



## Review Article

### CLINICAL EFFICACY OF VRAHAT DADIMASHTAK CHOORNA: A CRITICAL REVIEW

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#### ABSTRACT

According to *Ayurvedic* literature, the potency and efficacy (*Saviryata awadhi*) of *Ayurvedic* classical preparations depend upon quality of each drug (having *Rasa panchak*), *desh* (region), *Kal* (time), *Ritu* (season), their preparation method and route of administration. But now a day, in modern science got after research these concepts molded and depend on chemical composition of each drug or preparation. Here we describe the claims of *Vrahat dadimashtak choorna* in various diseases especially in Gastro-intestinal ailments. As per *Acharya Sharangdhar*, *Vrahat dadimashtak choorna* is useful for the treatment of following disorders:-*Atisaar* (diarrhoea) *Kshaya* (phthisis), *Gulma* (abdominal tumor/abdominal lump), *Grahani* (sprue), *Galagraha* (pain in throat), *Mandagni* (Improper digestion), *Peenus* (rhinitis), *Kas* (cough). The all contents of *Vrahat dadimashtak choorna* have been evaluated according to the research done by various research scholars. The efficacy has been also tested according to the *Rasa*, *Guna*, *Virya*, *Vipaka* described in *Ayurvedic* text. In this research paper we are try to establish the claims of old *Ayurvedic* text on the recent research parameters.

**KEYWORDS:** *Vrahat dadimashtak choorna*, *Atisara*, *Gulma*.

#### INTRODUCTION

*Ayurveda* has a vast treasure of drugs for the treatment of gastrointestinal disorders mentioned in our renowned treaties. *Vrahat dadimashtak choorna* is a very common *Ayurvedic* medicine for the management of gastrointestinal disorder and metabolic disorder. As *Acharya sharangdhar* stated *Vrahat dadimashtak choorna* is useful for the treatment of following disorders:

- *Atisaar* (Diarrhoea)
- *Kshaya* (phthisis)
- *Gulma* (Abdominal tumor / Abdominal lump)
- *Grahani* (Sprue)
- *Galagraha* (Pain in throat)
- *Mandagni* (Improper digestion)
- *Peenus* (Rhinitis)
- *Kas* (Cough)<sup>[1]</sup>

*Ayurvedic* properties, Chemical composition and Medicinal Properties of ingredient drugs of *Vrahat Dadimashtak choorna* are followed (Table 1-3).

#### indications of *Vrahat dadimastak choorna*

**1. *Atisaar* (Diarrhoea):** The constituents of *Vrahat dadimashtak choorna* like *Sunthi*, *Jeerak*, *Dhaniya* and *Dadimbeej* having *Deepan* and *Grahi* properties, so it is quite effective in different types of *Atisara*. Essential oil from cardamom was evaluated to have some inhibition for each of the test strains that included: *Listeria monocytogenes*, *Staphylococcus*

*aureus*, *Escherichia coli*, *Yersinia enterocolitica*, *Pseudomonas aeruginosa*, *Lactobacillus plantarum*, *Aspergillus niger*, *Geotrichum*, and *Rhodotorula*.<sup>[2]</sup> Volatile oils from *Cinnamomum zeylanicum* (CZ) had significant activity against the growth of food poisoning organisms, food spoilage organisms and organisms of faecal origin.<sup>[3]</sup> CZ- CZ leaves and bark was able to inhibit the propagation of human rotavirus 32.4% and 33.9% respectively.<sup>[4]</sup> *Patra* (leaf) Antidiarrhoeal activity of Ethanol extract in mice, Castor oil Induced diarrhea<sup>[5]</sup>. Ginger inhibits the growth of *Escherichia coli*, *Proteus* species, *Staphylococci*, *Streptococci* and *Salmonella*.<sup>[6]</sup>

**2. *Kshaya* (phthisis):** The *Ela*, *Tvak*, *Tungshir*, *Pippali* and *Jeeraka* of this *Choorna* having *Deepana*, *Rochana* and *Kshayahara* properties. The immunomodulatory effect of *Z. officinale* essential oils was reported in mice. In the study, essential oil of *Z. officinale* was administered to mice (once a day, orally, for a week) previously immunized with sheep red blood cells. *Z.officinale* essential oil showed the improvement in humoral immune response in immune suppressed mice<sup>[7]</sup>. Immunomodulatory effect of cumin seed, in a recent study, oral treatment with cumin showed immunomodulatory properties in normal and immune suppressed animals via modulation of T lymphocytes expression in a dose dependent manner. It stimulated the T cells' (CD4 and CD8) and Th1 cytokines' expression in normal and cyclosporine induced immune suppressed mice- In restraint stress induced immune suppressed

animals; the active compound of cumin countered the depleted T lymphocytes, decreased the elevated corticosterone levels and size of adrenal glands and increased the weight of thymus and spleen.<sup>[8]</sup> Water (MIC-100 µg/ml) and ethanolic (MIC-200 µg/ml) extracts of CZ was observed to have activity against *M. tuberculosis*.<sup>[9]</sup>

3. **Gulma (Abdominal tumor/Abdominal lump):** *Vrahat dadimashtak choorna* have *Jeerak*, *Pippali*, *Pippalimool*, *Yawani* showing *Deepana* and *Gulmahaar* properties. Due to the presence of calcium and fiber in cinnamon which can help to remove bile, which prevents damage to colon cells, thus prevents colon cancer<sup>[10]</sup>. Antiaflatoxic Activity of *C. tamala* of leaf oil Aflatoxin B1 secretion by the toxigenic strain (SK 3NSt) of *A. flavus*<sup>[11]</sup>
4. **Grahani (Spru /Mal-absorption):** This *Choorn* has *Nagakesar*, *Sunthi*, and *jeeraka* having *Deepana*, *Grahi* and *Grahnidoshahara* properties. *C. tamala* shows Gastroprotective activity in Experimental gastric ulcers in rats<sup>[12]</sup>. Gastro protective Activity of *Trachyspermum ammi* fruit showed antiulcer activity by using different ulcer models. Animals pre-treated with ethanolic extract showed significant decrease in ulcer index and percentage ulcer protection in all models. The results suggests that the extract showed significant protection ( $p < 0.001$ ) by reducing ulcerative lesions when compared with control group of animals<sup>[13]</sup>. *Trachyspermum ammi*, affect on the food transit time in experimental rats *in vivo*, the addition of *Trachyspermum ammi* to the diet reduced food transit time and also enhanced the activity of digestive enzymes and/or caused a higher secretion of bile acids (Digestive stimulant actions)<sup>[14]</sup>.
5. **Galagraha (Pain in throat):** Its content like *Sunthi*, *Maricha*, *Dhanyak*, *Jeera* and *Yawani* having *Shoolprashaman* (pain killer) and *Sheetahara* properties found effective in *Galagraha*. Piperine the active principle of *Pippali* and *Maricha* cures cold cough, dyspnoea, diseases of the throat and Improves breathing, reduce cough (Stanley, 2001). Small pieces of cinnamon can be chewed or gargled with cinnamon water which serves as a good mouth freshener and anti-inflammatory effect<sup>[15]</sup>.
6. **Mandagni (Improper digestion):** As per Ayurvedic text, Its *Dadimbeej*, *Misri*, *Dhaniya*, *Sunthi*, *Tvak*, *Patra*, *Ela* etc., having *Deepan*, *Pachana* and *Agnivardhaka guna* so it is quite effective in treating *Mandagni*. Black Pepper Improves Digestion and Promotes Intestinal health, It has been found that piperine can increase absorption of selenium, vitamin B, beta-carotene and curcumin. It can improve digestion and stimulate the secretion from

the taste buds and taste bud stimulation is a feedback loop for digestion process. It sends impulses to the stomach to increase digestive juices secretion (eg. Hydrochloric acid). These juices break down the protein in the stomach, improving ability for further digestion in the duodenum<sup>[16]</sup>. Cinnamon is very effective for indigestion, nausea, vomiting, upset stomach, diarrhea and flatulence. It is very helpful in removing gas from the stomach and intestines. It also removes acidity, diarrhea and morning sickness. It is often referred to as a digestive tonic<sup>[17]</sup>. Some active components of ginger are reported to stimulate digestion, absorption, relieve constipation and flatulence by increasing muscular activity in the digestive tract<sup>[18]</sup>. Ginger has been traditionally exploited for having broad range of antimicrobial activity against both gram positive and gram negative bacteria and fungi. In vitro studies have shown that active constituents of ginger inhibit multiplication of colon bacteria, these bacteria ferment undigested carbohydrates causing flatulence, this can be counteracted with ginger<sup>[19]</sup>. *Svetajiraka* has reported to be a very good stomachic appetizer and carminative<sup>[20]</sup>.

7. **Peenus (Rhinitis) And Kas (Cough):** *Pippali*, *Maricha*, *Tvak*, *tungshir* and *Tamalpatra* having *Kasa*, *Peenus hara* properties so this *Choorn* is also effective in cough and rhinitis. Cinnamon is very useful home remedy for common or severe colds. It will cure most chronic cough, cold and clear the sinuses<sup>[21]</sup>. Piperine the Cures cold cough, dyspnoea, diseases of the throat and Improves breathing, reduce cough (Stanley, 2001). Ginger is found effective to cure many illnesses such as allergic reactions, acute and chronic cough, common cold, fever, allergic rhinitis, sinusitis, acute chronic bronchitis, respiratory troubles<sup>[22]</sup>. *Yawani* (Bishop's weed) the antitussive effects of aerosols of two different concentrations of aqueous and macerated extracts and *carvacrol*, codeine, and saline were tested by counting the number of coughs produced. The results showed significant reduction of cough number obtained in the presence of both concentrations of aqueous and macerated extracts and codeine ( $p < 0.001$  for extracts and  $p < 0.01$  for codeine)<sup>[23]</sup>.

## CONCLUSION

By this all review work, It is concluded that *Vrahat Dadimashtak Choorna* is very good drug to treat all the above stated ailments of gastro-intestinal disorders. And now, we are now able to justify the claims of old *Ayurvedic* text on the modern research parameters.

**Table 1: Ayurvedic properties of ingredient drugs of Vrahat dadimashtak choorna [24]**

S.No.	Ingredient	Properties	Part used	Qty (%)
1.	Dadimbeeja (Pomgranate) ( <i>Punica granatum</i> )	<b>Rasa-Madhura, Kashaya, Amla; Guna-Laghu, Snigdha; Virya-Anushna; Vipaka- Madhura, Amla; Karma-Rochana, Kandughana, Krimghana, Sangrahi, Kanthaya; Dosha Prabhava- Kapha-Vata har</b>	Seed	33%
2.	Misri (crystalline sugar)	<b>Rasa-Madhur; Guna-Sheet, Sar, Laghu; Virya-Sheet; Vipaka-Madhura; Karma-Ruchya, Dahnut, Moorchchahar, Chhardighna, Jwaraghna; Dosha Prabhava-Vata Pitta har</b> [25]	-----	33%
3.	Pippali (Long peeper) <i>Piper longum</i>	<b>Rasa-Katu; Guna-Laghu, Snigdha, Tikshana; Virya-Anushna; Vipaka-Madhura; Karma-Aanahaghna, Vrishya Dipaniya, Shoolprashamniya, Pachaniya, Jwarahara; Dosha Prabhava-Kapha-Vata har</b>	Fruits	4%
4.	Pippalimula (long peeper root)	<b>Rasa-Katu, Tikta; Guna-Laghu, Snigdha, Tikshana; Virya-Ushna; Vipaka-Katu; Karma-Aanahaghna, Vrishya, Dipaniya, Shoolprashamniya, Pachaniya, Jwarahara; Dosha Prabhava-Kapha-Vata har</b>	Roots	4%
5.	Yawani (Bishop's weed) ( <i>Trachyspermum ammi</i> )	<b>Rasa-Katu Tikta; Guna-Laghu, Ruksha, Tikshana; Virya-Ushna; Vipaka-Katu; Karma-Rochan, Dipan, Jantughna, Anuloman, Vednasthapan; Dosha Prabhava-Vata Kapha Shamak</b>	Seeds	4%
6.	Maricha (Black peeper) ( <i>Piper nigrum</i> )	<b>Rasa-Katu; Guna-Laghu, Tikshana; Virya-Ushna; Vipaka-Katu; Karma-Chakshushya, Dipaniya, Shoolprashamniya, Krimghana; Dosha Prabhava-Kapha-Vata har</b>	Fruits	4%
7.	Dhanyaka (Coriander) ( <i>Coriandrum sativum</i> )	<b>Rasa-Kashaya; Guna-Laghu, Ushana, Ruksha; Virya-Ushna; Vipaka-Madhura; Karma-Dipaniya, Pachaniya, Vatanulomaka, Mutral; Dosha Prabhava-Tridosha shamaka</b>	Fruits	4%
8.	Jiraka (Cumin seed) ( <i>Cuminum cyminum</i> )	<b>Rasa-Katu; Guna-Laghu, Ruksha; Virya-Ushna; Vipaka-Katu; Karma-Rochan, Dipana, Vatanulomaka Vednasthapan, Raktashodhaka; Dosha Prabhava-Kapha-Vata har</b>	Seeds	4%
9.	Sonth (Dry zinger) ( <i>Zingiber officinale</i> )	<b>Rasa-Katu; Guna-Laghu, Snigdha; Virya-Ushna; Vipaka-Madhur; Karma- Rochana, Dipan, Shoolprashaman, Raktashodhak, Aampachan; Dosha Prabhava-Vata-Kapha Shamak</b>	Rhizome	4%
10.	Tugakshiri (Bamboo manna) ( <i>Bambusa arundinacea</i> )	<b>Rasa-Madhura, Kashaya; Guna-Laghu, Ruksha, Tikshana; Virya-Shita; Vipaka-Madhur; Karma- Varnya, Kusthghna, Raktasthambhana, Trishnaanigraha; Dosha Prabhava-Kapha-pitta har</b>	Latex	1%
11.	Tvak ( <i>Cinnamomum zeylanicum</i> )	<b>Rasa-KatuTikta; Guna-Laghu, Tikshana, Ruksha; Virya-Ushna; Vipaka-Katu; Karma- Rochana, Kandughana, Krimghana, Sangrahi, Kanthaya; Dosha Prabhava-Kapha-Vata har</b>	Barks	0.5%
12.	Ela (Cardamom) ( <i>Elettaria cardamomum</i> )	<b>Rasa-Madhura Katu; Guna-Laghu, Ruksha; Virya-Shita; Vipaka-Madhura; Karma-Rochana, Dipana, Krimghana; Dosha Prbhava- Tridosh har</b>	Fruits	0.5%
13.	Patra ( <i>Cinnamomum tamala</i> )	<b>Rasa-Madhura; Guna-Ushna, Pichchhila, Laghu; Virya-Ushna; Vipaka-Katu; Karma-Arsoghna, Hrullasa, Rochan, Peenusghna; Dosha Prbhava- Kaph vata har</b> [26]	Leaves	0.5%
14.	Nagakesar (Cobra's saffron) ( <i>Mesua ferra</i> )	<b>Rasa-Kashaya, Tikta; Guna-Laghu, Ruksha; Virya-Anushana; Vipaka-Katu; Karma- Stambhana, Krimghana; Dosha Prabhava-Vata-Pitta har</b>	Seeds	0.5%

**Table 2: Chemical composition of each drug of Vrahat Dadimashtak Choorna** [27]

S.N.	Drug	Chemical Composition
1	<i>Dadimbeeja</i> (Pomgranate) ( <i>Punica granatum</i> )	punicic acid [28]
2	<i>Misri</i>	crystalline sugar
3	<i>Pippali</i> (Long peeper) <i>Piper longum</i>	piperine, iperonaline, piperettine, asarinine, pellitorine, piperundecalidine, piperlongumine [29]
4	<i>Pippalimula</i> (long peeper root)	piperine, iperonaline, piperettine, asarinine, pellitorine, piperundecalidine, piperlongumine
5	<i>Yawani</i> (Bishop's weed) ( <i>Trachyspermum ammi</i> )	carbohydrates, tannins, glycosides, saponins, flavone and nicotinic acid [30]
6	<i>Maricha</i> (Black peeper) ( <i>Piper nigrum</i> )	Piperine, lauratic acid, palmitic acid, ascorbic acid [31]
7	<i>Dhanyaka</i> (Coriander) ( <i>Coriandrum sativum</i> )	apigenin, luteolin, diosmin, dihydroquercetin, catechin, chrysoeriol, dicoumarin, 4-hydroxycoumarin (Oganeyan et al., 2007)
8	<i>Jiraka</i> (Cumin seed) ( <i>Cuminum cyminum</i> )	cuminaldehyde, limonene, $\alpha$ and $\beta$ pinene, cineole, cymene, $\alpha$ and $\gamma$ terpinene, safranal and linalool [32]
9	<i>Sonth</i> (Dry zinger) ( <i>Zingiber officinale</i> )	gingerols, shogaols, paradols and zingerone zingiberene, curcumene, farnesene [33]
10	<i>Tugakshiri</i> ( <i>Bambusa arundinacea</i> )	Oxalic acid, reducing sugar, resins, waxes, HCN, benzoic acid (Ghosh et al., 1938)
11	<i>Tvak</i> ( <i>Cinnamomum zeylanicum</i> )	Cinnamaldehyde, trans-cinnamaldehyde, eugenol, linalool [34]
12	<i>Ela</i> (Cardamom) ( <i>Elettaria cardamomum</i> )	protocatechualdehyde, protocatechuic acid, alpha-terpinyl acetate, linalyl acetate, limonene, linalool, limonene [35]
13	<i>Patra</i> ( <i>Cinnamomum tamala</i> )	Furanosquiterpenoids, Furanogermenone, $\beta$ -caryophyllene, sabinene, curcumenol [36]
14	<i>Nagakesar</i> (Cobra's saffron) ( <i>Mesua ferra</i> )	Mesuarin, Mesuein, Ferrxanthone (Walia, S., et.al, 1984)

**Table 3: Medicinal Properties of Each Constituents of Vrahat Dadimashtak Choorna** [37]

S.N.	Drugs	Charak	Susruta	P.V. Sharma	Uses in Nighantus
1.	<i>Dadimbeeja</i>	<i>Hridya Chhardinigrha</i>	<i>Parushakadi gana</i>	<i>Rochan</i>	<i>Grahi, Ruchya, Deepana</i>
2.	<i>Misri</i>				<i>Ruchya,</i>
3.	<i>Pippali/ Pippalimula</i>	<i>Kasahar, Dipniya, Traptighna</i>	<i>Urdhwabhaghar, Pipplyadigana</i>	<i>Kasahar</i>	<i>Swas, Kasa, Agnivardhaka, Gulmaghna, Kshyapahama</i>
4.	<i>Yawani</i>	<i>Sheetprashamana</i>	--	<i>Shoolprashamana</i>	<i>Gulmaghna</i>
5.	<i>Maricha</i>	<i>Dipniya, Shoolprashamana Kramighna, Shirovirechan</i>	<i>Pipplyadigana Tryausna</i>	<i>Deepan</i>	<i>Deepana, Sarvakashara</i>
6.	<i>Dhanyaka</i>	<i>Trashnanigrha Sheetprashamana</i>	<i>Guduchyadigana</i>	<i>Trashnani grha</i>	<i>Swasakashara, Rochana Grahi</i>
7.	<i>Jiraka</i>	<i>Shoolprashamana Shirovirechan</i>	<i>Pipplyadigana</i>	<i>Deepan</i>	<i>Gulma, Atisaar, Grahani, Kshaya</i>
8.	<i>Sonth</i>	<i>Traptighna, Arsoghna, Dipniya, Shoolprashamana Trashnanigrha</i>	<i>Pipplyadigana Tryausna</i>	<i>Traptighna</i>	<i>Atisaar, Agnivardhaka, Grahnidosh</i>
9.	<i>Tugakshiri</i>	---	---	---	<i>Kasa, Kshaya</i>
10.	<i>Tvak</i>	---	<i>Eladigana</i>	<i>Chhedana</i>	<i>Swasakashara, Kshaya, Peenus, Aruchi, Hrullasa</i>



11.	<i>Ela</i>	<i>Shwashar, Angamarda Prashamana, Shirovirechan</i>	<i>Eladigana</i>	<i>Dahaprashamana</i>	<i>Swasakashara, Kshaya, Rochana, Deepana</i>
12.	<i>Patra</i>	---	<i>Eladigana</i>	<i>Chhedana</i>	<i>Peenus, Aruchi, Hrullasa</i>
13.	<i>Nagakessara</i>		<i>Eladigana Priyangawadigana Anjanadigana</i>	<i>Raktastambhana</i>	<i>Atisaara, Agnivaradhaka, Grahanivikara</i>

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