A Systemic Review on Ghrita (Ghee): Myths V/S Facts

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ABSTRACT
Ayurveda advised herbal remedies for treatment and prevention of diseases. In Ayurveda four type of sneha and their qualities are detailed described, Ghrita is one of them. But according to modern dietetic science ghrita (ghee) is considered as fat increasing substances and avoid to taken in some diseases like DM, obesity, cardiac disease etc. Many Aacharya described many types of medicated ghee to cure many diseases. On the other hand many researches of modern science shows that these fatty items increase many diseases risk like cardiac disease, obesity, type 2 diabetes, stroke etc. So this article is an attempt to enclose that what is fact and what is myths about ghee.

Material and Method: For this article search over various search engine like PubMed, Google scholar was done. Relevant article and various books and samhita also searched.

KEYWORDS: Ghee, Ayurveda, Myths, modern science

INTRODUCTION
Ayurveda is oldest life science and Ayurveda principle also uses as household remedies. In Ayurveda most of drugs given in the form of medicated sneha to enhance the absorption of drugs. Four types of mahasneha (Ghrita, taila, vasna and majja) and their combined qualities described by Aacharya charak in sutra sthana². These four sneha used in many diseases in many forms. Many Aacharya described many types of medicated ghee to cure many diseases. On the other hand many researches of modern science shows that these fatty items increase many diseases risk like cardiac disease, obesity, type 2 diabetes, stroke etc. So this article is an attempt to enclose that what is fact and what is myths about ghee.

Ghrita (ghee) has been used for more than 5000 years in dietary items. Apart from this Aacharya charak described ghrita as uttam sneha and many health benefits of it³. The chaturvidha sneha (Ghrita, taila, vasna and majja) are jeevaniya (imparts vitality), varnya (enhance complexion) and it increases bala (stamina/strength). They pacify vata, pitta and kapha³. These four sneha is used in four forms according to Aacharya charak⁴ as

1. Pana- oral intake
2. Abhayanga- external application
3. Basti- enemas
4. Nasya- nasal instillation

According to Aacharya sushruta⁵ and Aacharya vagbhatta⁶ described above forms and some other form of uses sneha like

- mastika-applied on head
- uttar basti- per urethra instillation of medicine
- karnapoorana- ear lubricants
- bhojana-along with meals
- gandusha-gargling
- aksh tarpana-medicated sneha in eyes

The usage of sneha are broadly in two category, they are-
1. Internal usage
2. External application

GHRITA (GHEE):
In Rigaveda there are description of ghrita used as a method of providing nutrition along with a capacity of kindle the digestive power. In Atharava Veda there is immense literature on ghrita.

In Ayurveda classics ghrita is considered as jangama dravya’ (obtained from animal kingdom-cow, buffalo, goat etc.). Among those Ayurveda consider Gau ghrita (cow’s ghee) is best and choice for both food and medicinal purpose. Ghrita contains a specific guna ‘sanskarasya anuvartana’ that means it carries the property of other drugs which are added during the paka of sneha without losing its own property.
Properties of Ghrita:
According to Aacharya Charak\textsuperscript{8} ghrita increases smruti (memory), buddhi (intellect), Agni (digestive capacity), sukra (vigour), oja (vitality), it increases kapha and meda. It pacifies vata, pitta, visha (poison), unmada (psychiatric disorder), shosa (depletion), alakshmi and Jwara (fever).

Rasa Panchak— Rasa-Madhura (sweet)
Guna- sheeta (cold)
Veerya- sheeta
Vipaka- Madhur

Aacharya charak used the word for ghrita is ‘Saahastrakarmakrita’ (doing hundred work)

According to Aacharya Sushruta\textsuperscript{9} ghrita is saumya (non-irritant), mridu (imparts softness), and alpa abhishyandi (does not block channels). It is used in treatment of udavarta, unmada, apsursara, shoola and abdominal pain.

According to Aacharya Vagbhatta\textsuperscript{10} ghrita enhances Dhi, samritt, medha, agni, bala, oya, sukra and chaksha (vision). It enhances praja (offspring), kanti (lustre). It is beneficial for individual for individual suffering from injury, depletion, burn, fever.

According to Kashyapa samhita\textsuperscript{11} ghrita pacifies pitta, vata disorder but does not vitiates kapha disorder, enhances bala, Agni, medha.

Indication of Ghrita\textsuperscript{12, 13, 14, 15}— Ghrita is vata-pitta prakriti, burns, trauma, poisoning, injury, weakness.

Ghrita administration according to Dosh\textsuperscript{16,17}— Ghrita can be administered in all individual in all condition. Various ghrita combination are described for the three doshas they are –

1. Pitta dosha- only ghrita
2. Vata dosha- ghrita+ sandhav lavan
3. Kapha dosha- ghrita+Vyosha (shunthi+maricha+pippalli)

Composition of Ghrita\textsuperscript{18}:
100gm of Ghrita contains 99.48 g total fat, 61.924 g of saturated fat, 256mg cholesterol,
3069 IU of Vitamin A, 4mg calcium and small quantity of other vitamins and minerals. It is a rapid source of energy compared to other oils because it contains short chain fatty acid which are readily absorbed and metabolized.

But many researches prove that the composition of ghrita varies to the method of preparations. And study shows that commercially produced ghrita contains more saturated fatty acid other than traditionally produced ghrita.

Ghrita as controversial Lipid:
Ghrita is comes under lipid, which is essential for living organism along with carbohydrate, proteins and nucleic acid.

Lipids are a type of carbon containing organic compound are classified into saturated fatty acids (SFAs) and unsaturated fatty acids (UFAs). UFAs is further classified as monosaturated UFAs and polysaturated UFAs\textsuperscript{19}.

Plant based oils are rich in UFAs and animal products are rich in SFAs. So animal products contains SFAs like acetic acid, propionic acid, butyric acid\textsuperscript{20}. Many researches and article have shown that CVDs, Atherosclerosis like diseases at high risk due to consumption of SFAs. Ghrita contains butyric acid approx.2-5% has a role in improving insulin sensitivity, increase energy and shows anti-inflammatory action. A number of studies proved that Ghrita Prepared by traditional method contains higher amount of docosahexaenoic acid (DHA) and omega-3 PFA (polysaturated fatty acid) and DHA contributes to reduce risk of diseases like heart attack, cancer and arthritis\textsuperscript{21}.

Discussion:
Ghrita is used in either in pure form or mixed with food items or medicated ghee. Aacharya Charak describe many type of medicated ghee in many vata-pittaja diseases like kushta, kasa-shwasa etc\textsuperscript{22}. These properties of ghrita due to saturated fatty acids, cholesterol, omega-3 fatty acid and omega-6 fatty acid, different vitamins. In Ayurveda classics eight types of ghrita are described. In which ewe milk is unhealthy for heart so it should avoidable. Researches on medicated ghee also shows positive result in every condition.

Conclusion:
According to Ayurveda classics ghrita is an important content of food and Chikitsa. Previous researches and data support that moderate consumption do not show any side effect on population. Many researches shows many beneficial property of ghrita. So it shows that practice of moderate quantity of ghrita is beneficial for health maintenance.

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