REVIEW ARTICLE

Role of Goghrita in Geriatrics

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ABSTRACT

Introduction: A major proportion of old age population if falls prey to geriatric disorders will not only decrease the quality of life of elderly but will also offer a financial burden on treatment of geriatric disorders on the country. Ghrita is best among all fats and goghrita is best among all ghrita. Goghrita due to its unctuous property, higher smoking point, feature of sanskar, components such as mono unsaturated fatty acids, poly unsaturated fatty acids, oleic acid, and docosahexaenoic acid prevents and treats geriatric disorders.

Methods: Conceptual review of ancient Ayurveda texts, texts of contemporary science including pharmacology, medicine, physiology, pathology and medicine, articles, and journals.

Results: Goghrita, due to its specific features, has capability to prevent and treat geriatric disorders. Goghrita prepared by traditional method is better as it contains more docosahexaenoic acid and omega 3 fatty acids.

Discussion: Physiological elevation of vata dosha is found in old age. Vata regulates nervous system and alleviation of vata dosha may result in geriatric disorders, especially of neurological origin. Goghrita pacifies vata due to its unctuous property and is thus helpful in treating and preventing geriatric disorders.

Conclusion: Goghrita pacifies vata due to its unctuous property and thus may prevent and treat geriatric disorders.

1. INTRODUCTION

Ghrita is a type of clarified butter. Ghrita promotes memory, intelligence, agni (digestive capacity), semen, ojas (the essence of seven dhatu's that is vital for life), kapha (one of biological humors other than vata and pitta), and medas (the fourth dhatu among seven dhatu's of the body, whose function is to provide unctuousness), alleviates vata and pitta, poison, insanity, phthisis, inauspiciousness, and fever. It is best of all fats, is cold, has madhura (sweet) ras, madhura vipaka, has thousands potentialities, and so, if used properly according to prescribed methods, exerts thousand types of action.5 No other fat receives the property of sanskara (processing with drugs) as ghrita and that is why it is regarded as best of all the fats.5 Goghrita is the best among all the ghritis.3 Goghrita is sweet in final taste after digestion, is cool, alleviates vata and pitta, and eliminates poison, is foremost among those things which are beneficial for eyes and is strengthening.4

Description of goghrita can be found from ancient historical texts. In Mahabharata, it is written that Kauravas (hundred sons of King Dhritarashtra and his wife Gandhari) were born from pots of goghrita.5 Goghrita is one of the mandatory ingredients to be used with food in some states of India. It is used in cooking and for the preparation of certain ayurveda medicines. Goghrita is also used in certain religious acts as cow is being considered a sacred animal in Indian subcontinent. Goghrita is the one of the important ingredients of Panchakarma (an ancient Ayurveda detoxification and rejuvenation therapy that aims to restore balance in the body, mind, and spirit), ingredient of many Ayurveda formulations, and an effective anupana (liquid consumed soon after food or medicine).

2. ETYMOLOGY

The word ghee comes from Sanskrit: (ghṛta-, IPA: [ɡʱr̥ta]) “clarified butter,” from ghṛ-, “to sprinkle”9 cognate with the Ancient Greek word χριστός (khrístos, “rubbed, anointed”), from which derives...
3. PREPARATION

Goghrita is prepared mainly by two methods, first being the traditional and second being direct cream method. In traditional method, cow milk is boiled and cooled at room temperature. Some curd is added as starter culture, mixed, and incubated at room temperature. Curd formed is manually churned until butter float on top of the buttermilk. Butter is washed using water to remove residual buttermilk and then heated in stainless steel container till it gets clarified. Clear liquid ghrita is then obtained. In direct cream method, cream is separated from whole cow milk and heated in stainless steel pan and clear molten ghrita is then obtained. Thus, ghrita is differs from clarified butter in perspective of preparation: the process of preparation of clarified butter is completed once the water is evaporated and fat gets separated from milk solids, but ghrita is prepared by simmering the clarified butter, resulting in nutty taste and aromatic smell of ghrita.[8] There is not much difference in properties of ghrita prepared by both traditional and direct cream method, but the ghrita prepared from traditional method has greater docosahexaenoic acid, Omega-3 long-chain polyunsaturated fatty acids content as compared to ghrita prepared by direct cream method.[9] Ghrita is fairly shelf-stable largely because of its low moisture content and possible anti-oxidative properties.

4. GOGHRITA: BOON TO ELDERLY

Vridhi of vata dosha (increase in physiological limits of vata dosha) occurs in old age.[10] Vata dosha is responsible for regulating physiological functions of body by regulating nervous system. An imbalance in vata dosha may lead to geriatric disorders. Goghrita, due to its unctuousness property,[3] pacifies vata and thus may work efficiently in the treatment and prevention of geriatric disorders.

Cow milk is composed of saturated fatty acids, particularly C14:0 and C16:0, and small amounts of monounsaturated fatty acids (MUFA), polyunsaturated fatty acids (PUFA), and omega-3 fatty acids.[11] The ghrita prepared from cow milk has the components of its parent product. Broadly, ghrita has 99–99.5% fats, around 1% moisture, unsaponifiable matter, charred casein, carotene, and fat-soluble vitamins.[12] Omega-3 long-chain polyunsaturated fatty acid is a major component of retinal and brain tissues. Studies have found that MUFA and PUFA are protective against age-related cognitive decline.[13]

Goghrita is rich in Docosahexaenoic acid, particularly the one prepared by traditional method. The high DHA content may be due possibly due to rich microbial flora used in starter curd culture. DHA along with fat-soluble vitamins, anti-oxidants, and conjugated linoleic acid could be responsible for health benefits of goghrita. Studies have found that docosahexaenoic acid reduces the risk of diseases like heart attack, cancer, insulin resistance, arthritis,[14] and attention deficit hyperactivity disorder.[15]

Milk though healthy may harm people suffering with lactose intolerance. Goghrita contains negligible amounts of lactose and casein and is therefore acceptable to most people who have a lactose intolerance or milk allergy.[16,17]

Goghrita contains Vitamin A and its quantity found in Goghrita is approximately ranged from 315 to 375 μg/100 g.[18] Vitamin A may have anticancer effects and protect against age-associated conditions such as macular degeneration.[19] Oleic acid is a component of goghrita. Daily consumption of fat, especially in oleic acid, has a beneficial effect against cognitive decline in elderly individuals.[20]

The smoke point of goghrita (temperature at which the molecules of goghrita begin to break) is higher than normal cooking temperatures of approximately 200° Celcius. Thus, this higher smoke point prevents breaking of molecules of goghrita while cooking, making goghrita an ideal fat for deep frying.[21]

5. CONCLUSION

Physiological elevation of vata dosha occurs in old age. Geriatric disorders may be due to alleviation of vata dosha. Goghrita pacifies vata due to its unctuous property and thus may prevent and treat geriatric disorders. Goghrita can be prepared by traditional and direct cream method. However, Goghrita prepared by traditional method is better as it contains more docosahexaenoic acid and omega 3 fatty acids. Moreover, the components of ghrita such as MUFA, PUFA, oleic acid, and Vitamin A make it one of the efficient preventive and protective tool against geriatric disorders.

6. ACKNOWLEDGMENTS

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7. AUTHORS’ CONTRIBUTIONS

All the authors contributed equally in the design and execution of the article.

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9. ETHICAL APPROVALS

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10. CONFLICTS OF INTEREST

Nil.

11. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

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REFERENCES

4. Shastri AD, editor. Commentary Ayurveda Tattva Sandipika of

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