



REVIEW ARTICLE

Use of Dadima (*Punica granatum* L.) in Ahara Kalpana (dietetic preparations): A comprehensive review on its preventive and therapeutic profile from Ayurvedic literature.

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ABSTRACT:

Background: Fruit have been a part of the human diet since the earliest time. *Dadima* (*Punica granatum* L.) of family *Lythraceae*, is one among the fruits described under *Phala Varga* (group of fruits), a classification under *Ahara Varga* (group of dietetic articles) of *Charaka Samhita* and has been highlighted for its wide range of use as an *Ahara* (diet), both preventive and curative in different diseased conditions. **Aim:** To have a comprehensive review on *Dadima* or its parts as an ingredient in various *Ahara Kalpana* (dietetic preparations) containing from available classical texts of Ayurveda. **Results:** *Dadima* as an ingredient being included in 634 formulations. Among them, 102 are uses as *Ahara Kalpana* indicated for its internal uses and 1 for external use. There are 39 formulations where *Dadima* is used as *Bhavana Dravya* during its preparation. *Dadima* is also recommended as an *anupana* for 44 formulations being indicated for various diseases. **Conclusion:** *Dadima* as a fruit, both in preventive and therapeutic, has wide range of clinical applications. It found to be an ingredient in 103 *Ahara Kalpana* being indicated in 31 different disease conditions. It is also used as an *anupana* with other drugs for many diseases.

Keywords: *Ahara*, *Anupana*, *Dadima*, Diet, *Pathya*, *Pomegranate*

INTRODUCTION:

Fruit have been a part of the human diet since the earliest time. Fruits like *Kharjura* (*Phoenix dactylifera*), *Narikelam* (*Cocos nucifera*), *Dadima* (*Punica granatum*), *Kadali* (*Musa acuminata*) and *Nimbuka* (*Citrus acida*) are reported for their use during the Indus valley civilization at Harappa and Mohenjo-Daro.¹ *Ayurveda* designate *Ahara* (diet) one among the three pillars of life considering its important

role for the maintenance of health and the best sustainer of life.² *Ahara* (diet) provides not only essential nutrients needed for life but also other bioactive compounds for health promotion and disease prevention. *Ahara* is considered one among the *Tri-upastambas* (three basic elements of life). Among them, it is mentioned first due to its importance in sustenance of life. Crucial role of *Ahara* in the prevention of chronic diseases has been established through epidemiologic

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www.thehealerjournal.org

DOI: 10.51649/healer.71

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Submitted: 15.06.2021

Received: 17.06.2021

Revised: 19.06.2021

Accepted: 23.06.2021

studies.³ Charaka mentions fruits under the classification of *Phala Varga* (group of fruits), a category under *Ahara Varga* (group of diets), and enlisted different fruits with their properties, actions and indications in different medical conditions.⁴ *Dadima*, along with *Amalaka* and *Draksha*, is ranked first and considered as one of the finest fruits by *Acharya Sushruta*.⁵ *Dadima* (*Punica granatum* L.), of family *Lythraceae* is one of the most common domesticated plant and has been reported for its traditional uses in 14 states of India and 10 countries across the globe for 41 different diseased conditions.⁶ Recently Pomegranate extract has been reported to have potential antiviral effects against severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2).⁷ Ayurvedic scriptures describes the types, nomenclature, pharmacological properties and actions of the plant *Dadima* along with its wide range of use as an *Ahara* (diet) and *Aushadha* (drug). *Dadima* is having *Madhura*, *Amla* and *Kashaya Rasa*, *Madhura Vipaka* and *Snigdha*, *Laghu Guna*, and *Sheeta Veerya* and reported as a single drug or as an ingredient in 530 formulations have been indicated for its use as an *Aushadha* in 80 different diseased conditions. Its multiple uses, as a drug in *Ayurveda*, has also been recently reported by us.⁸ A comprehensive single-hand information regarding use of *Dadima* as an *Ahara*, as depicted in the ancient texts of *Ayurveda*, is still lacking. Hence, an attempt has been made for a meticulous review to create an exclusive database on the *Dadima* as *Ahara* described in the available Ayurvedic pharmacopeias and compendiums

Aim and Objectives: To have a comprehensive review on use of *Dadima* as an *Ahara dravya* from various classical texts of *Ayurveda*.

MATERIALS AND METHODS:

Search Criteria

Information regarding the drug *Dadima* was extracted from available 26 *Rasa Grantha* (compendia related to *Rasa Shastra*), 18 *Chikitsa Grantha* (compendia related to treatment), and 08 *Samhita* (treaties). In this review, information from various treatise and compendia like *Samhita Grantha*: *Charaka Samhita*⁹, *Sushruta Samhita*¹⁰, *Ashtanga Samgraha*¹¹, *Ashtanga Hridaya*¹², *Kashyapa Samhita*¹³, *Bhela Samhita*¹⁴, *Harita Samhita*¹⁵; *Samgraha Grantha*, *Chikitsa grantha* and *Rasa Grantha* like: *Bhava Prakasha*¹⁶, *Vrindamadhava*¹⁷, *Chakradutta*¹⁸, *Gadanigraha*¹⁹, *Vangasena*²⁰, *Sharangdhara Samhita*²¹, *Yogaratanakara*²², *Bhaishajya Ratnavali*²³, *Sahashra Yoga*²⁴, *Kalyanakarakam*²⁵, *Bharata Bhaishajya Ratnakara*²⁶,

*Siddhabhaiṣajya Maṇimala*²⁷, *Vaidya Ratnam*²⁸, *Yoga Chintamani*²⁹, *Vaidya Chintamani*³⁰, *Basavarajiyam*³¹, *Vaidya Rahasya*³², *Anupana Manjari*³³, *Rajamartanda*³⁴, *Rasarnava Nama Rastantrama*³⁵, *Rasendra Chudamani*³⁶, *Rasa Prakasha Sudhakara*³⁷, *Rasa Ratna Samucchaya*³⁸, *Rasa Paddhati*³⁹, *Ananda Kanda*⁴⁰, *Rasa Chintamani*⁴¹, *Rasa Manjari*⁴², *Rasendra Chintamani*⁴³, *Rasendra Sara Sangraha*⁴⁴, *Rasa Kamadhenu*⁴⁵, *Yoga Tarangini*⁴⁶, *Ayurveda Prakasha*⁴⁷, *Brihata Rasa Raja Sundara*⁴⁸, *Rasa Raja Mahodadhi*⁴⁹, *Rasa Jala Nidhi*⁵⁰, *Rasayoga Sagara*⁵¹, *Rasopanishada*⁵², *Rasamrutam*⁵³, *Rasendra Sambhava*⁵⁴, *Abhinava Navajivana*⁵⁵, *Rasa Sanketa Kalika*⁵⁶, *Rasayana Sara*⁵⁷, *Chikitsa Kalika*⁵⁸, *Rasa Chandansu*⁵⁹, *Vaidyaka Chamatkara Chintamani*⁶⁰ has been compiled.

Formulations and dietetic preparations containing *Dadima* or its parts, as an ingredient, were critically studied and recorded in a specially designed information sheet. With an aim to make the presentation short various abbreviations were created for different dosage form such as *Bhakta* (Bh), *Kanji* (Kj), *Ksheerapaka* (Kp), *Leha* (Lh), *Lepa* (Paste) (Lp), *Mantha* (Mn), *Manda* (Md), *Paka* (Jaggery preparation) (Pk), *Peya* (gruel) (Py), *Pinda* (bolus) (Pd), *Raga* (Rg), *Shadava* (Sd), *Sharbata* (Shr), *Sura* (alcoholic preparation) (Su), *Saktu* (Sk), *Takra* (Tk), *Yavagu* (gruel) (Yv) and *Yusha* (gruel) (Ys).

NAMASTE PORTAL⁶¹ was referred for the interpretation of classical Ayurvedic terminologies and their nearest english equivalents and which terms are not available there were referred from standard dictionaries⁶² and AFI⁶³. Internal as well as external and both administrations were categorized according to their *srotasa* of origin and were presented in a tabular form accordingly.⁶⁴

Inclusion criteria:

This review cover-ups the available Ayurvedic texts both in printed and electronic format. If not available in printed format, electronic versions were considered. The available data are systematically presented in precise tabular format with regards to its indications on various disease conditions. The texts where information related to *Dadima* was available were considered as source material.

Exclusion criteria:

Samhita and *Rasagranthas*, which are available in manuscript form were excluded from the present research study. Non-available books were also excluded.

Data analysis:

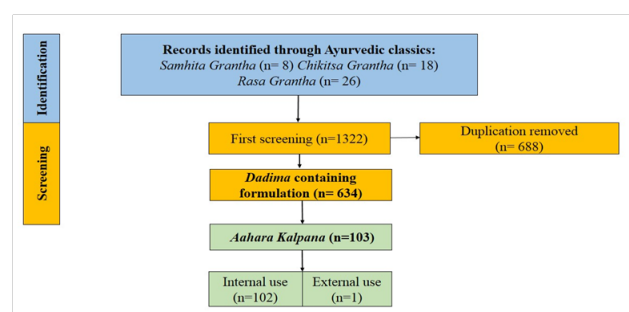
The repetition of a single formulation noted in more than one text was considered as one.

RESULT AND DISCUSSION:

Formulation containing *Dadima* in internal, external, or both administration:

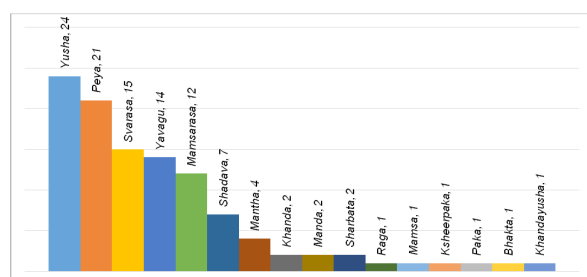
On keen observation, it is noted that in all referred texts, *Dadima* has been used as an ingredient in 1322 formulations. After omitting repeated formulations, 634 formulations were scrutinized, among them 102 *Ahara Kalpana* (dietetic preparations formulations) having internal uses, 1 *Ahara Kalpana* (formulation) having external use. (Fig.1)

Fig. 1: Data collection and screening method.



Among 16 types of *Ahara Kalpana*, maximum dosages form is of *Yusha* (24), *Peya* (21), *Svarasa* (15), *Yavagu* (14), *Mamsarasa* (12), *Shadava* (7), *Mantha* (4), *Khanda* (2), *Manda* (2), *Sharbata* (2), *Raga* (1), *Mamsa* (1), *Ksheerapaka* (1), *Paka* (1), *Bhakta* (1), and *Khandayusha* (1). (Fig. 2)

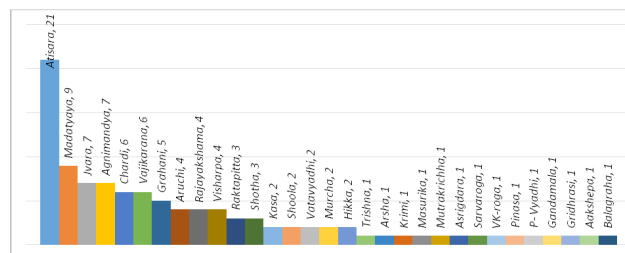
Fig. 2: Types of *Ahara Kalpana*



Dadima as an *Ahara* is found to be used in 31 different diseased conditions among them maximum formulations have been found in *Atisara* (21), *Madatyaya* (9), 7 each in *Jvara*, and *Agnimandya*, 6 each in *Chardi*, *Vajikarana*, *Grahani* (5), 4 each in *Aruchi*, *Rajayakshama*, *Visharpa*, 3 each in *Raktapitta*, *Shotha*, 2 each in *Kasa*, *Shoola*, *Vatavyadhi*, *Murcha*, *Hikka*, and one each in *Trishna*, *Arsha*, *Krimi*, *Masurika*, *Mutrakriccha*, *Asrigadara*, and

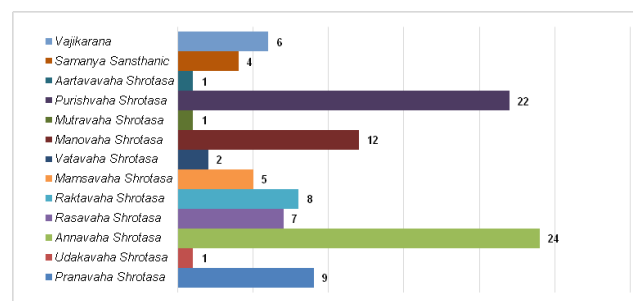
many disease conditions mentioned below in *Srotasa* wise classifications. (Fig. 3)

Fig. 3: Indication of *Ahara Kalpana* of *Dadima* in various disease conditions.



Maximum 24 *Dadima* containing formulations of has been indicated in *Annavaha Srotasa*, 22 in *Purishavaha*, 12 in *Manovaha*, 9 in *Pranavaha*, 8 in *Raktavaha*, 7 in *Rasavaha*, 6 in *Vajikarana*, 5 in *Mamsavaha*, 4 in *Samanaya Sansthanic*, 2 in *Vatavaha*, 1 each in *Udakavaha*, *Artavavaha*, and *Mutravaha Srotasa*. (Fig. 4)

Fig. 4: *Srotasa* wise indications of *Dadima* containing *Ahara Kalpana*.



Formulations containing *Dadima* as an *Ahara* indicated in diseases of various *Srotasa*

1. *Pranavaha Srotasa*:

Formulations containing *Dadima* have been indicated as an *Ahara* in the management of *Hikka* (hiccup), *Kasa* (cough), *Pinasa* (rhinitis), and *Rajayakshama* (tuberculosis) related to *Rasavaha Srotasa*. Maximum four formulations are indicated in *Rajyakshama*, 2 in *Hikka*, 2 in *Kasa*, and 1 in *Pinasa*. *Mamsarasa* (3), *Yusha* (2), and *Yavagu* (2) are maximum dosage forms. (Table-1).

Table 1: *Dadima* as an *Ahara* indicated in *Pranavaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Hikka</i> (hiccup)			
	<i>Prakshepa Ahara Dravya</i> ¹²	-	<i>Phala</i>

	Pippalyadi Yavagu ¹⁹	Yv	Phala
Kasa (cough)			
	Dhanyadi Shadava ¹²	Sd	Phala
	Navanga Yusha ^{17, 19, 20, 24, 26}	Ys	Phala
Pinasa (rhinitis)			
	Aaja Mamsarasa ²³	MsRs	Phala
Rajayakshama (tuberculosis)			
	Dadima Siddha Mamsarasa ^{12, 20}	MsRs	Phala
	Nagaradi Yavagu ⁹	Yv	Phala
	Pippalyadi Mamsarasa ¹⁹	MsRs	Phala
	Shadanga Yusha ^{16, 17}	Ys	Phala

2. Udakavaha Srotasa:

Dadima, in Peya form along with Amalaki, has been indicated in case of Trishna, a disease of Udakavaha Srotasa. (Table-2).

Table 2: Dadima as an Ahara indicated in Udakavaha Srotasa disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Trishna (thirst due to pitta)			
	Dadimaamalaka Peya ²⁰	Py	Phala

3. Annavaha Srotasa:

Formulations containing Dadima have been indicated as an Ahara in the management of Agnimandya (digestive impairment), Aruchi (anorexia), Chardi (emesis), Grahani (disorders of lower GIT), and Krimi (worm infestation) related to Annavaha Srotasa. Maximum six formulations are indicated in Chardi, 5 in Agnimandya, 5 in Grahani, 4 in Aruchi, 2 in Shoola, and 1 in Krimi. Peya (4), Yavagu (4), Yusha (3), Shadava (3), and Kalka (2) are found maximum dosage forms. One formulation of Mamsarasa has been indicated for its external use as Basti (enema) in Agnimandya. (Table-3).

Table 3: Formulations containing Dadima indicated in Annavaha Srotasa disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Ahara Kalpana (internal)			
Agnimandya (digestive impairment)			
	Dhanyadi Shadava ⁹	Sd	Phala
	Dhaanyadi Yusha ¹³	Ys	Phala
	Mridwika Raga ⁹	Rg	Phala
	Pippalyadi Manda ⁹	Md	Phala
	Saktu Yoga ²⁶	Kl	Phala
Aruchi (anorexia)			
	Aparajita Khanda ¹²	Kh	Phala
	Dadima Peya ¹³	Py	Phala
	Draksha Shadava ^{19, 26}	Sd	Phala
	Raga Shadava ¹⁰	Sd	Phala
Chardi (emesis)			
	Dadima Sharbata ¹⁹	Shr	Phala
	Jambvadi Yoga Pana ¹⁵	Py	Phala

	Masura Saktu Yoga ²⁶	Kl	Phala
	Masuradi Mantha ^{20, 21, 49}	Mn	Phala
	Mudagadi Peya ¹³	Py	Phala
	Nimbukadi Sharkara ²⁷	Shr	Phala
Grahani (disorders of lower GIT)			
	Bilvadi Yavagu ¹³	Yv	Phala
	Dadima Siddha Yavagu ⁹	Yv	Phala
	Kapitthadi Yavagu ^{16, 19, 26, 55}	Yv	Phala
	Mamsa Rasa ⁹	MsRs	Phala
	Panchakoladi Yusha ^{13, 20}	Ys	Phala
Krimi (worm infestation)			
	Krimiharini Yavagu ⁵⁵	Yv	Mulatvaka
Shoola (colic pain)			
	Koladi Peya ⁹	Py	Phala
	Kulatthadi Yusha ^{17, 19, 22, 23, 45}	Ys	Phala
Ahara Kalpana (External)			
Agnimandya (digestive impairment)			
	Mamsarasa (Basti) ⁹	MsRs	Phala

4. Rasavaha Srotasa:

Total seven formulations containing Dadima have been indicated as an Ahara in the management of Jvara (fever) related to Rasavaha Srotasa. Yusha (gruel) (4) is found maximum dosage form. (Table-4).

Table 4: Formulations containing Dadima indicated in Rasavaha Srotasa disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Jvara (fever)			
	Dadima Amalaka Yusha ¹⁶	Ys	Phala
	Dadimadi Peya ¹⁹	Py	Phala
	Dadimadi Yusha ^{10, 20}	Ys	Phala
	Drakshadi Saktu ¹⁶	Mn	Phala
	Karavelakkadi Yusha ¹²	Ys	Phala
	Kulatthadi yusha ¹⁷	Ys	Phala
	Mudagadi Yavagu ^{13, 16}	Yv	Phala

5. Raktavaha Srotasa:

Formulations containing Dadima have been indicated as an Ahara in the management of Masurika (smallpox), Raktapitta (bleeding due to pitta), Visharpa (erysipelas) related to Raktavaha Srotasa. Maximum 4 formulations are indicated in Visharpa, 3 in Raktapitta, and 1 in Masurika. Yusha (3), Mamsarasa (2), and Mantha (2) are found maximum dosage form. (Table-5).

Table 5: Formulations containing Dadima indicated in Raktavaha Srotasa disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Ahara Kalpana (Internal)			
Masurika (small pox)			
	Dadima Yusha ²⁰	Ys	Phala
Raktapitta (bleeding due to pitta)			

	<i>Laja tarpana</i> ⁹	Py	<i>Phala</i>
	<i>Madhukharjuradi Mantha</i> ¹²	Mn	<i>Phala</i>
	<i>Paravatadi Mamsarasa</i> ⁹	MsRs	<i>Phala</i>
<i>Visharpa</i> (erysipelas)			
	<i>Jangala Mamsarasa</i> ⁹	MsRs	<i>Phala</i>
	<i>Mulakadi Yusha</i> ¹²	Ys	<i>Phala</i>
	<i>Mungadi Yusha</i> ⁹	Ys	<i>Phala</i>
	<i>Yava Mantha</i> ⁹	Mn	<i>Phala</i>

6. Mamsavaha Srotasa:

Formulations containing *Dadima* have been indicated as an *Ahara* in the management of *Gandamala* (scrofula), *Gridhrasi* (sciatica), and *Shotha* (inflammation) related to *Mamsavaha Srotasa*. Maximum (3) formulations are indicated in *Shotha*, 1 each in *Gandamala* and *Gridhrasi*. *Ghrita* (medicated ghee) (2) is found as the maximum dosage form. (Table-6).

Table 6: Formulations containing *Dadima* indicated in *Mamsavaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Ahara Kalpana (Internal)			
<i>Gandamala</i> (scrofula)			
	<i>Ashtachatvarishatasangya Guggulu</i> ¹⁹	Gu	<i>Phala</i>
<i>Gridhrasi</i> (sciatica)			
	<i>Jeerakadi Churna</i> ¹⁵	Cr	<i>Phala</i>
<i>Shotha</i> (inflammation)			
	<i>Chitrakadya Ghrita</i> ^{17, 18, 19, 20}	Gh	<i>Phala</i>
	<i>Sauvarchaladya Ghrita</i> ₂₆	Gh	<i>Phalat-vaka</i>
	<i>Yavadi Kvatha</i> ¹²	Kv	<i>Phala</i>

7. Vatavaha Srotasa:

A total of two formulations containing *Dadima* as an *Ahara* have been indicated in the management of *Vatavyadhi* (disorder due to *vata*) related to *Vatavaha Srotasa*. *Peya* and *Yavagu* are found dosage forms. (Table-7).

Table 7: Formulations containing *Dadima* indicated in *Vatavaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Ahara Kalpana (Internal)			
<i>Vatavyadhi</i> (disorder due to <i>vata</i>)			
	<i>Hingvadi Peya</i> ²⁰	Py	<i>Phala</i>
	<i>Shatapushpadi Yavagu</i> ²⁵	Yv	<i>Phala</i>

8. Manovaha Srotasa:

Formulations containing *Dadima* have been indicated as an *Ahara* in the management of *Aakshepa* (clonic convulsion), *Madatyaya* (alcohol abuse), and *Murcha* (syncope) related to *Manovaha Srotasa*. Maximum Nine (9) formulations are indicated in *Madatyaya*, 2 in *Murcha*, and 1 in *Aakshepa*. *Yusha* (4), *Mamsarasa* (3), and *Panaka* (2) are found maximum

dosage forms. (Table-8).

Table 8: Formulations containing *Dadima* indicated in *Manovaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
Ahara Kalpana (Internal)			
<i>Aakshepa</i> (clonic convulsion)			
	<i>Jangalamamsarasa</i> ¹³	MsRs	<i>Phala</i>
<i>Madatyaya</i> (alcohol abuse)			
	<i>Aamratakadhi Shadava</i> ¹⁰	Sd	<i>Phala</i>
	<i>Dadima Peya</i> ⁹	Py	<i>Phala</i>
	<i>Dadima Siddha Mamsa</i> ⁹	Ms	<i>Phala</i>
	<i>Dadimamlaka Yusha</i> ^{19, 20}	Ys	<i>Phala</i>
	<i>Jangala Mamsarasa</i> ^{9, 13}	MsRs	<i>Phala</i>
	<i>Kashmaryadi Panaka</i> ^{10, 14}	Pn	<i>Phala</i>
	<i>Mudagadi Yusha</i> ²³	Ys	<i>Phala</i>
	<i>Satinadi Yusha</i> ¹⁷	Ys	<i>Phala</i>
	<i>Usheeradi Panaka</i> ¹³	Pn	<i>Phala</i>
<i>Murcha</i> (syncope)			
	<i>Jangal Mamsarasa</i> ^{10, 20}	MsRs	<i>Phala</i>
	<i>Mudagadi Yusha</i> ¹⁰	Ys	<i>Phala</i>

9. Mutravaha Srotasa:

Total one (1) formulations containing *Dadima* as an *Ahara* in the form of *Yavagu* have been indicated in the management of *Mutrakriccha* (dysuria) related to *Mutravaha Srotasa*. (Table-9).

Table 9: Formulations containing *Dadima* indicated in *Mutravaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Mutrakriccha</i> (dysuria)			
	<i>Dadimadi Yavagu</i> ¹³	Yv	<i>Phala</i>

10. Purishvaha Srotasa:

Formulations containing *Dadima* have been indicated as an *Ahara* in the management of *Atisara* (diarrhea) and *Arsha* (piles). Maximum twenty-one (21) formulations are indicated in *Atisara* and 1 in *Arsha* (piles). *Peya* (9), *Yusha* (6), and *Yavagu* (3) are found maximum dosage form. (Table-10).

Table 10: Formulations containing *Dadima* indicated in *Purishvaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Arsha</i> (piles)			
	<i>Hviberadi Peya</i> ⁹	Py	<i>Phala</i>
<i>Atisara</i> (diarrhea)			
	<i>Ambasthakadi Peya</i> ^{14, 25}	Py	<i>Phala</i>
	<i>Aralavadi Manda</i> ²⁰	Mn	<i>Ankur</i>
	<i>Bilvadi Dhanya Yusha</i> ¹²	Ys	<i>Phala</i>
	<i>Dadima Khadayusha</i> ⁹	Khy	<i>Patra</i>
	<i>Dadima Siddha Bhakta</i> ¹²	Bh	<i>Phala</i>
	<i>Dadimadi Yavagu</i> ^{12, 13}	Yv	<i>Phalatvaka</i>
	<i>Dhatakyadi Peya</i> ^{20, 22, 26}	Py	<i>Phala</i>

	Kapitthadi Peya ^{18, 20, 22, 23, 26}	Py	Phala
	Katavangadi Peya ¹²	Py	Phalatvaka
	Laja Peya ^{9, 12}	Py	Phala
	Mashadi Yusha ¹⁰	Ys	Phala
	Mulakadi Shaka ⁹	Shaka	Phala
	Pathadi Yusha ⁹	Ys	Phala
	Phalayusha ¹³	Ys	Phala
	Prishniparnyadi Peya ⁹	Py	Phala
	Putikaranjadi Yusha ^{20, 22}	Ys	Phalatvaka
	Shalakkadi Yavagu ¹⁰	Yv	Phalatvaka
	Shaliparnyadi Peya ^{9, 12, 15, 17, 18, 20, 23, 24, 26, 55}	Py	Phala
	Shyonakadi Yavagu ¹⁰	Yv	Patra
	Vatsakadi Peya ¹⁵	Py	Phala
	Yavadi Yusha ⁹	Ys	Phala

11. Artavavaha Srotasa:

Total one (1) formulations containing *Dadima* as an *Ahara* in the form of *Yusha* have been indicated in the management of *Asrigadara* (menorrhagia) related to *Artavavaha Srotasa*. (Table-11)

Table 11: Formulations containing *Dadima* indicated in *Artavavaha Srotasa* disorders.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Asrigadara</i> (menorrhagia)			
	Shanadi Yusha ¹³	Ys	Pushpa

12. Samanya Sansathani Vyadhi:

Formulations containing *Dadima* have been indicated as an *Ahara* in the management of *Balagraha* (pediatric disease due to possession), *Sarvaroga* (all disease), *Pittaja Vyadhi* (disease due to *pitta*), and *Vata-kaphaja Vikara* (disease due to *vatakapha*). One (1) formulation each is indicated in *Balagraha*, *Sarvaroga*, *Pitta Vikara*, and *Vatakapha Vikara*. (Table-12).

Table 12: Formulations containing *Dadima* indicated in *Samanya Sansathani Vyadhi*.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Pittaja Vyadhi</i> (disease due to <i>pitta</i>)			
	Nyogradhadi Yusha ¹³	Ys	Phala
<i>Balagraha</i> (pediatric disease due to possession)			
	Ashvakarnadi Ksheerpaka ¹³	Kp	Pushpa
<i>Sarvaroga</i> (all disease)			
	Dadima Paka ⁹	Pk	Phala
<i>Vata-kaphaja Roga</i> (disease due to <i>Vatakapha</i>)			
	Dadimasiddha Yavagu ¹³	Yv	Phala

13. Formulations containing *Dadima* as *Vajikarana*:

A total of six formulations are indicated for their use as *Vajikarana* (aphrodisiac) with *Mamsarasa* (2) and *Shadava*

(2) as the maximum dosage form. (Table-13).

Table 13: Formulations containing *Dadima* used as *Vajikarana*.

S. No.	Formulation / Varga	Dosage form	Part used
<i>Vajikarana</i> (aphrodisiac)			
	Dadimadi Peya ¹⁹	Py	Phala
	Kapitthadi Shadava ¹⁹	Sd	Phala
	Samskruta mamsarasa ¹⁰	MsRs	Phala
	Shreephalakhandana ⁴¹	Kh	Phala
	Tintidikadi Shadava ¹⁹	Sd	Phala
	Vrishyamahisharasa ⁹	MsRs	Phala

Dadima as a *Bhavana Dravya*:

Bhavana (levigation) is one among the *Samsakara* (processing) during pharmaceutical processing, described by *Acharya Charaka* which enhances the therapeutic properties of the drugs as well as the qualities of the drug.⁶⁵ *Dadima* is used as a *Bhavana Dravya* in various formulations indicated for different diseased conditions. Total Thirty-nine (39) formulations have been found in which *Dadima* is used as *Bhavana Dravya*. *Svarasa* (juice) of *Phala* (fruit), *Phalatvaka* (fruit rind), *Patra* (leaf), and *Pushpa* (flower) are used for *Bhavana Samskara*. (Table-14).

Table 14: Formulations containing *Dadima* as a *Bhavana Dravya*.

S. No.	Formulation / Varga	Part used
	Gandhaka Gandha Harana ²⁶	Phala
	Vanga Kalpa ⁵⁰	Phala
<i>Agnimandya</i> (impaired digestion)		
	Aanandodaya Rasa ²³	Phala
<i>Ajeerna</i> (indigestion)		
	Ksharadi Vati ³¹	Phala
	Ramabana Rasa ⁵¹	Phala
<i>Amlapitta</i> (hyperacidity)		
	Chandrakala Rasa ⁵¹	Phala
<i>Arsha</i> (piles)		
	Shiva Rasa ²⁶	Phala
<i>Aruchi</i> (anorexia)		
	Sulochanabhra Rasa ^{23, 26, 44, 50}	Phala
<i>Atisara</i> (diarrhea)		
	Jatiphaladi Vati ^{44, 48}	Patra
	Setu Bandha Gutika ^{24, 51}	Phala
	Sudhasara Rasa ^{38, 48, 50, 51}	Phala
<i>Daha</i> (burning sensation)		
	Laghvananda Rasa ⁴⁸	Phala
	Mahakala Rasa ³²	Phala
<i>Grahani</i> (a disorder of lower GIT)		
	Aanandabhairava Rasa ⁵¹	Phala
	Chitrakadi Gutika ^{9, 16, 17, 18, 19, 20, 21, 22, 23, 26, 30, 46, 60}	Phala
	Laghvananda Rasa ⁴³	Phala
	Paradadi Vati ^{26, 27, 51}	Phala
<i>Gulma</i> (lump)		
	Chitrakadi Churna ³⁰	Phala

	<i>Kankayana Gutika</i> ^{20, 21, 22, 26, 32}	<i>Phala</i>
<i>Jvara</i> (fever)		
	<i>Chandrakala Rasa</i> ²³	<i>Phala</i>
	<i>Navagraha Rasa</i> ⁵¹	<i>Phala</i>
<i>Kasa</i> (cough)		
	<i>Khadiradi Gutika</i> ²²	<i>Phalat-vaka</i>
	<i>Rasa Sindura</i> ⁵¹	<i>Phala</i>
<i>Mutrakrichha</i> (dysuria)		
	<i>Chandrakala Rasa</i> ^{22, 23, 26, 30, 31, 38, 41, 46, 48, 53, 59}	<i>Phala</i>
<i>Pandu</i> (anemia)		
	<i>Aanandodaya Rasa</i> ^{26, 42, 50, 51, 59}	<i>Phala</i>
<i>Pittaja Vyadhi</i> (disease due to pitta)		
	<i>Leelavilasa Rasa</i> ⁵¹	<i>Phala</i>
	<i>Pittagnivarida Rasa</i> ⁵¹	<i>Phala</i>
<i>Asrigadara</i> (menorrhagia)		
	<i>Pradarantaka Lauha</i> ⁵¹	<i>Phala</i>
<i>Prameha</i> (diabetes mellitus)		
	<i>Vanga Rasayana</i> ²⁶	<i>Phala</i>
<i>Raktapitta</i> (bleeding disorder)		
	<i>Chandrakala Rasa</i> ^{50, 59}	<i>Phala</i>
<i>Rasayana</i> (rejuvenation)		
	<i>Lauha Rasayana</i> ^{45, 48, 51}	<i>Phalat-vaka</i>
	<i>Tala Bhasma</i> ⁵¹	<i>Pushpa</i>
<i>Sarva Roga</i> (all disease)		
	<i>Abhra Sindura</i> ⁵¹	<i>Phala</i>
	<i>Gandhaka Taila</i> ⁴⁰	<i>Phala</i>
	<i>Sahashraputi Bhasma</i> ⁴⁸	<i>Phala</i>
<i>Vajikarana</i> (aphrodisiac)		

	<i>Marichadi Vati</i> ²⁷	<i>Phala</i>
<i>Vatavyadhi</i> (disorder due to Vata)		
	<i>Laghvananda Rasa</i> ^{23, 44, 59}	<i>Phala</i>
<i>Visha Chikitsa</i> (poison treatment)		
	<i>Bhimrudra Rasa</i> ^{23, 44, 51, 59}	<i>Phala</i>
<i>Visuchika</i> (acute gastroenteritis)		
	<i>Triphaladi Vati</i> ²⁹ (<i>Anjana</i>)	<i>Phala</i>

Dadima as an Anupana Dravya:

Anupana (adjuvant) plays a pivotal role in the pharmacokinetic and pharmacodynamics of drug action which reduces the drug dose, has a synergistic effect, and thus increases the therapeutic effectiveness and minimizes the drug toxicity.⁶⁶ On keen observation, it was found that total forty-four (44) formulations have been found in which *Dadima* is indicated to be used as *Anupana Dravya* in 21 disease conditions. This points out the possible synergistic effect like drug-drug interaction and drug-diet interaction of *Dadima*. (Table-15)

Maximum six indication of *Dadima* as an *anupana* found in case of *Pandu* followed by 5 in *Agnimandya*; 4 each in *Arsha*, *Gulma* and *Jvara*; 2 each in *Ajeerna*, *Atisra*, *Kasa*, *Rajayaksjama*, *Udararoga* and one each in *Hikka*, *Kshaya*, *Kushtha*, *Ashrigadara*, *Sarva Roga*, *Sheetapitta*, *Shoola*, *Shvasa*, *Upadamsha*, *Urahadaha*, and *Vajikarana*. (Fig. 5)

Fig. 5: Indication of *Dadima* as an *Anupana* in various disease conditions.

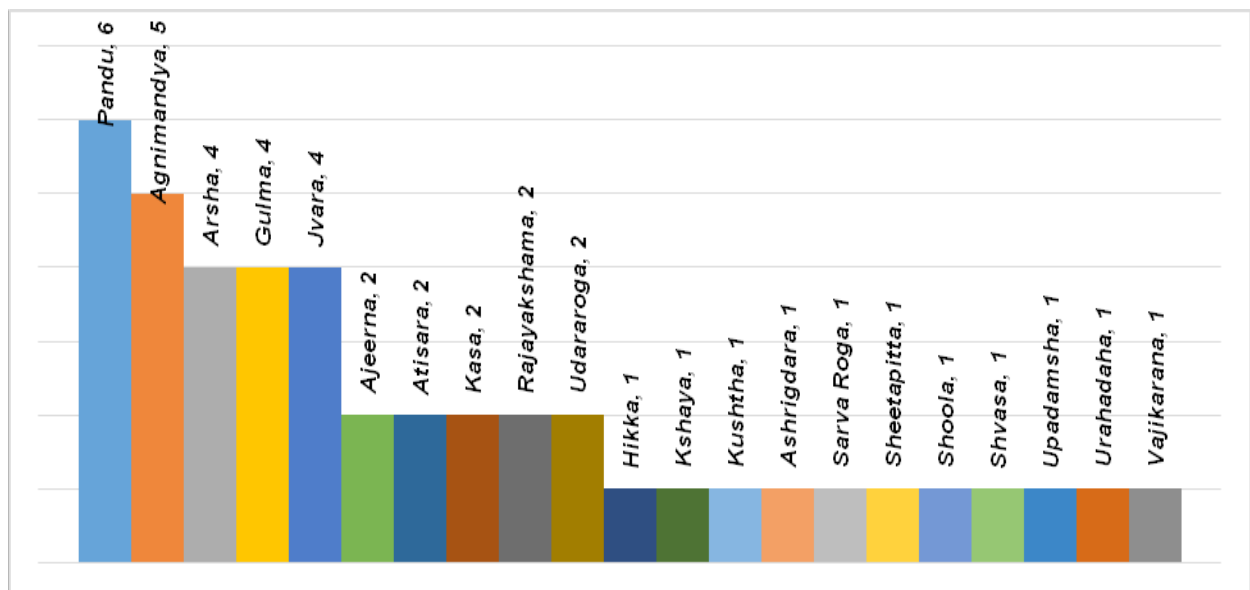


Table 15: Formulations to be consumed with *Dadima* as an *Anupana Dravya*.

S. No.	Formulation / Varga	Part used
Agnimandya (impaired digestion)		
	<i>Agnijananai Vati</i> ^{43, 45}	<i>Phala</i>
	<i>Bhasmamrita Rasa</i> ²⁶	<i>Phala</i>
	<i>Kanchana Parpati</i> ²⁷	<i>Phala</i>
	<i>Mahashankha Vati</i> ⁴⁵	<i>Phala</i>
	<i>Sandeepana Rasa</i> ⁵⁰	<i>Phala</i>
Ajeerna (indigestion)		
	<i>Hviberadi Churna</i> ⁴⁹	<i>Phala</i>
	<i>Saptamimahashankha Vati</i> ⁴⁸	<i>Phala</i>
Arsha (piles)		
	<i>Arshakuthara Rasa</i> ^{26, 38, 45, 50, 51}	<i>Phala</i>
	<i>Mahasamkha Vati</i> ²³	<i>Phala</i>
	<i>Narayana Churna</i> ^{9, 12, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 30, 46, 49}	<i>Phala</i>
	<i>Shankha Vati</i> ^{26, 51}	<i>Phala</i>
Atisara (diarrhea)		
	<i>Atisaraharo Rasa</i> ⁵¹	<i>Phala</i>
	<i>Daruharidradi Churna</i> ²²	<i>Phala</i>
Gulma (lump)		
	<i>Badvanala Rasa</i> ^{26, 44, 45, 48, 51, 59}	<i>Phala</i>
	<i>Hapushadya Churna</i> ^{18, 24, 49}	<i>Phala</i>
	<i>Kanchana Lauha Rasa</i> ⁵¹	<i>Phala</i>
	<i>Lauha Putapaka</i> ⁵⁰	<i>Phala</i>
Hikka (hiccup)		
	<i>Talaka Sindura</i> ^{30, 31}	<i>Phala</i>
Jvara (fever)		
	<i>Kalagnirudro Rasa</i> ⁴⁸	<i>Phala</i>
	<i>Navachandra Rasa</i> ⁴⁸	<i>Phala</i>
	<i>Panchanajvarankusha Rasa</i> ⁴²	<i>Phala</i>
	<i>Panchanana Rasa</i> ^{43, 50}	<i>Phala</i>
Kasa (cough)		
	<i>Talakeshvara Rasa</i> ^{31, 51}	<i>Phala</i>
	<i>Tameshvaro Rasa</i> ⁴⁸	<i>Phala</i>
Kshaya (consumption)		
	<i>Laghushiva Gutika</i> ²⁶	<i>Phala</i>
Kushtha (integumentary disease)		
	<i>Laghushiva Gutika</i> ³⁰	<i>Phala</i>
Pandu (anemia)		
	<i>Kautajadi Guda</i> ²⁴	<i>Phala</i>
	<i>Kautajadi Gutika</i> ¹²	<i>Phala</i>
	<i>Shilagandhaka Vati</i> ⁵¹	<i>Phala</i>
	<i>Shilajatu Vatika</i> ²⁶	<i>Phala</i>
	<i>Shiva Gutika</i> ^{20, 45}	<i>Phala</i>
	<i>Vajra Gutika</i> ^{19, 26, 45, 51}	<i>Phala</i>
Asrigadara (menorrhagia)		
	<i>Shilajatu Vatika</i> ²³	<i>Phala</i>
Rajyakshama (tuberculosis)		
	<i>Dviyoni Rasa</i> ⁵¹	<i>Phala</i>
	<i>Lokanatha Rasa</i> ⁵¹	<i>Phala</i>
Sarvaroga (all disease)		
	<i>Suryachandraprabha Vati</i> ⁵¹	<i>Phala</i>
Sheetapita (urticaria due to Vata)		
	<i>Shleshmapittantaka Rasa</i> ⁵⁴	<i>Phala</i>
Shoola (colic pain)		
	<i>Shooladhvasi Rasa</i> ⁵¹	<i>Phala</i>
Shvasa (asthma)		

	<i>Talisa Churna</i> ⁴⁹	<i>Phala</i>
Udararoga (ascites)		
	<i>Hapushadya Churna</i> ^{12, 30}	<i>Phala</i>
	<i>Udayabhaskara Rasa</i> ⁵¹	<i>Phala</i>
Upadamsha (syphilis)		
	<i>Bhairava Rasa</i> ⁴⁴	<i>Phala</i>
Urahadaha (burning chest)		
	<i>Tamra Bhasma Sevana</i> ⁴⁹	<i>Phala</i>
Vajikarana (aphrodisiac)		
	<i>Kalavidhvansa Rasa</i> ⁵¹	<i>Phala</i>

Dadima as a Pathya- Apathya Ahara:

Ayurveda deals elaborately on *Pathya* (do's) - *Apathya* (don't's), its importance in the prevention of the disease, elimination of *Doshas*, and bringing harmony within the body. *Lolimbaraja*, in *Vaidyaka Jeevana*, endorse this view by saying that when an individual follows a proper diet, he need not required medicine. and when an individual does not follow a proper diet, medicine have no use.⁶⁷ *Acharya Charaka* opined that the *Ahara*, which is beneficial and nutritional to the body and also gives happiness to the mind is known as *Pathya* and the opposite to that is known as *Apathya*.⁶⁸ *Dadima* is used as *Pathya Ahara* in Forty-one different disease conditions and during the treatment course of twelve other medications in six different disease conditions. In the case of *Raktapitta*, during the treatment course of *Khandakadya Lauha*, *Dadima* is indicated as an *Apathya Ahara*. (Table-16).

Table 16: List of diseases and medicines where *Dadima* is recommended as a *pathya* and *apathya Ahara*.

Pathya in disease condition	<i>Agnimandya</i> ^{23, 50, 54} , <i>Ajeerna</i> ^{17, 30, 31} , <i>Amlapitta</i> ^{22, 23, 30, 50, 54} , <i>Apasmara</i> ^{22, 30, 54} , <i>Arsha</i> ²⁰ , <i>Aruchi</i> ^{22, 50, 54} , <i>Atisara</i> ^{12, 19, 22, 23, 30, 50, 54} , <i>Chardi</i> ^{23, 30, 50, 54} , <i>Daha</i> ^{22, 23, 30, 50, 54} , <i>Garbhini- Sutika</i> ^{31, 54} , <i>Grahami</i> ^{22, 23, 30, 54} , <i>Gulma</i> ^{9, 12, 20, 22, 23, 30, 50} , <i>Hikka</i> ⁵⁵ , <i>Hridroga</i> ^{23, 30, 31, 50, 54} , <i>Jalapana Rasayana</i> ⁴⁰ , <i>Jvara</i> ⁵⁷ , <i>Jvaratisara</i> ¹⁶ , <i>Kshaya</i> ⁴⁵ , <i>Loha Parpati</i> ⁵¹ , <i>Madatyaya</i> ^{9, 23, 30, 31, 50} , <i>Madhya Jvara</i> ^{22, 23, 30} , <i>Masurika</i> ^{22, 23, 30, 54} , <i>Murcha</i> ^{18, 23, 30, 46, 50, 54} , <i>Pandu</i> ³¹ , <i>Parada Sevana Kala</i> ^{31, 38, 40, 48} , <i>Pittaja Vyadhi</i> ^{30, 31} , <i>Pradara</i> ⁵⁴ , <i>Raktapitta</i> ^{10, 15, 16, 19, 20, 23, 30, 31, 45, 50, 54} , <i>Sheetapitta</i> , <i>Udarda</i> ²³ , <i>Shiroroga</i> ^{22, 23, 31, 54} , <i>Shookadoshaja</i> ^{23, 54} , <i>Shoola</i> ⁵⁴ , <i>Sutika</i> ²³ , <i>Trishna</i> ^{19, 22, 23, 30, 31, 50} , <i>Unmada</i> ³¹ , <i>Vajikarana</i> ⁵⁴ , <i>Vatavyadhi</i> ^{19, 23, 30, 54} , <i>Visha</i> ^{9, 23, 45} , <i>Visharpa</i> ^{22, 23, 30, 31} , <i>Vrana</i> ^{16, 20, 23, 30}	
		Indication
Pathya during consumption these medicines	<i>Shankar Lauha Sevana</i> ^{16, 26, 43, 50}	<i>Arsha</i>
	<i>Agyachandeshvaro Rasa</i> ⁵¹	<i>Jvara</i>
	<i>Chudamani Rasa</i> ⁴⁵	<i>Jvara</i>
	<i>Mritunjaya Rasa</i> ⁵¹	<i>Jvara</i>
	<i>Navyachandra Rasa</i> ⁵¹	<i>Jvara</i>
	<i>Rasa chudamani Rasa</i> ^{43, 51}	<i>Jvara</i>
	<i>Tamrabhairava Rasa</i> ⁵¹	<i>Jvara</i>
	<i>Trailokyakeerti Rasa</i> ^{45, 51}	<i>Jvara</i>
	<i>Lokanatha Rasa Sevana</i> ^{26, 30, 59}	<i>Daha, Nasagata Raktapitta</i>
	<i>Meghanada Rasa</i> ⁵¹	<i>Sannipata</i>
	<i>Kalagnirudro Rasa</i> ⁵¹	<i>Sannipata Vyadhi</i>
	<i>Shiva Gutika</i> ^{20, 24}	<i>Vatarakta</i>

Apathya during consumption of the medicine	Khandakadya Lauha ^{16, 18, 23, 30, 43, 48, 50}	Raktapitta
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Dadima in the form of various *Ahara Kalpana* (dietetics preparations) indicated maximum in *Atisara* (21), *Madatyaya* (9), *Jvara* (7), *Agnimandya* (7), *Chardi* (6), *Grahani* (5), etc. The extracts of various parts of *Punica granatum* have been researched for its use as alternative or therapeutic treatments (as herbal medicines or dietary supplements). There is no relevant toxicokinetics studies on *Punica granatum*-derived ingredients were found. *Punica granatum* has been found to be orally safe on acute, sub-acute and chronic toxicological studies.⁶⁹ Pomegranate is also found to be safe on its overdose because there is no possibility of side effects.⁷⁰

Various research activity has been carried out which validate the indications mentioned in ayurvedic classics. Details of updated pharmacological and clinical research reported on *P. granatum* are presented in systematic manner in Table 17.

Table 17: Ayurvedic indications, indicated dietetics preparation and reported studies of *P. granatum*.

Ayurvedic indications	Total number of Ahara Kalpana indicated	Reported research activities
Gastrointestinal diseases		
<i>Atisara</i> (diarrhoea)	21	Antidiarrhoeal activity ⁷¹ Gut Microbiota ⁷²
<i>Aruchi</i> (anorexia)	4	
<i>Agnimandya</i> (digestive impairment)	6	
<i>Arsha</i> (piles)	1	
<i>Chardi</i> (emesis)	6	
<i>Grahani</i> (disorders of lower GIT)	5	
Respiratory diseases		
<i>Kasa</i> (cough)	2	Chronic obstructive pulmonary disease (COPD) ⁷³
<i>Hikka</i> (hiccup)	2	
<i>Pinasa</i> (rhinitis)	1	
Neurological Diseases		
<i>Aakshhepa</i> (clonic convulsion)	1	Central Nervous System activity ⁷⁴ Neuroprotective Activity ⁷⁵
<i>Madatyaya</i> (alcoholism)	9	
<i>Murcha</i> (syncope)	2	
Urological Disorder		
<i>Mutrakrichha</i> (dysuria)	1	Nephroprotection ⁷⁶
Inflammatory Diseases		
<i>Vatavyadhi</i> (disorder due to <i>vata</i>)	2	Anti-inflammatory ⁷⁷ Analgesic Activity ⁷⁸
<i>Shotha</i> (inflammation)	3	
<i>Shoola</i> (colic pain)	2	
Gynecological diseases		
<i>Asrigadara</i> (menorrhagia)	1	Estrogenic Activity ⁷⁹

Male reproductive diseases		
<i>Vajikarana</i> (aphrodisiac)	6	Spermprotective activity ⁸⁰
Other diseases		
<i>Gridhrasi</i> (sciatica)	1	Wound Healing Activity ⁸¹
<i>Jvara</i> (fever)	4	Anti-malarial activity ⁸²
<i>Krimi</i> (worm)	1	Anthelmintic ⁸³
<i>Visharpa</i> (erysipelas)	4	Skin Health ⁸⁴
<i>Masurika</i> (small pox)	1	

Yusha is found to be maximum dosage form followed by *Peya* among *Ahara Kalpana* of *Dadima* and maximum *Ahara Kalpana* used in case of *Atisara*. In Ayurvedic classics, *Yusha* and *Peya* are mentioned to possess *Laghu*, *Deepana*, *Pachana guna* and indicated for its use in *Atisara* and *Jvara*.⁸⁵

CONCLUSION:

Dadima finds a wide range of preventive and therapeutic importance being included as an ingredient in 103 formulations, described in classical texts of Ayurveda as *Ahara Kalpana*. Among these maximum (102) are recommended for internal uses and only one for external use. *Dadima* containing *Ahara kalpana* are indicated in 31 different disease conditions, where maximum formulations used in *Atisara* (21). *Yusha* is found to be maximum dosages form (24), among these *Ahara Kalpana*. *Dadima* is also used as *Bhavana Dravya* in preparation of thirty-nine formulations. *Dadima* is recommended to be used as *Anupana Dravya* along with forty-four formulations in 21 disease conditions. *Dadima* is used as *Pathya Ahara* in Forty-one different disease conditions and during the treatment course of twelve medication. *Dadima* is found as an *Apathya* only during the medication of *Khandakadya Lauha* in the case of *Raktapitta*. *Dadima* as an *Ahara Kalpana* (dietetic preparations) finds a wide range of preventive and therapeutic indications. The present review may help clinician for practice and in exploring the drug for research activities.

ACKNOWLEDGEMENTS: Authors are thankful to Director, ITRA, for providing Library and other facility to carry our research work.

CONFLICT OF INTEREST: Author declares that there is no conflict of interest.

SOURCE OF SUPPORT: None

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How to cite this article:

Patel VK, Acharya R, Use of Dadima (*Punica granatum* L.) in Ahara Kalpana (dietetic preparations): A comprehensive review on its preventive and therapeutic profile from Ayurvedic literature, The Healer Journal, 2021;2(2):69-80.