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Therapeutic Signals of *Amalaki* (*Emblica officinalis* Garten) in *Brihatrayi*: A Review

Neha Soni^{1*}, Pravin Joshi² and Om Prakash Rout³

¹⁻³Department of Dravyaguna, Government Ayurveda College, Raipur, Chhattisgarh, India

ABSTRACT

Ayurveda is our ancient traditional Indian system of medicine which is very rich about holistic knowledge towards health of human being. Brihatrayi comprises three leading texts of Ayurveda i.e, Charakasamhita, Susrutasamhita and AstangaHridaya. These texts are excellent compilation of physical ailments and their treatment by using herbal drugs. Amalaki is one of the most valued herbal cure many of diseases. Different parts of Amalaki plant is used to cure many diseases like Prameha, Rakta pitta, Amla pitta, Panduroga, Grahniroga, Kustha, Gulma, Udavarta, VishamJvara etc. We find a thorough description about properties of Amalaki in Brihatrayi regarding different contexts. In present era, plants activities on different organ-system of animals have been proved by different types of experimental studies which strengthen the classical indication of the plant. This review article is an attempt to compile indications of Amalaki from Brihat-trayi in different diseases.

KEYWORDS

Amalaki, Emblica, Brihatrayi, Samhita



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INTRODUCTION

History of Medicine in India has its roots back to Vedic period. Rigveda, which is oldest repositories of human knowledge have been written about 4500-1600 B.C. Rigveda explains about 99 medicinal plants. Yajurveda listed 82 plants. Ayurveda, the science of life is considered Upveda of Atharvaveda which contains a more detailed account of many plants and their uses¹. Atharva Veda, which is considered important among all four Vedas, deals with 288 plants, almost all of them have medicinal properties and were used to cure deadly diseases.

Our Indian system of medicine called Ayurveda, is very rich in concept of structural, functional and psychological aspect of human being as well as plants, their properties and uses. Among the various Samhitas, Charaka Samhita and Susruta Samhita are well known to have many formulations based on plants along or in combination and salient features of plants are described². Ashtanga Hridaya is a compilation of these two Samhitas. These three; Charaka Samhita, Susruta Samhita and Ashtanga Hridaya are collectively termed as Brihatrayi, which are leading texts of Ayurveda literature.^{3,4,5} Although we find references of Amalaki beginning right from Vedic and religious scriptures, Samhitas,

Nighantus and later texts of Ayurveda present a more elaborate description. Here we will study about indications of Amalaki from Brihat-trayi in different diseases.

Properties of Amalaki⁶

- Guna: Guru, Ruksha and Shita
- Rasa: Panch Rasa (Lavanarashita and Amla Pradhan)
- Virya: Shita
- Vipaka: Madhura
- Doshakarma: Tridosha Shamaka (Vata shamaka due to Amla and Madhura rasa; Pitta shamaka due to Shita virya and Madhura vipaka; Kapha shamaka due to Ruksha guna and Kashaya rasa)

THERAPEUTIC INDICATIONS

Different parts of Amalaki tree i.e., Phala (Fruit), Patra (leaves), Chhala (bark) are used to cure different diseases under different formulations. Different parts comprise different properties and therapeutic value. All the three Samhitas of Brihatrayi have mentioned many indications of Amalaki described as follows.

Charaka Samhita

In Charaka Samhita, Amalaki is used in Kasa, Swasa, Rakta pitta, Netraroga, Daha, Agnimandhya, Hridayaroga, Mutrakrichha, Prameha, Jeerna Jvara, Vishama Jvara etc.



These indications are listed below as per its formulations and indications³.

Table 1 List of the Formulations and indications of Amalaki in Charaka Samhita³

Sr No	Formulation	Name of Formulation	Diseases	Reference
1	Rasayana	1. AmalakayasBramhaRasayana	Jaraanashak, Shramanashak, Ayushya	C.Chi.1/3-4-6
		2. Yograja	Pandu, Kasa, Rajyakkshma, VishamJvara	C.Chi.16/81
2	Mahakashaya	1. Virechanopag		C.Su. 4/24
		2. Kasahar		C.Su. 4/36
		3. Jvarahar		C.Su. 4/39
		4. Kusthaghna		C.Su. 4/13
3	Churna	1. AmalakChurna	Rasayana	C.Chi.1/2-8
		2. SauvarchaladiChurna	Kasa, Swasa, PanduRoga, HridRoga,	C.Chi.18/22 C.Chi.16/70
		3. NavayasChurna	Arsh	
4	SarpiGuda	1. PrathamSarpiGuda	Yakshma, Rakta pitta, Kasa, Prameha	C.Chi.11/50
		2. TritiyaSarpiGuda	Hikka, kasa, swasa, Jvara	C.Chi.11/62
		3. ChaturthaSarpiGuda	PusthiVardhak	C.Chi.11/66
5	Kwatha	1. PippalyadiKwatha	Gulma, Arsh, Udavarta, UdarRoga, Visuchika	C.Chi.13/158
		2. TriphaladiKwatha	UdarRoga	C.Chi.13/149
6	Vati	1. KsharaVatika	Jalodar, Apchi, Gulma, PanduRoga	C.Chi.13/164
		2. ShilajatuVatak		C.Chi.16/87
7	Ghrita	1. AmalakGhrita	Ayurvedhak, Vayasthapak, Balavardhak, Dirghayu	C.Chi.1/2-75
		2. AmritprashGhrita		C.Chi.11/38-39
8	Avaleha	1. AmalakAvaleha	Rasayana	C.Chi.1/3-7
		2. ChayanaprashAvaleha	Jara and Shramanasak, Ayushya	C.Chi.1/1-62
9	Arista	1. Dhatriyarista	PanduRoga	C.Chi.16/111



		2.	Astaatarisra	Vibandha, Sotha, Agnimamdhya	C.Chi.12/32
		3.	Phalarista	Arsh, Kasa, Gulma, Udavart	C.Chi.14/148
		4.	Abhayarista	PanduRoga, Gulma, Jvara, Granthi, Yakshma	C.Chi.14/138
		5.	Kankarista	Gulma, Pleeha, Udar, Kustha	C.Chi.14/158
10	Pradeha		TriphaladiPradeha	Visarpanashaka Varnavardhaka	C. Chi 21/87
11	Guda		KalyanakGuda	Kasa Swasa Jvara, Mutrakrichha	C.K 7/40
12	Virechan	1.	VyosadiGutika		C.K 7/46
		2.	NisothaAmalaki yoga	Gulma	C.K 7/66

Susruta Samhita

Susruta Samhita is mainly a surgical treatise but it has also dealt with several complications arising during course of treatment of surgical diseases. Acharya has

also described a large number of plants and their medicinal uses. Acharya has described Amalaki in following formulations and indications⁴.

Table 2 List of the formulation and indication of Amalaki in Susruta Samhita⁴

Sr.No	Formulation	Name of Formulation	Diseases	Reference
1	Gana	1. AmlakyadiGana		S.Su. 38/56
		2. MustadiGana		S.Su. 36/50
		3. AmlaVarga		S.Su.42/19
		4. PhalaVarga		S.Su. 46/139
2	Churna	PathyadiChurna	KasaHar	S.Su. 52/16
3	Swarasa	Amalakswarasa	Mutra Dosh har	S.Su. 58/40
3	Kalka	Abhayadi Kalka	Mutra Dosh, MutraKricha	S.Su. 58/37
4	Kwatha	1. KiratiktadiKwatha	VatapittajaJavra	S. Chi. 39/199
		2. TriphaladiKwatha	TridoshNashak	S. Chi. 39/200
		3. RashnadiKwatha	VatapittajaJvara	S. Chi. 39/207
5	Yoga	1. Amalak Yoga	Mutra Dosh har	S.Su. 58/41
		2. ChandanMuladi Yoga	ChhardiRogaNashak	S.Su. 54/36
		3. Kusthanashak Yoga	Kustha	S.Chi.9/44
		4. Pramehanashak Yoga	Prameha	S.Chi. 11/8
		5. Krishnadi Yoga	Hikka	S.Ut. 50/27



6	Ghrita	1. EladiGhrita	Swarabheda, Kasa, Gulma, Pleeha, Grahani	S.Chi. 41/55-56
		2. PippalyadiGhrita	Jvara, Gulma, UdarRoga Kshaya, Kasa	S.Chi. 39/219
		3. KravyadiGhrita	JirnaJvara	S.Chi. 39/225
		4. PatoladiGhrita	KusthaJvara, Arjuna, Netra MukhaRoga	S.Chi. 39/228
7	Guga	KalyanakGuda	Kasa, Swasa, Bandhyata, Shotha, Swarabheda	S.Su. 52/39
8	Arista	Arista	Arsh, Grahini, Pandu, Shotha	S.Ch. 6/15
9	Yoosh	1. AmalakYoosh	VatajaChhardi	S.Su. 49/22
		2. mudgadiYoosh	Atisara	S.Su.46/378
		3. DadimadiYoosh	Atisara	S.Su.46/379
10	Vajikaran	Amalak Yoga	Vajikarak	S.Chi. 26/24
11	Rasayana	AmalakYoosh	Rasayana, Kustha, Pandu, UdarRoga	S.Chi. 28/3
12	Virechan	VirechakLeha		S.Su. 9/44
13	Pathya	Amalak	Timir me Aharavidhan	S.Ut. 1748

Astanga Hridaya

This is the third treatise of the Brihatrayi.

AstangaHridaya follows CharakaSamhita

and SusrutaSamhita regarding to its text.

Amalaki is explained in formulations and

indications in the following diseases⁵.

Table 3 List of the formulation and indication of Amalaki in Astanga hridaya⁵

Sr.No	Formulation	Name of Formulation	Diseases	Reference
1	Gana	PhalaVarga		
2	Churna	1. HapusadyaChurna	Arsh, Pandu, Sotha, Kamla, Halimak	A.H. Chi.15/25
		2. NavayasChurna	Pandu, Kustha, Arsh, Prameha	A.H. Chi.16/14
3	Kwatha	MustadiKwatha	Kustha,	A.H. Chi.19/58



				Sotha, Pandu,	
4	Vatika	1.	GudadiGutika	TwakaRoga	A.H. Chi. 8/155
		2.	AkshaBijadiGutika	TimirRogaNashak	A.H.U.T.13/43
5	Avaleha	1.	KasaNasakAvaleha	Kasa, Swasa	A.H. Chi. 3/29
		2.	SitadiAvaleha	KusthaRoga	A.H. Chi.19/49
6	Ghrita	1.	VirechakGhrita	PittajaGulma	A.H. Chi.14/65
		2.	DhatriGhrita	Kasa, Kashya, Rajyakshma, Rakta pitta	A.H. Chi. 3/108
		3.	KalyanakGhrita	BalaGraha, Apasmar, Unmada, Prameha	Sotha, A.H. U.T 6/26
		4.	PippalyadiGhrita	Jvara, Shiroroga,	Vaman, Halimak A.H. Chi. 1/90
		5.	TrayushnadiGhrita	VatajGulma	A.H. Chi. 14/21
7	Guda		AladiSarpiguda	Prameha, Gulma, Pandu	A.H. Chi. 5/28
8	Yoga	1.	Manibhadra Yoga	Kasa, Swasa, Arsha, Prameha	A.H.U.T 19/51
		2.	Drakshadi Yoga	Jvara, Chardi, Murcha, Rakta pitta	A.H. Chi.1/56
9	Varti		KokilaVarti	Timira	A.H.U.T 13/71
10	Anupana		Saladi Yoga	Prameha	A.H. Chi.12/16
11	VirechanKalpa	1.	MisrakSneha	Gulmaroga	A.H. Chi.14/89
		2.	TrivitadiKalpa		A.H.K. 2/47
12	Asava		Lodhrasava	Krimi, Pandu, Grahni, Kustha	A.H. Chi. 12/28
13	Mansa rasa		Bakrekamansa rasa	Rajyakshma, Pinas	A.H. Chi. 5/11
14	Peya		AmlakSwarsa	PittajaChhardi	A.H. Chi. 6/16
15	Sukta		PiluPhalaSukta	Arsh, Gulma, Agnimandhya	A.H. Chi. 8/148
16	Anjan		SadmakhikaAnjan	Timir, Arma, Kancha, NetraKandu	A.H.U.T.13/44

Table 4 List of Pharmacological activity of Amalaki⁷

S. no	Pharmacological activity	Research Work
1	Rasayana	Amalaki Rasayana is said to have growth promoting effect. There has no

significant effect on the levels of serum protein fractions, yet it raises the total protein level and increases the body weight. The study also indicates that the increase in the



		body weight is due to a positive nitrogen balance.
2	Anti diabetic	Emblica fruit powder reduced blood sugar levels in normal rabbits, as well as in hyperglycemic rabbits proving the hyperglycemic activity.
3	Anti-peptic ulcer	30 cases of ulcer and non ulcer dyspepsia showed equal improvement in subjective and objective parameters with conventional antacids and emblica fruit.
4	Hypo- lipidemic	Five groups of rabbits were studied for 16 weeks to determine the effect of Emblica Fruit and Vit. C (6mg/kg) on cholesterol induced hypercholesterolemia and atherosclerosis, both reduced the serum cholesterol.
5	Antioxidant	The long lived belief that the therapeutic effect of Amalaki is due to its rich Vit- C (L-ascorbic acid) content has thus been dispelled. The patent vit- C-like activity of Amalaki fruit has now been located in the Low Mol. hydrolysable tannins.

Botanical Description of Amalaki⁸:

In modern science of plant system, Amalaki is recognized as *Emblica officinalis* Gaertn.

Botanical Name-*Emblica officinalis* Gaertn. Or *Phyllanthus emblica* Linn.

Family-Euphorbiaceae

Table 5 Chemical Composition^{7,8}

Hydrolysable Tannins,	Emblicanin A and B Punigluconin, Pedunculagin, chebulinic acid (Ellagitanin),
Alkaloids	Chebularic acid (Benzopyran tannin) Corilagin, Ellagotanin
Alkaloids	Phyllantine, Phyllembin, Phyllantidine

Habitat-Found throughout tropical and subtropical India, wild or painted, Ceylon-China. Mamay Islands.

Habit- A deciduous small or middle sized tree with crooked trunk and spreading branches.

Bark- Bark is greenish grey, peeling off in conchoidal flakes; branchlets glabrous or finely pubescent, 10-20 cm. long, often deciduous.

Leaves- Subsessile, 10-13 by 2.5-3 mm., closely set along the branchlets, distichous, light green, leaves; stipules ovate, finely acute.

Flowers- Flowers are greenish yellow, in axillary fascicles on the leaf-bearing branchlets, often on the naked portion below the leaves, with fimbriate bracts at the base. Male flowers are numerous, on short slender pedicels. Sepals are 6 in numbers, oblong, obtuse, 1.2 mm. long. Anthers 3 on a short central column. Female flowers few, subsessile. Sepals same as in the male flower. Disk a lacerate cup. Ovary 3celled, styles connate at the base, irregularly twice 2-fid with acute lobes. Fruits 1.3-1.6 cm. fleshy, globose, with 6 obscure vertical furrows, pale yellow, of three 2-seeded crustaceous cocci. Seeds 6, 3-gonous.



Phenolic compounds	Gallic acid, Methyl gallate , Ellagic acid, trigallayl glucose
Amino acids	Glutamic acid , Proline, Aspartic acid ,Alanine,Cysteine,Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic acid
Flavonoids	Quercetin,kaempferol
Organic acids	Citric acid

DISCUSSION

Since ages, plants have remained important sources of medicines in our country, which is evidenced through their uses in traditional systems of medicine i.e. Ayurveda, Siddha, Unani, Homeopathy and Chinese. Rigveda (4500-1600 B.C) presents earliest documentation about the usage of plants remedies where Aushadhi Sukta includes a good number of plants for various ailments. Realizing the importance of medicinal plants as a natural source of newer medicine, now the world is moving towards the plant based medicine for phytomedicines that repair and strengthens bodily system and help to destroy offending pathogens without toxic side effect. Owing to various side effect of allopathic/synthetic medicine, plant based medicines are gaining popularity in world market as whole.

In this article, the properties and medicinal uses of Amalaki (*Emblica officinalis* Gaertn.) have been explored as the plant is used since very ancient time to cure the diseases. The plants and its different part are used in the form of different formulations like Kwatha (decocotion),

Kalka (paste), Churna (powder), Peya, Yavagu, Leha, Ghrita, Basti etc. as mention in Brihatrayi. It is used to cure many diseases like Kasa, Swasa, Rakta pitta, Netraroga, Daha, Agnimandhya, Hridayaroga, Mutrakrichha, Prameha, JirnaJavra, VishmaJavra, etc. which are proved by animal experimental studies done by different scholars mentioned in the article. Approximately, all the medicines used are proven by the animal experimentation and obtained evidences. The therapeutic uses of plant showsignificant effect on multi-organ system without any adverse effects. Thus, the plant and its various formulations can be used to cure the mentioned diseases, without any hazardous effect on health. However, there is need of future researches for tremendous work of herbal drug to make their use efficient and effective.

CONCLUSION

Amalaki is one of the medicinal plantswhich is quoted since Vedic period repetitively with very high therapeutic value. The present review of Amalaki from Brihatrayi (i.e. Charaka Samhita, Susruta Samhita, Astanga Hridayay) can be useful



to know about the different formations and indication of it, in which every part of this plant has been used. In this way, we can use Amalaki to cure different ailments. In this regard, future studies are needed to carry out to explore other useful aspect of this for its therapeutic potential in preventing and curing the diseases.



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