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A Potent Medicine Of Ayurveda: *Goghrita*

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ABSTRACT: -

The purpose of this study was to review ancient ayurvedic texts and recent laboratory backed information regarding *goghrita*.

Introduction-*Goghrita* (Clarified butter made from the milk of a cow) is called as *Amritopam* which is best among all types of *ghrita*. It is *yogavahi dravya* which potentiates the actions of other medicines without changing its own properties.

Material and methods- Review of literature was done with the help of ancient Ayurveda books and modern scientific publications and critically analyzed.

Results and discussion- *Goghrita* is having *Madhura Rasa; Guru, Snigdha, Mridu Guna; Madhura Vipaka* and *Sheeta Veerya*. It is having *Chakshusya, Balya, Vṛisya, Jeevaneeya, Medhya, Vishaghna* and *Vatapittashamaka* properties which is indicated in *Jeerna jvara, Kshaya, Visha, Daha, Shotha, Shoola, Unmada, Apasmara* and many other diseases. Chemically, cow ghee is a complex lipid including glycerides and free fatty acids. The physicochemical parameters like specific gravity, moisture content, saponification value etc. help in assessment of quality of *goghrita*, thus help in finding adulteration with others types of fat substances. The chemical composition of *goghrita* revealed presence of triglycerides, free fatty acids, fat soluble vitamins in different proportions, which is crucial for standardization of samples collected from various sources. *Goghrita* facilitates the absorption and assimilation of food and drug substances in the body thus, acting as a potent vehicle or carrier for drug delivery.

Keywords: *Goghrita*, cow ghee, clarified butter, *yogavahi*, vehicle.



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INTRODUCTION

Goghrita (cow ghee) is called as *Amritopam* (the elixir of life). It performs a lot of actions by virtue of its enormous properties. In Indian subcontinent, ghee is used abundantly in cooking. Among all the sources of *ghrita*, the one derived from cow is considered as best. In Ayurveda, *goghrita* is either used as a single drug or as a binder or vehicle for other drugs. Since, it is rich in lipids, easily crosses the blood-brain barrier and used extensively in treatment of psychosomatic disorders along with other drugs as *ghrita kalpana* (medicated ghee). It is considered as best *yogavahi dravya* which potentiates the actions of other medicines without changing its own properties.

AIM AND OBJECTIVE OF STUDY

The present study was aimed on critical review of ancient ayurvedic wisdom and recent laboratory backed scientific information regarding *goghrita* (clarified cow's butter). The objective was to evaluate the *goghrita* sample on various physico-chemical parameters to ascertain its purity and safety for human use.

MATERIAL AND METHODS

Review of literature was done with the help of ancient and present scriptures of Ayurveda, research articles including physicochemical and pharmacological properties, government publications related to diet and nutrition, guidelines issued from government bodies regarding food safety and adulteration with reference to *goghrita*. It was then critically analyzed and findings were reported.

RESULTS AND DISCUSSION

A. *Goghrita* In *Samhita*

1. *Charaka Samhita* (1000 B.C.-400 A.D.)

Goghrita is beneficial for providing nutrition to all the *dhatu* and *ojas* of body. It is considered as best among all types of *ghrita*. It is best in alleviating *vata* *pitta* *dushṭi*. It is having *Chakshusya*, *Balya*, *Vrisya*, *Kanṭhya*, *Jeevaneeya*, *Medhya*, *Vishaghna*, *Kaphakara* and *Vatapittahara* properties. It is indicated in *Jeerna jvara*, *Kshaya*, *Visha*, *Daha*, *Shotha*, *Shoola*, *Unmada*, *Apasmara*, *Mada*, *Murccha* and many other diseases. It pacifies *vata* by *snehana karma*, *pitta* by *sheeta veerya* and *kapha dosha* by *sanskara* with other drugs. It specially pacifies *pitta* by the virtue of its *madhura rasa* and *vipaka*, *sheeta veerya* and *manda guna*.^[1]

2-*Sushruta Samhita* (1000B.C.- 500 A.D.)

Goghrita is *chakshusya*, *balya*, *vata* *pittadosahara* having *madhura vipaka* and *sheeta veerya*.^[2]

3. *Astanga Hridayam* (600 A.D.)

It is *snehottam* and best among *vayasthapana* (anti-ageing) drugs having *sahasraveerya* doing *sahasra karma*, which indicates the high potency and greater utility of *ghrita*.^[3]

B. *Goghrita* In *Nighantu*

1. *Dhanvantari Nighantu* (10th-13thCentury A.D.)

In this *nighantu*, *Goghrita* is described in *Suvarnadi varga* considered as best in *chakshusya* and *balya karma*.^[4]

2. *Madanapala Nighantu* (1374 A.D.)

Madanapala describes *Goghrita* in *Paneeyadi varga*. The properties and actions of *ksheerrottha ghrita*, *purana ghrita* and *kumbha sarpi* is also given here.^[5]

3. *Kaiyadev Nighantu* (1425 A.D.)

In this *nighntu*, the properties and action of *ghrita* in general and *goghrita* in particular are given in *Drava varga- Ghrita varga* similar to previous description.^[6]

4. *Bhavaprakasha Nighantu* (16th Century A.D.)

Bhavmishra especially describes the properties and action of *Gavya ghrita* (cow ghee) in *Ghrita varga*. He calls it *rasayana* (rejuvenator) and better than all other sources of *ghrita*.^[7]

C. *Goghrita* (Clarified Cow's Butter)

Definition- Clarified butter made from the milk of a cow, used in cooking and medicinal preparations.^[8]

Latin Name: *Butyrum depuratum L.*

Synonyms: *Ajya, Havishya, Sarpi*

Rasapanchaka:

Rasa: *Madhura*

Guna : *Guru, Snigdha, Mridu*

Veerya : *Sheeta*

Vipaka : *Madhura*

Prabhava: *Medhya, Vishaghna*

Doshaprabhava : *Vata-pittashamaka*

Actions- *Deepaniya, Snehana, Anulomana, Hridya, Vrishya, Garbhasthapanam, Jvaraghna, Dahaprashamana, Balya, Brihmana, Rasayana, Chakshusya, Yogavahi.*

Therapeutic Uses- *Raktapitta, Parshvashoola, Karshya, Daurbalya, Udavarta, Gulma, Kasa, Garbhapata, Jeerna jvara, Timira, Unmada, Apasmara.*

Important formulations- *Triphala ghrita, Brahmi ghrita, Panchatikta ghrita, Jatyadi ghrita, Eladi ghrita, Changeri ghrita, Somaraji Ghrita.*^[9]

PHYSICOCHEMICAL CHARACTERISTICS

Chemically, ghee is a complex lipid of glycerides (usually mixed), free fatty acids, phospholipids, sterols, sterol esters, fat soluble vitamins, carbonyls, hydrocarbons, carotenoids (only in ghee derived from cow milk), small amounts of charred casein and traces of calcium, phosphorus, iron, etc. Glycerides constitute about 98% of the total material. Out of the remaining constituents, sterols (mostly cholesterol) occur to the extent of about 0.5%. Rate of absorption is 96 %, highest of all oils and fats. [Table 1]^{[10][11][12]}

Table 1: Showing different physico-chemical parameters and their values for evaluation of Goghrita

PHYSICOCHEMICAL PARAMETERS	GOGHRITA
Melting Range	28-44° C
Specific gravity (at 25°C)	1.01995
Moisture, maximum, %, (m/m)	0.5
Milk fat, minimum, %, (m/m)	99.5
Butyro-refractometer Reading at 40°C	40-45
Reichert Meissl Value, minimum	26-29
Polenske Value	2-3
FFA as Oleic Acid, maximum, %	3.0
Saponification value, maximum, %	225
Unsaponifiable matter, maximum, %	1.5
Iodine number	26-38
Baudouin Test	Negative

CHEMICAL COMPOSITION

Cow ghee is rich in triglycerides, saturated fatty acids and fat soluble vitamins.^{[13][14]} [Table2]

Table 2: Showing different categories of Glycerides, Fatty acids, Vitamins and their per cent value

Triglycerides	97-98 %	Butyric acid	4.5-6 %
Diglycerides	0.25-0.4 %	Caproic acid	1-1.36 %
Monoglycerides	0.016 - 0.038 %	Capric acid	1.5-1.8 %
Glyceryl esters	0.011- 0.015 %	Caprylic acid	0.9-1 %
Keto acid glycerides	0.015-0.018 %	Lauric acid	6-7 %
Free fatty acids	0.1-0.44 %	Myristic acid	21-23 %
Phospholipids	0.2-1.0%,	Palmitic acid	19- 19.5 %
Sterols	0.22- 0.41%.	Stearic acid	11-11.5 %
Vitamin A	2500 IU/100g	Arachidic acid	0.5-0.8 %
Vitamin D	8.5 x 10 ⁻⁷ g/100g	Oleic acid	27-27.5 %
Vitamin E	24 x 10 ⁻³ g/100g	Linoleic acid	4-5 %
Vitamin K	1 x 10 ⁻⁴ g/100g	Total Saturated FA	71-75%

PHARMACOLOGICAL PROPERTIES

Butyric acid helps in decreasing inflammation from gastrointestinal tract and is now recommended in some patients with ulcerative colitis. Vitamin A eliminates and neutralizes the free radicals that attack the macular cells, thereby preventing macular degeneration and development of cataracts. Vitamin E and β -carotene are antioxidant which fights against free radicals and promote skin cell growth, strengthens immune system, reduces the risk of certain cancers and heart diseases. Conjugated linolenic acid, a type of omega-6 fatty acids, consumed daily not only maintains the weight by improving lean body mass along with reducing body fat, but also protects from cancer.^[15]

Since active ingredients especially low molecular weight saturated fatty acids are suspended within Ghee, they are easily digested and absorbed. When herbs are mixed with Ghee, their activity is potentiated by many times due to its *yogavahi* (assimilatory) nature. Lipophilic action of Ghee facilitates transportation of necessary elements to a target organ and also within the cells. Digestion, absorption and drug delivery to a target organ system is crucial in obtaining the maximum benefits from any formulation. Thus, *goghrita* is one of the best carriers of the drug molecules.

CONCLUSION

Goghrita (cow ghee) is called as elixir of life owing to its *madhura rasa*, *guru snigdha guna*, *sheeta veerya* and *madhura vipaka* which is having *balya*, *snehana* and *rasayana* actions. It is best among drugs alleviating *vata-pitta dushti*. *Goghrita* is *yogavahi* in nature which delivers the properties and action of substrate herbal drugs and potentiates it further. The physico-chemical parameters of *Goghrita* help in assessing the purity and safety of market sample *Goghrita* is rich in triglycerides, fat

soluble vitamins A, D, E and K and free fatty acids which are essential building blocks of cells and tissues and also provide energy. Anti-inflammatory, anti-oxidant and anti-hyperlipidemic actions of *Goghrita* were reported in previous research studies.

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REFERENCES

1. Yadav JT, editor. *Charaka Samhita* of *Agnivesha*, elaborated by *Charaka & Dridhabala* with *Ayurvedadeepika* commentary by *Chakrapnidatta*. Reprint ed. Varanasi; Chaukhambha Surbharti Prakashan: 2017, *Sutrasthana* 13/14, 41-43, pp. 82,84; 25/38, 40, pp. 130-131; 27/231-233, pp. 166; *Nidanasthana* 1/37-40, pp. 203; *Vimanasthana*, 1/14, pp. 233.
2. Yadav JT, editor. *Sushruta Samhita* of *Sushruta* with the *Nibandhasangraha* commentary of *Dalhanacharya*. Reprint ed. Varanasi; Chaukhambha Surbharti Prakashan: 2017, *Sutrasthana* 45/97, pp. 204.
3. Paradkar HS, editor. *Astangahridayam* of *Vagbhata* with the *Sarvangasundara* commentary of *Arunadatta* and *Ayurvedarasayana* commentary of *Hemadri*. Reprint ed. Varanasi; Chaukhambha Orientalia: 2017, *Sutrasthana* 5/37-39, pp. 73.
4. Ojha JK, Mishra U, editor. *Dhanvantari Nighantu* of *Mahendra Bhogik*. 1st ed. Varanasi; Chaukhambha Surbharti Publication: 2016, *Suvarnadi varga*, 6/134-136, pp. 203.
5. Tripathi HP, editor. *Madanpala Nighantu* of *Madanapala*. 1st ed. Varanasi; Chaukhambha Krishnadas Academy: 2009, *Paneeyadi Varga*, 8/126-134, pp. 207-209.
6. Sharma PV, editor. *Kaiyadev Nighantu* of *Kaiyadev*. 1st ed. Varanasi; Chaukhambha Orientalia: 2007, *Drava Varga*, 4/263-271, pp.

- 367-368.
7. Chunekar KC, editor. *Bhavaprakasha Nighantu of Bhavamishra*. Reprint ed. Varanasi; Chaukhambha Bharati Academy: 2006, *Ghrita Varga*, 17/4-6, pp. 775.
 8. Definition of Ghee. Oxford English Dictionary. <https://www.lexico.com/definition/ghee>
 9. Sharma P V. *Dravyaguna Vijnana- Part-3*. Reprint ed. Varanasi; Chaukhambha Bharati Academy: 2013, pp. 304-305.
 10. Ganguli N C, Jain M K. Ghee: Its Chemistry, Processing and Technology. *Journal of Dairy Science*, 1973; 56(1): 19-25. <https://www.sciencedirect.com/science/article/pii/S0022030273851094>
 11. *Anonymous*. The Ayurvedic Pharmacopoeia of India, Part-1, Vol. 6. 1st ed. New Delhi; NISCAIR-CSIR, Department of AYUSH, MOHFW: 2006, pp. 238-239.
 12. Revised general standards for milk and milk products, Food Safety and Standard Authority of India (FSSAI). <https://foodsafetyhelpline.com/fssai-notifies-revised-general-standards-milk-milk-products/>
 13. Indian Food Composition Table. National Institute of Nutrition-ICMR, Hyderabad, 2017. <http://indiaenvironmentportal.org.in/files/file/IFCT%202017%20Book.pdf>
 14. Dhiman K S. Standardization and clinical evaluation of *Keshanjana* -an Ayurvedic formulation in *Shushkakshipaka* (Dry Eye Syndrome). https://ayushportal.nic.in/EMR/CLINICAL_FINAL_REPORT-6.pdf
 15. Katri P, Nora S, Riitta K. Diet promotes sleep duration and quality. *Nutrition Research*, 2012;32(5): 309-19. <https://doi.org/10.1016/j.nutres.2012.03.009>

