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Dashanga Guggulu a polyherbal formulation for Obesity - A Review

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ABSTRACT

In Ayurvedic pharmaceuticals *Guggulu Kalpa* is very known and unique preparation. Chief component of this preparation is *Guggulu* (an exudate *Commiphera mukul*). It is one of the most important drug used since Vedic period. In *Ayurveda* practice *Guggulu Kalpa* are very popular formulation e.g. *Yograjguggulu*, *Trayodashangguggulu*, *Lakshadiguggulu* etc. In this *Kalpas*, *Dashanga Guggulu* is also an important preparation. It is commonly used in *Medoroga*, *Kaphajrogas* and *Amavata*. Present review explains the pharmacological potential of *Dashang Guggulu* in obesity along with the other pharmacological activities of the parts used of each ingredient in the formulation. This article helps the researcher and practitioner to explore more about this important *Guggul Kalpa*.

Key words: *Dashanga Guggulu*, Hyperlipidemia, *Kapha*, *Medoroga*, *Amavata*.

INTRODUCTION

In *Ayurveda* there are lots of pharmaceutical preparations are mentioned for treatment of obesity. *Dashang Guggulu* is one of the important *Guggulu Kalpa* used for *Medoroga* (obesity).^[1] It is also similar with *Navak Guggulu* mentioned in *Ayurvedic* literature. *Guggulu* is the chief ingredient of all *Guggulu Kalpas*. Some known *Guggulu Kalpas* are *Yograj Guggulu*, *Lakshadi Guggulu*, *Kaishor Guggulu* etc.. *Guggulu* is an exudate obtained in form of oleoresin gum from plant stem of *Commiphera mukul* (Hook ex. Stocks). Engl. belonging to family *Burseraceae*. It is known to have analgesic, anti-

inflammatory and antihyperlipidemic properties.^[2] As per *Bhavprakasha*, *Dashanga Guggulu* act therapeutically on *Kapha* and *Medovikara*. It also works in *Amajvikara* like *Amavata* also.^[3]

Method of preparation of *Dashang Guggulu*

Following ingredients are used for the preparation of *Dashang Guggulu*.^[4]

Ingredients

1. Purified *Guggulu* – 9 part.
2. *Pippali* (frt.) – 1 part.
3. *Marich* (frt.) – 1 part.
4. *Shunthi* (frt.) – 1 part.
5. *Haritaki* (frt.) – 1 part.
6. *Vibhitaki* (frt.) – 1 part.
7. *Amalaki* (frt.) – 1 part.
8. *Nagarmotha* (frt.) – 1 part.
9. *Vayvidang* (frt.) – 1 part.
10. *Chitrakmool* (rt.) – 1 part

Powders of above herbs (number 2 to 10) are added in purified *Guggulu* and this mixture is pounded in mortar and pestle for properly mixing of all ingredients it should be hammered continuously.

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During procedure of hammering small quantity of Ghee should be added for making mixture soft and non-adherent. Continuous hammering is very important for evenly distribution of the all ingredients

as well as reducing particle size to make easily digestible and absorbable. There after, tablets are made from this gum like mixture either by hand or by tablet making machine.

Table 1: Ingredients of the Dashang Guggulu and their pharmacological and therapeutic properties.

No.	Sanskrit Name	Botanical name and Family	Part used	Rasadi Panchaka and Ayurvedic properties	Pharmacological properties
1.	Guggulu purified	B.N.- Commiphora wightii (Arnott) Bhandari Syn.- C. mukul (HK. Ex stocks)Engl. Family- Burseraceae	Oleo gum resin from stem	Rasa- Tikta, Katu Guna- Laghu, Ruksha, Tikshna, Vishad, Sara, Sukshma, Sugandhi (old Guggulu), Snigdha, Pichchhila (fresh guggulu) Virya - Ushana, Vipak - Katu , Prabhava - Tridoshara , Rasayana, Doshagnata - Vatakaphashamak, Rogagnata - Sandhivata, Amavata, Gandamala, Aapachi, Granthi, Medoroga, Vatavyadhi Karma - Shothahara, Vedanasthapana, Vrunashodhan, Kapha Durgandha Nashak, Lekhan, Medohara (old guggulu). ^[5]	Hypolipidemic, ^[6] Antiobesity, ^[7] Cardio-protective, Anti-inflammatory, Anthelmintic, Antiarthritic. ^[8]
2.	Pippali	B.N. - Piper longum Linn. Family - Piperaceae	Fruit, Roots	Rasa - Katu, madhur (fresh piper) Guna - Laghu, Snigdha, Tikshna, Veerya - Anushna sheet, sheet (fresh piper) Vipaka - Madhur, Doshagnata - Kaphavatashamak, Kaphavata Vardhak (fresh piper) Rogagnata - Shotha, Agnimandya, Vibandh, Gulma,	Hepato-protective, ^[10] Antigiardial Antibacterial, Cough suppressor, Antiallergic. ^[11]

				<p><i>Amavata, Kasa, Shwasa, Hikka, Yakshma, Mootravikar, Shukradaurbalya, Rajorodha, Kashtaprasava, Yakrutvrudhi, Krimiroga, Pandu.</i></p> <p>Karma - Dipana, Pachana, Truptighna, Vatanulamaka, Yakruduttejaka, Garbhashay Sankochaka, Vrushya, Kushthaghna, Rasayana.^[9]</p>	
3.	<i>Maricha</i>	<p>B.N. - Piper nigrum Linn.</p> <p>Family - Piperaceae</p>	Fruit	<p>Rasa - Katu,</p> <p>Guna - Laghu, Teekshna, Ruksha,</p> <p>Virya - Ushna,</p> <p>Vipak - Katu,</p> <p>Doshaghnata - Kaphavatashamak,</p> <p>Rogaghnata- Hriddaurbalya, Pratishyaya, Kasa, Swasa, Hikka, Shoola, Adhmana, Agnimandya, Vatavikar, Krimi, Pama, Tarunyapidika, Shothavednayuktavikar, Charmaroga.</p> <p>Karma - Raktokleshak, Lekhan, Nadiuttejaka, Lalasaravajana, Deepana, Pachana, Vatanulomak, Krimihar, Swedajanan.^[12]</p>	Hepato-protective, ^[13] Antifungal and Antimicrobial, Anti-inflammatory and analgesic. ^[14]
4.	<i>Shunthi</i>	<p>B.N. - Zingiber officinale Rose.</p> <p>Family - Zingiberaceae</p>	Fresh rhizome (<i>Ardraka</i>), Dried rhizome (<i>Shunthi</i>).	<p>Rasa - Katu</p> <p>Guna - Laghu, Snigdha (<i>Shunthi</i>), Guru, Ruksha, Teekshna (<i>Ardraka</i>).</p> <p>Virya - Ushna,</p> <p>Vipak - Katu (<i>Ardraka</i>), Madhur (<i>Shunthi</i>),</p> <p>Doshaghnata - Kaphavatashamak,</p> <p>Rogaghnata – Amavata,</p>	Hypo-lipidaemic, ^[16] Hypoglycemic, Antiemetic, Cardiovascular and Antiplatelet. ^[17]

				<p><i>Sandhivata, Vatavyadhi, Aruchi, Chhardi, Agnimandya, Koshtavata, Sheetpitta, Kasa, Shwasa, Hikka, Pratishyay.</i></p> <p>Karma - Shothahara, Vednasthapana, Nadiuttejak, Rochana, Dipan, Pachana, Vatashamak, Triptighna, Vatanulomak, Grahi, Bhedana, Kaphahara, Shwasahara, Vrishya.^[15]</p>	
5.	<i>Haritaki</i>	<p>B.N. – Terminalia chebula Retz.</p> <p>Family – Combretaceae</p>	Fruit	<p>Rasa - Kashaya, Tikta, Madhura, Katu, Amla.</p> <p>Guna - Laghu, Ruksha,</p> <p>Virya - Ushna,</p> <p>Vipaka - Madhura,</p> <p>Prabhava- Tridoshshamak,</p> <p>Doshagnata -Tridoshashamaka specially Vatashamaka,</p> <p>Rogagnata - Vatavyadhi, Shotha - Vednayuktavikara, Netrabhishyanda, Agnimandya, Shoola, Anaha, Gulma, Vibandha, Udararoga, Arsha, Kamala, Yakritpleehavridhi, Krimiroga, Kushtha,</p> <p>Karma - Deepan, Pachana, Yakriduttejaka, Shothahara, Vednasthapana, Hridya, Kaphaghna, Srotaha - Shodhana, Prajasthapan, Garbhashayashothahara, Rasayana.^[18]</p>	Hypolipidemic ^[19] Purgative, Antibacterial. ^[20]
6.	<i>Vibhitak</i>	<p>B.N. - Terminalia bellirica (Gaertn.) Roxb.</p> <p>Family -</p>	Fruit	<p>Rasa - Kashaya,</p> <p>Guna - Ruksha, Laghu.</p> <p>Virya - Ushna,</p> <p>Vipaka - Madhura,</p>	Antitussive and Antiasthmatic, ^[22] Hypolipidemic and Anti-atherosclerosis. ^[23]

		Combretaceae		<p>Doshagnata - Tridoshashamaka specially Kaphashamaka,</p> <p>Rogagnata - Shotha-Vednayuktavikar, Palitya, Pratishyaya, Kasa, Shwasa, Swarabhanga, Arsha, Krimiroga,</p> <p>Karma - Shothahara, Vednasthapana, Krishnikaran, Madak, Deepan, Anulomana, Krimighna, Rechana, Bhedana, Grahi, Vajikaran (seed), Chakshushya.^[21]</p>	
7.	Amalaki	<p>B.N. - Phyllanthus emblica Linn. (syn. Emblica officinalis Gaertn.)</p> <p>Family - Euphorbiaceae.</p>	Fruit, seed, root bark, stem bark, leaf	<p>Rasa - Amla, Madhur, Kashaya, Tikta, Katu.</p> <p>Guna - Guru, Ruksha, Sheeta.</p> <p>Virya - Sheeta,</p> <p>Vipak - Madhura,</p> <p>Doshagnata - Tridoshashamaka specially Pittashamak,</p> <p>Rogagnata - Paittikvikar, Daha, Paittikashirahshool, Netraroga, Khalitya, Palitya, Drushtimandya, Aruchi, Trishna, Agnimandya, Vibandha, Amlapitta, Yakrutvikar, Arsha, Hridroga, Raktapitta, Pradara, Kushtha, Visarpa.</p> <p>Karma - Dahaprashamana, Chakshushya, Keshya, Deepana, Anulomana, Hridya, Shonitasthapana, Kaphaghna, Vrushya, Garbhasthapana, Pramehaghna, Kushthaghna, Jwaraghna, Rasayana.^[24]</p>	Hypolipidemic, ^[25] Anti-atherosclerotic, Antioxident, Anti-inflammatory, Hepato-Protective, Antiulcer, Hypoglycemic. ^[26]
8.	Nagar motha	<p>B.N. - Cyperus rotundus Linn.</p> <p>Family - Cyperaceae</p>	Tuber	<p>Rasa - Tikta, Katu, Kashaya,</p> <p>Guna - Laghu, Ruksha.</p> <p>Virya - Sheeta,</p> <p>Vipak - Katu,</p>	Anti-inflammatory, Anti-pyretic and Analgesic, ^[28] Anti obesity, Antimicrobial - Anthelmintic activity, Estrogenic. ^[29]

				<p>Doshagnata - Kaphapaittikavikar,</p> <p>Rogagnata - Twakavikara, Netraroga, Agnimandya, Ajeerna, Sangrahani, Trishna, Krimiroga, Raktavikar, Kasa, Shwasa, Rajorodha, Sutikaroga, Stanyavikara, Pama.</p> <p>Karma - Shothahara, Twagdoshahara, Lekhana, Stanyashodhana, Stanyajanana, Pachana, Grahi, Trishnanigrahana, Sangrahaka, Garbhashaya Sankochaka, Mutrala.^[27]</p>	
9.	Vayu vidanga	<p>B.N. - Embelia ribs Burm. F.</p> <p>Family - Myrsinaceae</p>	Fruit	<p>Rasa - Katu, Kashaya.</p> <p>Guna - Laghu, Ruksha, Teekshna.</p> <p>Virya - Ushna,</p> <p>Vipak - Katu,</p> <p>Prabhava - Krimighna.</p> <p>Doshagnata - Kaphavatashamaka.</p> <p>Rogagnata - Shiroroga, Apasmara, Agnimandya, Ajeerna, Krimidanta, Chhardi, Udarshool, Adhmana, Vibandha, Arsha, Krimiroga, Jeerna Pratishyay, Gandamala, Mutrakruchchha.</p> <p>Karma - Krimighna, Kushthaghna, Shirovirechana, Nadibalya, Deepana, Pachana, Anulomana, Garbha Nirodhaka, Varnya, Rasayana.^[30]</p>	Anti-fertility, ^[31] Anthelmintic, Anti- spermatogenic, Embryo toxicity and Teratogenicity, Anti- implantation activity. ^[32]
10	Chitraka	<p>B.N. - Plumbago zeylanica Linn.</p> <p>Family - Plumbaginaceae</p>	Root	<p>Rasa - Katu.</p> <p>Guna - Laghu, Ruksha, Teekshna.</p> <p>Virya - Ushna,</p> <p>Vipak - Katu,</p>	Anti- fertility, Anti- tumor and Anticancer activity, ^[34] Hypolipidemic and Anti- atherosclerotic activity. ^[35]

				<p>Doshagnata - Vatakaphashamaka, Pittavardhaka.</p> <p>Rogagnata - Shotha, Shleepada, Shwitra, Amavata, Vatavyadhi, Udarashoola, Arsha, Grahani, Rajorodha, Prasutivikara, Makkalashool.</p> <p>Karma - Lekhana, Visphotajanana, Deepana, Pachana, Krimighana, Shothahara, Raktapittakopaka, Kaphaghna, Garbhashaya Sankochaka, Garbhasravaka.^[33]</p>	
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CONCLUSION

Among all *Guggulu Kalpa*, *Dashanga Guggulu* is one of the important polyherbal formulation which is useful in *Kapha Medaja Vikara*. Therapeutically it is indicated for *Amavata* and *Sthaulya*. Most ingredients have *Katu*, *Tikta*, *Kashaya Rasa* predominantly. *Veerya* of some ingredients are *Ushna* (*Guggulu*, *Maricha*, *Sunthi*, *Haritaki*, *Vibhitaki*, *Vidanga*, *Chitraka*) where as three ingredient has *Sheeta* and *Anushna Sheet* property. Most of the ingredient possess *Katu Vipaka*. Over all properties of this *Guggulu Kalpa* has *Tikta*, *Katu*, *Kashaya Rasa*, *Ushna Veerya* and *Katu Vipaka*. *Dashanga Guggulu* shows *Vatakapha Shamaka* property predominantly. It also shows *Amapachaka* and *Medohara* effect therapeutically. Pharmacological activities of the ingredients of the *Dashanga Guggulu* has shown its use as hyperlipidemic, hypercholesterolemic, inflammatory and atherosclerotic conditions. It also shows antiobesity, antimicrobial, cardioprotective, lypolitic qualities. So this review helps the researcher to explore this formulation for more pharmacological activities of the *Dashanga Guggulu*.

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