

MILK: NATURE'S GIFT TO THE HUMAN SOCIETY

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ABSTRACT

Milk is an animal product which is produced by the female animals and taken by their kids as food and by the human beings for different purposes including use as food. Nature has given the quality and capacity to all the female animals including human beings to produce milk without their knowledge. Mother's Milk is considered as the complete food for the kids upto a certain age. Since time immemorial there is continuous study and research on milk extracted from different sources with special reference to their method of collection, property, nutritive value, indication, contra indication etc. The Ayurvedic classics discuss in detail about "Kshirabarga" considering 8 main sources. Among the 8 common sources of milk described in the Ayurvedic classics "cow's milk" is said as the best for use of human beings. The word "milk" in Ayurvedic classics indicates "cow's milk". It is said to be the best nutrient, healer, antidote and well tolerated, homologous daily consumable food for the persons of all age, sex and status. Very interesting facts are mentioned by the ancient Ayurvedic scholars about milk which have clinical applicability also.

Key words: *milk, animal product, kshirabarga.*

INTRODUCTION

Human and nature are closely related since creation. Nature is providing all resources to the human beings without which it will never be possible to survive. Food, drink, air, soil used for production all are provided by the Mother Nature to us without asking for any return.

Milk is such a substance which is found from the animals in the nature, like cow, goat, horse etc. Almost all the female animals naturally produce milk mainly to feed their kids.

Human beings use cow's milk and goat milk for daily use. It is used as food additive, nutritious drink and also to prepare a good number of modified products which are nutritious, tasty and even attractive.

From time immemorial milk is getting importance among all the people. There is also extensive study on milk and its products with special reference to property, quality, methods of use, benefits etc. Extensive study is being conducted in different levels

and a good number of information is collected by the researchers on milk.

Interestingly, study of the Ayurvedic classics reveals that, there is vivid description of milk under the heading “*Kshirabarga*” in the ancient samhitas. Study of the Ayurvedic samhitas nicely reveals that, the description of milk available in the Ayurvedic classics is more interesting and elaborate.

A detail study of the Ayurvedic classics to understand the concept can be considered as an important task.

AIM OF THE STUDY:

1. Study elaborately on the descriptions on milk mentioned in the Ayurvedic classics as well as in the modern classics.
2. Preparation of a Comparative statement on the descriptions available.
3. Frame up of Conclusive opinion on the descriptions of the different classics.

MATERIALS AND METHODS:

1. Ayurvedic classics, viz. Charaka Samhita, Susruta Samhita, Astanga Sangraha, Astanga Hridaya and modern medical books with some literatures on milk were studied in detail.
2. The concepts available in the classics studied were collected.
3. A comparative statement on the collected concepts was prepared.
4. A conclusive opinion on the descriptions of the different classics was framed after the study.

RESULT:

After the study the following results were observed:

Ayurvedic concept on milk-

1. Milk (*Kshira*) is getting a markable importance in the Ayurvedic classics.
2. Charaka, in Charaka Samhita, discussed about milk in Sutrasthana chapter 1, 25 and 27.
3. Acharyya Charaka describes whole milk group (*Kshirabarga*) having 10 qualities as *swadu*

(sweet), *sita* (cold), *mridu* (soft), *snigdha* (oily), *bahala* (viscous), *slakshna* (smooth), *picchila* (slimy), *guru* (heavy), *manda* (slow that produces heaviness), *prasanna* (attractive look) etc.^[1]

4. The 10 qualities of milk are similar to the qualities of “*Oja*” (the essence –vitality). Hence it increases the *Oja* and it is considered to be the best among the “*Jivaniya dravyas*” (nutrient drugs). It is also the best *Rasayana* (rejuvenator).^[2]
5. All the milks are said to be *madhura*, (sweet taste), *snigdha* (oily), *sita* (cold), *stanya* (galactogue)^[3].
6. Milk is *prinana* (nutrient), *bringhana* (bulk enhancer), *brishya* (potency enhancer), *medhya* (memory booster), *balya* (increases strength), *manaskara* (produces mental satisfaction), *jibaniya* (increases longevity), *sramahara* (reduces tiredness), *swasnasaka* (cures breathing difficulty), *kasanasaka* (cures cough), *sonitapittanasaka* (pacifies *rakta* and *pitta*), *sandhana* (helps in healing), *satmya* for all *pranis* (homologous for all living beings), *samana* (pacifies the vitiated *dosha* etc.), *sodhana* (helps in purification), *trishnaghna* (eliminates thirst), *dipaniya* (increases digestive capacity), *kshatakshinahita* (helpful for the patients of chronic ulcer and imatiating diseases)^[4].
7. Milk is specially indicated in *panduroga* (anaemia), *amlapitta* (acid peptic disorders), *sosha* (imatiating disorders), *gulma* (lump/tumour), *udararoga* (different types of gastro-intestinal disorders), *atisara* (loose motion), *jwara* (fever), *daha* (burning sensation), *swayathu* (oedema), *yonidosha* (diseases of the female reproductive organs), *sukradosha* (diseases related to semen), *mutradosha* (urinary problems) and *pradararoga* (lucorrhoea)^[5].
8. Milk is applicable in *grathita purisha* and good for *vata* and *pittabikarpiditapurusha*^[6].

9. Milk can be utilized for the therapeutic purposes like *nasya*, *alepa*, *avagaha*, *vamana* and *asthapana vasti* ^[7].
10. Milk is advised to use without hesitation for *birechana* and all types of *snehana karma* ^[8].
11. Milk is the best among all the *jivaniya dravyas* (nutrient substances) ^[9].
12. Regular use of milk and ghee is considered as the best *rasayana* (helpful in all respects for the body) ^[10].
13. Milk is *anekaoushadhiprasada* (produced from the ascent of all *dravyas*), *pranada* (helpful for life), *guru* (heavy), *madhura* (sweet), *picchila* (slimy), *sita* (cold), *snigdha* (oily), *slakshna* (smooth), *sara*, *mridu* (soft), *sarba-pranabhritanang satmya* (homologous to all living beings) ^[11].
14. Milks are indicated for all livings due to natural homologousness ^[12].
15. Milk is indicated in the *Vataja*, *Pittaja*, *Sonitaja* and even in *Manasa roga* ^[13].
16. Milk can cure *jirnajwara* (chronic fevers), *kasa* (cough), *swasa* (breathing problems), *sosha* (ematiating disorder), *kshaya* (qualitative and quantitative loss of the *sharira dhatus*), *gulma* (tumours), *unmade* (insanity), *udara* (abdominal disorders), *murcha* (fainting), *bhrama* (delirium), *mada* (habituation of alcoholic drinks), *daha* (burning sensation), *pipasa* (thirst), *hridbastidosa* (diseases of the heart and urinary bladder), *panduroga* (anaemia), *grahanidosa* (diseases related to the duodenum), *arsha* (piles), *sula* (pains), *udabarta* (flatulence), *atisara* (loose motion), *pravahika* (dysentery), *yoniroga* (diseases of the female reproductive organs), *garbhasrava* (abortion), *raktapitta* (bleeding disorders) etc. ^[14].
17. Milk is *sramahara* (eliminates tiredness), *klamahara* (reduces fatigueness), *papmahara* (eliminates the bad things) ^[15].
18. Milk is *balya* (provides strength), *brishya* (increases potency), *bajikarana* (aphrodisiac), *rasayana* (rejuvenator) ^[16].
19. Milk is *medhya* (memory booster), *sandhana* (healer), *asthapana* (can be used as *ashtapan bastidravya*), *bayahsthapana* (increases stability), *ayushya* (increases longevity), *jivana* (best nutrient), *bringhana* (increases bulk of the muscles), *bamana-birechana-asthapan* ^[17].
20. Milk contains the similar qualities as that of *oja*. Hence it is *ojabardhana* (increases the *oja* – the vitality) ^[18].
21. Milk is *pathyatama* (best usable) for *bala-briddha* (from childhood to old age), *kshata-kshina* (persons suffering from wound and ematiating disorders) and also *kshud-vyavaya-vyayamarshita purusha* (persons suffering from hunger and weak due to exposure to sexual act, physical exercise etc.) ^[19].
22. *Gokshira* (cow's milk) is *alpabhisyadi*, *Snigdha* (oily), *guru* (heavy), *rasayana* (rejuvenator), *raktapittahara* (cures bleeding disorders), *sita* (cold), *madhura* (sweet), *jivaniya* (increases longevity), *parama vatapittaghna* (best pacifier of *vata* and *pitta*) ^[20].
23. Milk is *madhura* in *rasa* and *vipaka* (sweet in taste and after digestion), *snigdha* (oily), *ojasya* (helpful for *oja*) and *dhatubardhana* (increases the *dhatus*) ^[21].
24. Milk is *jivaniya* (increases longevity), *rasayana* (rejuvenator), *kshatakshinahita* (helpful for the patients of wound and imatiating disorders) ^[22].
25. Milk is *medhya* (memory booster), *balya* (produces strength), *stanyakara* (galactogogue) ^[23].
26. Milk is *srama*, *bhrama*, *mada*, *alakshmi*, *swasa*, *kasa*, *trishna*, *kshudha*, *jirnajwara*, *mutra-kricchra* and *raktapittanasaka* (cures weakness, delirium, poverty, breathing trouble, cough, thirst, hunger, chronic fever, urinary problems, bleeding disorders etc.) ^[24].
27. Milk is *swadu* in *bipaka* and *rasa*, *snigdha*, *ojasya*, *dhatubardhana*, *vata-pittahara*, *brishya*, *shleshmala*, *guru* and *sitala* ^[25].

The following are the concepts about milk as mentioned in the modern literatures -

1. Vivid discussion is available in the modern literatures. It is described as the best and most complete food ^[26].
2. It is a good source of proteins, fats, sugars, vitamins and minerals which are most essential for growth and development of the body ^[27].
3. Milk proteins contain all the amino acids ^[28].
4. Milk fat is a good source of retinol and vitamin D ^[29].
5. The carbohydrate in all milks is lactose or milk sugar which is found nowhere in the nature ^[30].
6. Milk contains almost all known minerals necessary for the body like calcium, phosphorus, sodium, potassium, magnesium, cobalt, copper, iodine etc. It is rich with calcium ^[31].
7. Milk is a good source of many vitamins, like vitamin A, B6, B12, D.K.E, thiamine, niacin,

biotin, riboflavin, folates, pantothenic acid etc. ^[32].

8. Recent evidence suggests that, consumption of milk is effective for muscle growth ^[33].
9. Milk is considered as mechanical (physical) antidote due to its demulcent property. It prevents absorption of poisons ^[34].

DISCUSSION

The result obtained from the study can be justified as follows -

1. Milk is considered from different angles by the ancient Ayurvedic scholars. The opinions of the scholars reflect the depth of their study and observation about the qualities, indications and functions of milk.
2. The concepts of the qualities of milk are summarized in table – 1 below -

Table 1: Showing the different opinions on qualities of milk

Serial No.	Name of the quality	Name of the classics			
		Charaka	Susruta	Ashtanga Sangraha	Ashtanga Hridaya
1	<i>Swadu</i>				
2	<i>Shitala</i>				
3	<i>Mridu</i>		X	X	X
4	<i>Snigdha</i>				
5	<i>Bahala</i>		X	X	X
6	<i>Shlakshna</i>		X	X	X
7	<i>Picchila</i>		X	X	X
8	<i>Guru</i>				X
9	<i>Manda</i>		X	X	X
10	<i>Prasanna</i>		X	X	X
11	<i>Alpabhishyandi</i>	X		X	X

This table reflects that, Acharyya Charaka identified more number of qualities of milk than Acharyya Susruta and Bagbhata the cause of which is difficult to explain. But from the similarities observed it can be inferred that, the qualities like *swadu*, *shitala*, *snigdha* which can be considered as the basic ones are mentioned by all acharyyas.

All the other qualities mentioned by Charaka can be considered as related with these three.

The qualities of milk mentioned in the modern classics also have close similarity with the Ayurvedic concept but the concept of Acharyya Charaka reflects more meticulous study and observation.

3. When the concepts on the indications of milk are observed then it reflects the facts shown in

table -2

Table 2: Showing the different opinions of Ayurvedic acharyas about the indications of milk

Serial No.	Indication	Classics			
		Charaka	Susruta	Ashtanga Sangraha	Ashtanga Hridaya
1	<i>Jirnajwar</i>	X			2
2	<i>Kas</i>				
3	<i>Swas</i>				
4	<i>Shosha</i>			X	X
5	<i>Kshaya</i>	X		X	X
6	<i>Gulma</i>			X	X
7	<i>Unmada</i>	X		X	X
8	<i>Udara</i>			X	X
9	<i>Murccha</i>	X		X	X
10	<i>Bhrama</i>	X			
11	<i>Mada</i>	X			
12	<i>Daha</i>			X	
13	<i>Pipasa</i>				
14	<i>Hriddosha</i>	X		X	X
15	<i>Vastidosha</i>	X		X	X
16	<i>Panduroga</i>			X	X
17	<i>Grahanidosha</i>	X		X	X
18	<i>Arsha</i>	X		X	X
19	<i>Shoola</i>	X		X	X
20	<i>Udabarta</i>	X		X	X
21	<i>Atisara</i>			X	X
22	<i>Pravahika</i>	X		X	X
23	<i>Yoniroga</i>			X	X
24	<i>Garbhasrava</i>	X		X	X
25	<i>Raktapitta</i>				

From the table No. 2 it is observed that, speaking on the indications of milk Acharyya Charaka, Susruta and Bagbhata unanimously say that, milk can be used in *Kas, Swas, Pipasa, Raktapitta, Shrama*. Though some difference in opinion is observed then also there should be no confusion as with the

help of *Dosh-dushya bibechna* the indications and contraindications of milk can be determined.

4. The concepts of karma of milk mentioned by the Acharyas are tabulated in table No.3.

Table 3: Showing the concepts of Karma of milk as per different Ayurvedic classics -

Serial No.	Name of the karma	Classics			
		Charak	Susrut	Ashtanga Sangraha	Ashtanga Hridaya
1.	<i>Ojabardhana</i>				
2.	<i>Jivaniya</i>				

3.	<i>Rasayana</i>				
4.	<i>Pranada</i>	X		X	X
5.	<i>Sarbapranabhrita satmya</i>	X		X	X
6.	<i>Balya</i>				
7.	<i>Vrishya</i>				X
8.	<i>Vajikaran</i>	X		X	X
9.	<i>Medhya</i>				
10.	<i>Sandhana</i>			X	X
11.	<i>Asthapana</i>	X		X	X
12.	<i>Bayahsthapana</i>	X		X	X
13.	<i>Ayushya</i>	X		X	X
14.	<i>Bringhana</i>			X	X
15.	<i>Vata –Pittaghna</i>	X			X
16.	<i>Dhatubardhana</i>	X	X		
17.	<i>Stanyakara</i>		X		
18.	<i>Shleshmala</i>	X	X		X
19.	<i>Prinana</i>		X	X	X
20.	<i>Manashkara</i>		X	X	X
21.	<i>Shamana</i>		X	X	X
22.	<i>Shodhana</i>		X	X	X
23.	<i>Deepana</i>		X	X	X

The above table shows that, Acharya Charaka, Susruta and Bagbhata have unanimously accepted *Ojabardhana*, *Jivaniya*, *Rasayana*, *Balya* and *Medhya* as functions of milk. But in other ones there is some difference of opinion. It is difficult to justify the cause of this difference. But it can be easily assumed that, in relation to the concept of functions of milk there is close similarity among the concepts of Charaka, Susruta and Bagbhata.

5. The modern description of milk reflects that, it is a complete food containing most of the vitamins, minerals, essential amino acids etc. which are proved to have important role in growth and development of the body. It also has protective effect.

SUMMARY

As summary, after detail study about milk, from the Ayurvedic as well as modern classics, the following points can be noted -

1. The Ayurvedic Acharyas conducted extensive study on milk in different aspects like, types, qualities, indications and functions. Though there are some difference in description of Charaka, Susruta and Bagbhata then also there is similarity in the basic concepts. The differences observed are probably due to difference of time and feeling.
2. In respect of sources of milk all the 3 Ayurvedic scholars mentioned 8 numbers and cow's milk (*Gokshira*) is said to be the best by all. After mentioning of the 8 sources all the scholars used the word "*Kshira*" to indicate "*Gokshira*" only.
3. Acharya Charaka mentioned 10 qualities of milk. On the other hand Susruta, in Susruta Samhita, mentioned 5 and Bagbhata, in Ashtanga Sangraha 4 and in Ashtanga Hridaya 3 qualities of milk.
4. Charaka mentions 17 conditions whereas Susruta mentions 28 conditions where milk can be used. Bagbhata, in Ashtanga Sangraha and

Ashtanga Hridaya, mentions 11 conditions for use of milk.

5. Charaka mentions 14 functions of milk. On the other hand in Susruta Samhita 15, in Ashtanga Sangraha 10 and in Ashtanga Hridaya 7 functions of milk are available.
6. Modern description of milk is seemed to be brief in comparison to the Ayurvedic descriptions. But the concepts have similarity.
7. There is ampoule of scope and necessity of study on milk with special reference to quality, indications and functions.

CONCLUSION

As conclusion it can be said that, the minute observation, study and research of the ancient Ayurvedic scholars in relation to milk, if studied minutely from modern scientific angles, and works will be done to establish their observations then a very nice product will definitely come out for the benefit of the human society.

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