vasica)</i> .L.Nees) ⁽¹⁹⁾	Alkaloids- vasicine and Vasicinone	Hepatoprotective, Thrombopoietic, wound healing activity, moderate hypotensive activity
	β -sistosterol	Hepatoprotective, anti-microbial, anti-oxidant, anti-diabetic, anti-inflammatory
	Kaempferol	Hepatoprotective, antioxidant, anti-inflammatory
	Adhatodine	Anti-tubercular, anti-allergic, Hepatic and Cardioprotective activity.
2. <i>Guduchi (Tinospora cordifolia)</i> .Miers) ⁽²⁰⁾	β -glucoside-galactose	Hepatoprotective activity
	Alkaloids -- Tembetarine, Choline, Magnoflorine, Berberine, Tinosporin, Isocolumbin, Palmetine, Jatrorrhizine, Aporphine Alkaloids, Tetrahy-Dropalmatine. Furanolactone, Diterpenoid, Lactones, Cleodrane Derivatives, Columbin, Tinosporides, Jateorine.	Anti-cancer, anti-diabetes, anti-viral, anti-inflammatory and anti-microbial, immunomodulatory action.
	Berberine	Effective in chronic liver disease
	Ellagic acid & Ascorbic acid	Anti-oxidant activity
3. <i>Hareetaki (Terminalia chebula)</i> . Retz) ⁽²¹⁾	Chebolic acid	Hepatoprotective activity, anti -diabetic, neuro protective
	Punicalagin, Chebulagic acid, Galloyl compounds	Anti-viral activity
	Ellgitannins	Hepatoprotective activity
	Gallic acid	Anti-inflammatory and hepatoprotective activity.
4. <i>Vibhithaki (Terminalia bellerica)</i> Roxb.) ⁽²²⁾	Gallic Acid, Ellagic Acid, Methyl Gallate, Chebulaginic Acid, Chebulagic Acid	Hepatoprotective, anti-inflammatory, anti -oxidant, anti-bacterial, anti- viral
	Flavanols-Quercetin & Kaempferol, Carbohydrates, Fatty Acids and Proteins	Hepatoprotective, anti-oxidant, hypolipidemic activity.
	Chebulinic Acid, Chebulagic Acid, Gallic Acid, Ellagic Acid	Hepatoprotective, anti-inflammatory, anti -oxidant, anti-bacterial, anti- viral action
	Flavanoids -Quercetin &Kaempferol Phyllantine, Phyllantidine, Phyllembic Acid	Hepatoprotective, anti-oxidant, hypolipidemic
5. <i>Amalaki (Phyllanthus emblica)</i> .Linn) ⁽²³⁾	Tannins - Emblicanin A, B Punigluconin, Pedunculagin. Vit C, Gibberellin, Lupeol	Anti-oxidant activity
	Kutkin (Picrosides and Kutkosides) Picroliv, Kutokoside,	Hepatoprotective properties anti- cancerous activity
	Ig-Picrosides (i, ii, iii and iv) Picroside I and kutkoside	Antioxidative activity
	Steroidal glycosides such as Cucurbitacins B, D, and R	Anti-inflammatory and Antioxidant properties, Antitumorous abilities.
6. <i>Katuki (Picrorhiza kurroa)</i> . Royle ex Benth) ⁽²⁴⁾	Swertiamarin	Anti-hepatitis, Antibacterial Cardio-protective, Anti-atherosclerotic
	Swerchirin	Hypoglycemic, Hepatoprotective pro-heamatopoietic.
	Mangiferin	Antioxidant, Cemopreventive Antiinflammatory, Antiatherosclerotic
	Sweroside	Antibacterial, Hepatoprotective, Decreases hyperpigmentation
7. <i>Bhunimba (Swertia chirata)</i> . Buch. Ham) ⁽²⁵⁾	Syringaresinol	Hepatoprotective
	Chiratol	Anti-inflammatory
	Gallic acid, catechin	Antibacterial action
	Nimbolide, Azadirachtin-A	Hepatoprotective activity
8. <i>Nimba (Azadirachta indica)</i> A. Juss.) ⁽²⁶⁾	Polysaccharides G2A	Anti -inflammatory

Discussion

The herbal formulation known as *Vasaguduchyadi kwatha* finds its therapeutic indications in *Pandu* (anaemia), *Kamala* (jaundice) and *Raktapitta* (bleeding disorders). Each of these conditions is marked by an aggravation of the *Pitta dosha*. This vitiated *Pitta* subsequently spreads with the assistance of *Vata*, further disturbing *Kapha dosha* and resulting in the manifestation of *Pandu roga*.⁽²⁷⁾ An enhanced pathogenesis results in *Kamala*. In the context of *Raktapitta*, an exacerbation of pitta dosha leads to further vitiation of the *rakta* resulting in the manifestation of symptoms⁽²⁸⁾. In *Raktapitta* and *Kamala* derangement of *raktavaha srotas* and in *Pandu* derangement of *rasa vaha srotas* is involved. As *Pitta* and *Rakta* are having similar properties, the drugs which pacify vitiated *Pitta* will pacify vitiated *Rakta*. Thus, drugs which possess *rooksha*, *seetha* and *grahi* properties will be effective in normalizing vitiated *Pitta* as well as *Rakta*.

Vasa (*Adhatoda vasica*.L.Nees.) is characterized by its *kashaya* and *tikta* tastes, as well as its *seeta virya* all of which work in opposition to the properties associated with *Pitta dosha*. Moreover, *Vasa* exhibits *katu vipaka* and *laghu guna*, countering the properties attributed to *Kapha dosha*. *Vasa* is considered as *raktasodhaka* and *stambhaka* making it the most preferred drug (*agrya*) in *Raktapitta* (bleeding disorders). Vasicine, the major alkaloid present in *Vasa* is proven to possess its bronchodilatory activity, respiratory stimulating activity, thrombopoietic, hepatoprotective activities. The effect on *Kamala* can be due to its antioxidant property of alkaloids present, such as *vasicine* and *vassicol*.

Guduchi (*Tinospora cordifolia*. Miers) with its combination of tastes including *tikta*, *kashaya* and *madhura* along with *madhura vipaka*, helps in balancing *Pitta dosha*. Additionally, its *ushna virya* helps in pacifying both *Vata* and *Kapha doshas*, making it a valuable herb for tridoshic balance. This broad-spectrum dosha-pacifying nature allows *Guduchi* to be used in conditions like *Kamala* and *Pandu*. The flavonoid present in *Guduchi* has proved to have hepatoprotective effect. *Guduchi* is also proved to possess vasorelaxant, antimicrobial, anti-hypertensive, anti-inflammatory and anti-viral properties.

Hareetaki (*Terminalia chebula* Retz), possesses a combination of *kashaya*, *tikta* and *madhura* tastes, along with *madhura vipaka* which collectively help in balancing *Pitta dosha*. The *katu tikta*, and *kashaya* tastes, *laghu* and *rooksha* properties, and *ushna virya* make it effective in pacifying *Kapha dosha*. Moreover, the *madhura vipaka*, *ushna virya*, and *madhura amla* taste counteract imbalances in *Vata dosha*, making *Hareetaki* a *tridosha samana* drug. Scientific studies corroborate these

traditional uses, with tannins isolated from the fruits demonstrating potent inhibitory activity against the Hepatitis C virus (HCV) NS3/4A protease⁽²⁹⁾. *Hareetaki* has also been established for its hepatoprotective, anti-inflammatory activities.

Vibheetaki (*Terminalia bellerica* Roxb.), is characterized by *kashaya* taste, *laghu* and *rooksha* properties and *ushna virya*, all of which make it effective in pacifying *Kapha dosha*. Additionally, its *madhura vipaka* and *kashaya* taste play a role in balancing *Pitta dosha*. Therefore, *Vibheetaki* is considered a *Kaphapitta samaka* herb, helping balance both *Kapha* and *Pitta doshas*. The bioactive compounds such as glucosides, tannins, gallic acid, ellagic acid, ethyl gallate, gallic acid, and chebulanic acid, underlie its wide range of therapeutic actions including antioxidant, antimicrobial, antihypertensive, and hepatoprotective properties. Additionally, *Vibheetaki* has been found to possess analgesic, antipyretic, and anti-ulcerogenic effects, as well as antimicrobial activity.

Amalaki (*Phyllanthus emblica*.Linn) possess *madhura*, *tikta* and *kashaya* tastes, along with *madhura vipaka* and *rooksha guna* which are effective in pacifying *Pitta dosha*. The *ushna virya* and *laghu rooksha guna* also contribute to balancing *Kapha dosha*. Moreover, the *ushna virya*, *madhura vipaka*, and *madhura-amlam* taste help in pacifying *Vata dosha*. In essence, *Amalaki* is considered a *tridosha samana* drug, as it harmonizes all three *doshas*. The various parts of *Amalaki* are used traditionally for treating conditions such as diarrhoea, jaundice, inflammation, and it is recognized as a *Rasayana* (rejuvenative) herb. The high antioxidant activity in *Amalaki* is attributed to the presence of phenolic compounds and also studies have shown that the extract is having hepatocellular regenerative activity⁽²³⁾.

Katuki (*Picrorhiza kurroa*. Royle ex Benth) is characterized by its *tikta* and *katu* tastes, *laghu* and *rooksha* properties and *katu vipaka*, which make it effective in pacifying *Kapha dosha*. Additionally, its *seeta virya* and *tikta rasa* contribute to balancing *Pitta dosha*. *Katuki* pacifies vitiated *Rakta* also. This action is especially significant because vitiated *Rakta* is a primary cause of *Rakta Pitta* (bleeding disorders). Since *Rakta* and *Pitta* share similar qualities, the drug also helps in pacifying vitiated *Pitta dosha*. *Katuki* is rich in a variety of bioactive chemicals with significant pharmacological and therapeutic potential, including glycosides, iridoids, alkaloids, phenolics, terpenes, and cucurbitacins. The active constituent in *Katuki* known as kutkin, is a mixture of kutkoside and picroside. The hepatoprotective activity of kutkin is mainly due to the suppression of xanthine oxidase inhibitors, metal-ion chelators, oxygen anion generation, free radical scavenging, and anti-lipid peroxidation⁽²⁴⁾.

Bhunimba (*Swertia chirata*. Buch. Ham) characterized by its *tikta* taste and *seeta virya* which helps in pacifying *Pitta dosha*. Additionally, its *laghu* and *rooksha* properties, along with *katu vipaka* aids in addressing imbalances related to *Kapha dosha*. Researches has proved that it is a potential anti-hepatitis B virus agent, particularly on HepG 2.2.15 cell lines⁽³⁰⁾. It also exhibits anticholinergic effects, immunomodulatory and antioxidant activity.

Nimba(*Azadirachta indica* A. Juss.), with its *tikta* and *kashaya* tastes and *seeta virya*, make it effective in pacifying *Pitta dosha*. Furthermore, the *katu vipaka* and *laghu rooksha guna* contribute to its potential in balancing *Kapha dosha*. *Nimba* has been the subject of numerous studies highlighting its potent antioxidant properties. Additionally, research has shown that its bark possesses antioxidant, antibacterial, and anticancer activities.

While analysing the formulation it is seen that, drugs like *Vasa*, *Amalaki*, *Katuki*, *Bhunimba*, *Nimba* and *Guduchi* have *seeta virya*, while others exhibit *ushna virya*. The common taste among these ingredients is predominantly *tikta* and *kashaya*. They are also *laghu* and *rooksha*. Among the eight drugs, half offer a *madhura vipaka*, while the rest provide a *katu vipaka*. All the drugs in the formulation possess *Pitta-kapha samana karma*. Honey has the property of enhancing the therapeutic effects of other substances it is combined with, without altering its own inherent properties, effectively carrying and amplifying the actions of the co-administered substances (*Yogavahi*).

The approach of *samprapthi vighantam*, as mentioned in Ayurvedic treatment principle, is applied while using this formulation to mitigate the aggravated *pitta* and subsidiary *Vata* and *Kapha* through the inherent properties of the included drugs. In Ayurveda, a drug is considered to act through various avenues such as its *rasa*, *virya*, *guna vipaka* or *prabhava*. The specific attributes of the drugs in this formulation, including *tikta* and *kashaya* tastes, *seeta virya*, *madhura vipaka*, *laghu* and *rooksha guna*, collectively work to alleviate the vitiated *Pitta*. This corrective action aids in addressing diseases like *Pandu*, *Kamala*, and *Rakta pitta*.

Liver diseases are frequently associated with haematological abnormalities. The liver plays a central role in the clotting process, and acute and chronic liver diseases are invariably associated with coagulation disorders due to multiple causes. Bleeding is one of the most severe causes of anaemia. These interrelated conditions underscore the importance of this formulation, in the management of these conditions, as it encompasses a selection of key medicinal components that offer hepato cell regenerative properties, membrane-stabilizing effects, antioxidant capabilities, digestive support, thrombopoietic action, and immune modulatory effects.

Conclusion

Considering the pharmacological properties in Ayurvedic view and the pharmacological effects of phytoconstituents of all ingredients of the formulation, it can be understood that *Vasaguduchyadi kwatha* will be a suitable choice in the treatment of *Pandu*, *Kamala* and *Rakthpitta*. It can also be recommended to similar conditions where there is a predominant vitiation of *Pitta* as well as *Rakta*.

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