



Review Article

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CRITICAL REVIEW ON PUNARNAVASHTAK KWATHA: AN AYURVEDIC POLYHERBAL FORMULATION

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ABSTRACT

Ayurveda, an ancient system of medicine, represents a vast reservoir of knowledge that is not only historically rich but also profoundly intricate and deep. Far from being a primitive practice, Ayurveda focuses on the preventive aspects of health, emphasizing the importance of maintaining balance and harmony in the body to avoid diseases. This holistic approach involves detailed discussions on the diagnosis and management of a wide range of physical and mental disorders, offering a comprehensive framework for health and well-being. One notable formulation within this traditional system is Punarnavashtak Kwatha. This herbal decoction has garnered significant attention for its efficacy in treating conditions such as shotha (inflammation) and pandu (anemia). The formulation's name, "Punarnavashtak," refers to its primary ingredient, Punarnava, a herb renowned for its rejuvenating properties. The Kwatha, or decoction, form is a widely used and trusted method of preparing Ayurvedic medicines, allowing for the active ingredients of herbs to be effectively extracted and utilized. Punarnavashtak Kwatha exemplifies the importance of Kwatha Kalpana, a widely used dosage form in Ayurvedic medicine that ensures effective extraction and utilization of herbal active ingredients. Ancient Ayurvedic texts provide extensive references to this formulation, detailing its preparation, dosage, and therapeutic applications. Its historical significance, combined with modern therapeutic success, underscores the enduring benefits of Ayurvedic medicine. This formulation not only reflects the depth and richness of Ayurvedic knowledge but also its practical application in promoting health and treating diseases effectively in today's world.

Keywords: Punarnava, Shotha, Pandu, Punarnavashtak Kwatha

INTRODUCTION

Punarnavashtak Kwatha is a potent polyherbal formulation deeply rooted in the ancient system of Ayurveda, renowned for its therapeutic efficacy in addressing two prevalent health conditions, Pandu Roga (anemia) and Shotha Roga (oedema). Derived from the synergistic combination of multiple herbs, Punarnavashtak Kwatha embodies the holistic approach of Ayurvedic medicine, which seeks to restore balance and harmony within the body. The formulation is specifically crafted to enhance the body's vital functions, promoting the rejuvenation of tissues and alleviating symptoms associated with anemia and edema. With a rich history dating back to traditional Ayurvedic texts, Punarnavashtak Kwatha reflects the profound wisdom of Ayurveda in promoting overall well-being by addressing imbalances at their root cause. As a time-tested remedy, it exemplifies the holistic philosophy of Ayurveda and its emphasis on natural, sustainable healing for optimal health. Punarnavashtak Kwatha is an Ayurvedic polyherbal preparation mentioned in Ayurvedic literature Bhaishajya Ratnavali for hepatic disorders.

Kwatha Kalpana, often known as decoctions, involves the aqueous extraction of a mixture of herbs. This traditional dosage form is widely used for its ability to draw therapeutic properties from herbs into water through heating. Despite its clinical effectiveness, Kwatha's preparation is cumbersome, it has a short shelf life, and its taste is often unpalatable. In this article, we critically review Punarnavashtak Kwatha, tracing its use from its initial mention to contemporary times.

Literature Review

Present study is based on literary search, Punarnavashtak Kwatha described in several Samhitas like Chakradutt, Sharangdhara Samhita, Sahastra yog, Vrind Madhav etc. has been under taken to explore difference of ingredients, indication and sahapana (adjuvant) along with critical analysis of the formula.

In Punarnavashtak Kwatha basically eight ingredients are described. Some authors attributed some other ingredients also, like Haridra, Devdaru etc. (Table 1)

In the history of Ayurveda Punarnavashtak Kwatha was firstly described in Vrind Madhav. Besides Chakradutt the formulation is also mentioned in various Samhitas. (Table 2)

Table 1: Ingredients of Punarnavashtak Kwatha¹

Name	Botanical name	Family	Parts used	Part
Punarnava	<i>Boerhaavia diffusa</i> Linn.	Nyctaginaceae	Whole plant	1
Nimb	<i>Azadirachta indica</i> A.Juss	Meliaceae	Leaf	1
Patol	<i>Trichosanthes dioica</i> Roxb.	Cucurbitaceae	Leaf	1
Sunthi	<i>Zingiber officinale</i> Roxb.	Zingiberaceae	Dried Rhizome	1
Kutaki	<i>Picrorhiza kurroa</i> Royle	Scrophulariaceae	Dried Rhizome	1
Guduchi	<i>Tinospora cordifolia</i> Willd.	Menispermaceae	Stem	1
Daruharidra	<i>Berberis aristata</i> DC.	Berberidaceae	Dried stem	1
Haritaki	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit	1

Table 2: Punarnavashtak Kwatha with their variants.

Samhita	Time period	Rogadhikara	Name
Vrind Madhav ²	9 th century AD	Shotha chikitsa	Punarnavadi kwatha
Chakradutt ³	11 th century AD	Udar chikitsa	Punarnava ashtak kwatha
Vanga sen ⁴	12 th century AD	Pandu chikitsa	Punarnavadi kwatha
Gada nigrah(II part ⁵)	12 th century AD	Pandu chikitsa	Punarnavadi kwatha
Rasa ratnakar ⁶	13 th century AD	Shotha chikitsa	Punarnava ashtak kwatha
Sharangdhara samhita ⁷	13 th century AD	Pandu & Shotha chikitsa	Punarnavadi kwatha
V. Nigantu ratnakar ⁸	-	Pandu chikitsa	Punarnavadi kwatha
Yog tarangini ⁹	17 th century AD	Pandu chikitsa	Punarnava ashtak kwatha
Yog ratnakar ¹⁰	18 th century AD	Pandu chikitsa	Punarnavadi kwatha
Bhaishajya ratnawali ¹¹	19 th century AD	Shotha chikitsa	Punarnava ashtak kwatha
Aarogya chintamani ¹²	-	Pandu chikitsa	Punarnavadi kwatha
Yog chintamani ¹³	-	Vata-shofa chikitsa	Punarnavadi kwatha
Ayurved sara sangraha ¹⁴	20 th century AD	Pandu chikitsa	Punarnavadi kwatha
Sahastra yog ¹⁵	20 th century AD	Pandu chikitsa	Punarnavadi kwatha
Rastantra Saar & Siddhaprayog Sangraha ¹⁶	20 th century AD	Shotha chikitsa	Punarnavadi kwatha

Table 3: Pharmacological properties of ingredients of Punarnavashtak Kwatha

Ingredients	Rasa	Guna	Virya	Vipaka
Punarnava ¹⁷	Madhur, Tikta, Kashaya	Ruksha	Ushna	Madhur
Nimb ¹⁸	Tikta, Kashaya	Laghu	Shita	Katu
Patol ¹⁹	Tikta	Laghu, Ruksha	Ushna	Katu
Shunthi ²⁰	Katu	Laghu, Snigdha	Ushna	Madhur
Kutaki ²¹	Katu, Tikta	Laghu	Ushna	Katu
Guduchi ²²	Tikta, Kashaya	Laghu	Ushna	Madhur
Devdaru ²³	Tikta	Laghu, Snigdha	Ushna	Katu
Haritaki ²⁴	Madhur, Tikta, Kashaya, Amla, Katu	Laghu, Ruksha	Ushna	Madhur
Daruharidra ²⁵	Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu
Haridra ²⁶	Tikta, Katu	Laghu, Ruksha	Ushna	Katu

Table 4: Difference of ingredients in various classics

Samhita	Punarnava	Nimb	Patol	Shunthi	Kutaki	Guduchi	Devdaru	Haritaki	Haridra	Daruharidra
C.D.	+	+	+	+	+	+	-	+	-	+
Y.R.	+	+	+	+	+	+	-	+	-	+
B.R.	+	+	+	+	+	+	-	+	-	+
Y.T.	+	+	+	+	+	+	-	+	+	+
V.S.	+	+	+	+	+	+	-	+	-	+
G.N.	+	+	+	+	+	+	-	+	+	+
B.N.R.	+	+	+	+	+	+	-	+	-	+
V.M.	+	+	+	+	+	+	-	+	-	+
A.F.I.	+	+	+	+	+	+	+	+	-	-

(C.D. - Chakradutt, Y.R. - Yogratanakar, B.R. - Bhaishajya ratnawali, Y.T.- Yog tarangini, V.S. - Vangasen, G.N.- Gadha nigrah, V.N.R. - Vrihad Nigantu ratnakar, V.M. - Vrind madhav, A.F.I.- Ayurvedic formulary of India)

Table 5: Specific Karma (Therapeutic action) of ingredients of Punarnavashtak Kwatha

Ingredients	Karma (Therapeutic action)
Punarnava	Anuloman, shothahara, Mutral, Vata-Kaphahara ²⁷
Nimb	Dipana, Kaphahara, Pitahara, Shitagrani ²⁸
Patol	Shotha-hara, Kaphaghan ²⁹
Sunthi	Anuloman, Dipana, Pachana, Vata-Kaphahara ³⁰
Kutaki	Pitahara, Dipana ³¹
Guduchi	Tridosh shamak, Dipana, Rasayan ³²
Devdaru	Kaphahara, Vatahara ³³
Haritaki	Anuloman, Sarvadosh prashman, Dipana ³⁴
Daruharidra	Shotha-hara ³⁵
Haridra	Vishodhani, Aruchinashni ³⁶

Table 6: Chemical composition and Pharmacological actions of ingredients of Punarnavashtak Kwatha

Ingredients	Botanical name	Chemical compositions	Pharmacological actions
Punarnava	<i>Boerhaavia diffusa</i>	Punarnavine C ₁₇ H ₂₂ N ₂ O, Rotenoid - boeravinone A1, B1, C2, D, E, F, Hypoxanthine 9- L- arabinofuranoside, Punarnavoside, Ursolic acid, β - sitosterol, Lignans- Liiodendri and syringaresinol mono- β -D-glucoside	Immunosuppressant, anti-diabetic, antioxidant, anti-cancer, analgesic, hepatoprotective, anti-viral, anti-fungal and anti-fibrinolytic activity ³⁷
Nimb	<i>Azadirachta indica</i>	Nimbin, Nimbidol, Gedunin, Salannin, Azadirachtin and azadirone	Anti-inflammatory, anti-pyretic, antihistamine, anti-fungal, anti-tubercular, anti- protozoan, anti-pyretic, vasodilator, anti-malarial, anti-fungal, insect repellent, anti-hormonal, anti-feedant activity ³⁸
Patol	<i>Trichosanthes dioica</i>	24- α -ethyl-20-ene-7-hydro-stigmast-8 β :14 β -di-3-O- β -D-xylofuranoside ³⁹	Antioxidant, anti-bacterial, anti-fungal, anti-inflammatory, hepatoprotective activity ⁴⁰
Sunthi	<i>Zingiber officinale</i>	Gingerol, shogaols, paradol and zingerone, 6-gingerol 8-gingerol and 10-gingerol, 6-shogaol, 8- shogaol, 10-shogaol and zingerone. 6-paradol, 6- and 10-dehydrogingerdione and 6- and 10-gingerdione	Anti-inflammatory, anti-coagulant, anti-cancer, anti-emetic, anti-nociceptive, antioxidant activity ⁴¹
Kutaki	<i>Picrorhiza kurroa</i>	picrosides I, II, and III kutkoside, s veronicoside, pikuroside, cucurbitacins, 4-hydroxy-3-methoxy acetophenone ⁴²	hepatoprotective, anti-cholestatic, immunomodulatory activity, antioxidant activity ⁴³
Guduchi	<i>Tinospora cordifolia</i>	Octacosanol, Nanocosanol 5-onedichloromethane, Heptacosanol diterpenoid furano lactone, cordifolide, cordifol, heptacosanol, tinosporide, β - sitosterol, tinosporine, clerodane furano diterpine, tinosporaside, and columbin	Anti-toxin, anti-diabetic, anti-cancer, immunomodulatory, antioxidant, anti-microbial, hepatoprotective activity ⁴⁴
Daruharidra	<i>Berberis aristata</i>	Berberine, Berbamine, Oxycanthine, Epiberberine, Palmatine, Dehydrocaroline, Jatrohrizine, Columbamine, Dihydrokarachine, Karachine, Taximaline, Oxyberberine, Aromaline, Pakistanine, 1-O- methyl Pakistanine, Pseudo Palmatine chloride, Pseudo berberine chloride, Lanost-5-en- β -ol	Antioxidant, anti-pyretic, analgesic, anti-fungal and anti-microbial, anti-inflammatory activity, anti-platelet activating factor ⁴⁵
Haritaki	<i>Terminalia chebula</i>	Gallic acid, chebulic acid, punicalagin, chebulanin, corilagin, neochebulinic acid, ellagic acid, chebulegic acid, chebulinic acid, 1,2,3,4,6-penta-O-galloyl-b-D-glucose, casuarinin, 3,4,6-tri-O-galloyl-D-glucose and terchebulin	Anti-bacterial, anti-viral, Anti-amoebic and Immunomodulatory, anti-plasmodial, antioxidant activity ⁴⁶
Haridra	<i>Curcuma longa</i>	Curcumin, desmethoxycurcumin, bidesmethoxycurcumin, dihydrocurcumin ⁴⁷	Anti-inflammatory, anti-hepatotoxic, antioxidant and anti-depressant activity, Inhibition of aggregation of human blood platelets ⁴⁸
Devdaru	<i>Cedrus deodara</i>	α - himachalene, β - himachalene, himadarol, cedeodarin, dihydromyricetin, & cedrinoside	Antioxidant, anti-inflammatory, anti-tumor, anti-mutagenic, anti-carcinogenic, anti-bacterial and anti-viral activity ⁴⁹

Method of Preparation

The coarse powder of all the ingredients should be prepared. All drugs are mixed and taken in appropriate stainless-steel vessel and 16 times water should be added. Kept for one night. Next day the solution subjected to mild fire, boiled and reduced 1/8th of quantity and later filtered. The filtrate obtained is used as Punarnavashtak Kwatha for therapeutic purposes⁵⁰.

Dose

Though the specific dose is not mentioned in the formula, common dose mentioned for Kwatha Kalpana can be followed. In A.F.I. 48 gm. (Kwatha Churna) is mentioned as the dose of Punarnavashtak Kwatha.⁵¹ In Various classics dose of Punarnavashtak Kwatha is 2-4 Tola (1Pala)⁵².

Sahapana (Adjuvant)

Most of the classical texts have mentioned Gomutra as sahapana of Punarnavashtak Kwatha⁵³.

Samprapti (Pathogenesis)

The mechanism of action of Punarnavashtak Kwatha involves the vitiated Vata dosha displacing the vitiated Rakta, Pitta, and Kapha doshas into the circulatory channels. This displacement leads to an obstruction of Vata by these morbid elements, resulting in the accumulation of Pitta, Kapha, and Rakta between the skin and muscles. This accumulation causes swelling in the affected area, known as Shotha. The presence of Rakta and Pitta in the space

between the skin and muscles contributes to inflammation, while Kapha is responsible for fluid accumulation.

DISCUSSION

The exploration of Punarnavashtak Kwatha in this study provides a comprehensive understanding of its historical references, varied formulations, and pharmacological properties, shedding light on its potential significance in Ayurvedic therapeutics. The diverse compilation of this polyherbal preparation across classical texts underscores its enduring presence and adaptability within the Ayurvedic tradition. The Ayurveda attributes like most of ingredients with Ushna Virya (hot in potency) and Laghu guna help in samprapti vightan (breaking of pathogenesis) in Shotha roga. The pharmacological attributes of its ingredients, ranging from immuno-suppressant and hepatoprotective effects to anti-inflammatory and anti-malarial properties, suggest a holistic approach to addressing hepatic disorders and conditions associated with edema. The Ayurvedic concept of Shotha, intricately linked to the pathogenesis described, further emphasizes the formulation's potential in tackling multifaceted imbalances. However, practical challenges such as dosage form and formulation palatability indicate the need for future research to bridge the gap between traditional wisdom and contemporary form of formulations. This study initiates a discussion on the therapeutic potential of Punarnavashtak Kwatha, inviting further exploration and refinement for its practical application in holistic

healthcare.

CONCLUSION

This review study on Punarnavashtak Kwatha provides a broader view of this Ayurvedic polyherbal formulation, offering valuable insights into its historical roots, diverse formulations, and pharmacological properties. The formulation's presence in various classical texts and its versatile composition underscore its enduring relevance in Ayurvedic therapeutics. The pharmacological attributes of its constituent herbs align with the holistic principles of Ayurveda, suggesting a potential multifaceted approach to addressing hepatic disorders and related conditions. However, practical considerations, such as dosage standardization and formulation palatability, pose challenges to its widespread application. This study serves as a foundational step, stimulating further research to bridge traditional Ayurvedic wisdom with contemporary evidence-based practices, ultimately enhancing our understanding of Punarnavashtak Kwatha's therapeutic potential in the broader landscape of healthcare.

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