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REVIEW ARTICLE

Gradual Development of Ahara Kalpana In Brihattrayi

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ABSTRACT

History of *Ayurveda* is as ancient as history of the universe. *Brihattrayi* means "the triad of the old/mature (classics or authors)". These texts describe the basic principles and theories from which the treatment part of *Ayurveda* has evolved. *Charaka Samhita* and *Sushruta Samhita* passed through different procedures like *Pratisamskara, Pathashuddhi* and *Sampurana*. Considering this fact in mind, gradual development of Ayurvedic principles and practices can be understood by keen observation of these classical texts. One of such subject which has been grown up with time is the principle of *Ahara* and *Ahara Kalpana*. Most of the *Ahara Kalpanas* have been described in *Sutrasthana* of all the texts of *Brihattrayi*. They are described with the mentioning of different groups of food articles (*Ahara Varga*) as *Kritanna Varga*. Very few *Kalpanas* have been described with their preparation methods by the original authors of the texts. Commentators of later period described the procedures for preparation of these *Kalpanas*. Some modification has been made by later *Acharyas* from *Charaka* to *Sushruta* and *Vagbhatta*. *Vagbhatta* has merged both *Sushruta* and *Charaka* in this matter. And he also described some new *Ahara Kalpanas*. Thus the review of gradual development of *Ahara Kalpana* leads one to know the whole process of preparation methods and cooking techniques of diet for treatment and preventive measures.

Key words: Ahara Kalpana, Brihattrayi

INTRODUCTION

History of Ayurveda is as ancient as history of the universe. It is mentioned in classical texts of Ayurveda that the stream of the knowledge of Ayurveda was started from the Brahma – the creator of the universe ^[1]. This stream reached to the present era through the Samhitas (classical ancient texts) which were created by the ancient Rishis. Around 1500 B.C two school of thoughts existed and those made Ayurveda a systematically provable and classified medical system. 1. Atreya School: The School of Physicians. 2. Dhanwantari School: The School of Surgery. Both school thoughts had their own philosophy, diagnostic patterns, treatments and medicines. They had different followers and the texts were written by the school accordingly. These texts are divided into two major categories namely 1.Brihattrayi 2.Laghutrayi. Brihattrayi includes Charaka Samhita, Sushrut Samhita and Ashtanga Samgraha / Ashtanga Hridaya. Brihattrayi means "the triad of the old/mature (classics or

authors)"^[2]. These texts describe the basic principles and theories from which the treatment part of Ayurveda has evolved. They also include vast clinical information of many diseases and management. Brihattrayi have their been considered as the most important classical texts for treatment in Ayurveda. It is in use since long time for pursuing health among India and worldwide. Among these three books, Charaka Samhita and Sushruta Samhita have been developed by their original fundamental principles related to their subjects; while Ashtanga Samgraha and Ashtanga Hridaya are created with compilation of the principles and therapeutics of both Charaka Samhita and Sushruta Samhita with specific aim of describing entire knowledge of *Ayurveda* at one place^[3]. Apart from this, both of these Ashtanga texts have also described few newer drugs and treatment protocols according to their time period of creation. Charaka Samhita and Sushruta Samhita passed through different procedures like *Pratisamskara*, *Pathashuddhi* and *Sampurana*. Considering this fact in mind, gradual development of *Ayurvedic* principles and practices can be understood by keen observation of these classical texts.

One of such subject which has been grown up with time is the principle of Ahara and Ahara Kalpana. Ayurveda being a medical science, describes Ahara as an important factor for health and disease ^[4]. It is said by *Charaka* that body as well as diseases is born by the food ^[5]. Further he explains this by saying that the use of a wholesome diet is the only factor that promotes the healthy growth of man and the factor that for disease is the indulgence in unwholesome diet ^[6]. Because of this close relation of food with health, a well developed science of Ahara (dietetics) can be observed in classical texts of Avurveda which includes detailed depiction of Ahara Dravya (food articles) with their properties and functions in human body, Ahara Vidhi Vidhana (methods, codes and conducts for taking food) and Ahara Kalpana (food preparations). Concept of Ahara Kalpana has not been dealt in depth by original authors of the classical texts as the chief purpose of formation of these texts was to explain the principles and practices for prevention of health and cure of diseases ^[7] and not to describe recipes for a cookery book. Ahara Kalpanas have been described with specific aims like 1) To change the inherent properties of Aharadravya with Samskara, i.e. Shali dhanya is Laghu (light) in nature but *Pishta* of it become *Guru* (Heavy) to digest. 2) To add palatability, i.e. Panaka from different fruits become more tasty than raw fruit and 3) To exclude the harmful / poisonous effects of Aharadravya. Apart from this, Ayurveda gives more importance to digestion in comparison to nutrition. It is believed that only the properly digested food can provide proper nutrition to the body^[8]. Many of the Ahara Kalpanas have been formulated with keeping this view in mind.

Most of the *Ahara Kalpanas* have been described in *Sutrasthana* of all the texts of *Brihattrayi*. They are described with the mentioning of different groups of food articles (*Ahara Varga*) as *Kritanna Varga*. *Kritanna varga* is nothing but a list and properties of different Kalpanas made from different *Ahara Varga*. As said earlier, very few *Kalpanas* have been described with their preparation methods by the original authors of the texts. Commentators of later period described the procedures for preparation of these *Kalpanas*. In this way *Ahara Kalpana* is a widely described and detailed topic of *Ayurveda* literature. All three classics of *Brihattrayi* explain around 60 *Ahara Kalpanas* in each. Some of them are common and some are different. Difference in use and preparation method is observed with time period in *Ahara Kalpana*. Development of food technology in Ayurvedic literature can be noted by observing different *Ahara Kalpana* of *Brihattrayi*.

OBSERVATION

Use of Kalpana with consideration of other elements makes the Dravvas suitable for human body. The Ahara Vargas like Shooka Dhanya (cereal grains), ShamiDhanya (legumes), Mamsa (meat) and Shaka (vegetables) cannot be used without applying Kalpana. So that in Brihattravi all three Acharyas have mentioned Kritanna Vargas to explain the different Kalpanas made by Dravyas of other Ahara Vargas. In other words Kritanna Varga/ Ahara Kalpana are applied aspect of described Ahara Vargas. It consists of prepared foods, methods of preparing of different type of food items like Lajamanda, Peya, Vilepi, Yusha, Yavaagu etc. Properties of cooked food according to their cooking techniques and raw material are described in this Vargas. Ashita, Peeta, Khadita and Leedha are final forms of all the Kalpanas. It further explains the change in properties of Dravya when it undergoes specific process (Kalpanas); i.e. the Manda, Peya and Vilepi of similar Dravya differ in the properties and digestibility. Manda is easiest to digest than Peya and Vilepi^[9].

This is how Kritanna Varga or concept of Ahara Kalpana is very useful subject for practicing Ayurveda. Dravyas which are used in time of those Samhitas are different and there preparing methods are also changed. Many new Dravyas also are in practice today which hasn't described in classical Samhitas. Some classical Dravyas are not in practice today. Therefore it is a need to revive Ahara Kalpanas in today's context which should be on the basis of description available in classical texts. For e.g. cooking techniques and gazettes like baking, sautéing stewing, smoking, steaming, braising, microwave, induction cooker etc are not in use at that time. Hence any Samhita doesn't describe much about properties of cooked products with these techniques. Observation of gradual development lead to understand different

human body.

utility of *Ahara Kalpana* and one can even get to know the effect of newer techniques of cooking to **Table 1:** *Ahara Kalpana* in *Brihattrayi*

S.No	Kalpana	Charaka Samhita	Sushruta Samhita	Ashtang Samgraha
1	Yavaagoo	+	+	+
2	Peya	+	+	+
3	Udmantha	+	+	+
4	Mantha	+	+	+
5	Shaktu	+	+	+
6	Yoosha	+	+	+
7	Odana	+	+	+
8	Vilepi	+	+	+
9	Soopa	+	+	+
10	Shaka	+	+	+
11	Kambalika	+	+	+
12	Khada	+	+	+
13	Leha (Avalehika)	+	+	+
14	Payas	+	+	+
15	Krishara	+	+	+
16	Shashkuli	+	+	+
17	Kulmasha	+	+	+
18	Veshavar	+	+	+
19	Rasa	+	+	+
20	Mamsa	+	+	+
21	Driklavanika	+	-	+
22	Andarasa	+	-	-
23	Khanishka	+	+	-
24 25	Dadhimanda Udahwita	+	+	+
	Udshwita	+	-	-
26 27	Katvara Khadmuoseh	+	-	+
27	Khadayoosh	+	-	-
28	Upadansha Modaka	+	-	+
30	Utkarika	+	+	+
30	Vartika	+ +	+ -	+
31	Tarpana		-	
32	Tandulambu	+ +	-	+
33	Yavaudana	+	-	- -
35	Apoopa	+		+
36	Pramathya	+	-	-
37	Shuktodaka	+	_	-
38	Poopavarti	+	_	-
39	Yavaka	+	-	+
40	Vatya	+	+	+
41	Dhana	+	+	+
42	Madhukroda	+	_	_
43	Sapindaka	+	+	+
44	Роора	+	+	-
45	Poopalika	+	+	+
46	Gaudhoomika	+	-	-
47	Parpata	+	+	+
48	Pruthuka	+	+	+
49	Yava	+	-	-
50	Sarasa	+	-	-
51	Rasala	+	+	+
52	Vimardaka	+	-	-
53	Panak	+	+	+
54	Raga	+	+	+
55	Shadava	+	+	+
56	Shukta	+	-	-
57	Aasuta	+	-	-
58	Shindaki	+	-	+
59	Kalamla	+	-	-
60	Rasapraleh	+	-	-
61	Laja	+	+	+
62	Lajashaktu	+	+	+
63	Fanita	+	+	+
64	Shushkashaka	+	+	+
65	Virudhaka	+	+	+
66	Tilapinyaka	+	+	+
67	Grinjja	+	+	-
68	Mamsa	+	+	+
69 70	Parishushka Mamsa	+	+	+
70	Ullupta Mamsa	-	+	-
71	Angara pakva Mamsa	-	+	-
72	Shoolika Mamsa	-	+	-
73	Saurava	-	+	-

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74	Uddhrit rasa mamsa	-	+	-
75	Paalala	-	+	-
76	Amla	-	+	-
77	Khada yavagoo	-	+	-
78	Kambalika yoosha	-	+	-
79	Shindaki vataka	-	+	+
80	Kshirakrita bhakshya	-	+	-
81	Ghritapoora	-	+	-
82	Gaudika	-	+	-
83	Madhushirshaka	-	+	-
84	Samyava	-	+	+
85	Sattaka	-	+	+
86	Vishyanda	-	+	-
87	Samita	-	+	-
88	Fenaka	-	+	-
89	Paishtika	_	+	-
90	Vaidala	-	+	-
91	Ulumba	-	+	-
92	Poornakosha	-	+	-
93	Kunavi	-	+	-
94	Kshara parpata	-	-	+
95	Mudga veshavara	-	-	+
96	Aukula	-	-	+
97	Abhyosha	-	-	+
98	Supishtakrit tandulat	_	-	+
99	Mamsapinda	-	-	+
100	Ksharambu	-	-	+
101	Yavagoomanda	-	-	+
102	Lajatarpana	-	-	+
103	Rasika	-	-	+
104	Chandrakanta	-	-	+
105	Khalaka	-	-	+
106	Khalarasadadhika	-	-	+
107	Gulika	-	-	+
108	Swastika	-	-	+
109	Lopika	-	-	+
110	Mishraka	-	_	+
111	Gudapoora	-	_	+
112	Haridraka	-	-	+

Note: + mentioned; - not mentioned

Table 2: Classification of Ahara Kalpana according to Ahara Varga

S. No	Ahara Varga	Charaka	Sushruta	Astanga Samgraha
1	Shooka Dhanya (Cereals)	Yavaagoo, Peya, Mantha, Shaktu, Odana, Veelepi, Krushara, Shashkuli, Kulmasha, Poopavarti, Yavaka, Vatya, Dhana, Madhukroda, Pindaka, Poopa, Poopalika, Gaudhoomika, Prituka, Yava, Sarasaa, Modaka, Utkarika,	Yavaagoo, Peya, Mantha, Shaktu, Odana, Veelepi, Krushara, Shashkuli, Kulmasha, modaka, Utakarika, vatya, dhana, Sapindaka, poopalika, parpata, prithuka, laja, laja saktu, shindaki vataka, Poopa, Khadayavagoo, ghritapoora, madhushirshaka, samyava, sattaka,	Yavaagoo, Peya, Mantha, Shaktu, Odana, Veelepi, Krushara, Shashkuli, Kulmasha, modaka, Utakarika, tandulambu, yavaudana, yavaka, vatya, dhana, Sapindaka, poopalika, parpata, prithuka, laja, laja saktu, shindaki vataka, samyava, sattaka, aukula, abhyosha, supishtakrita
		Vartika, Tarpana, Tandulambu, Yavaudana, Apoopa, Grinjja	Vishyanda, Samita, Fenaka, paishtika, poornakosha, kunavi	tandula, yavagoo manda, gulika, swastika, lopika, mishraka, haridraka
2	Shami Dhanya (Pulses)	Yoosha, Soopa, Parpata, Paayasa, Khadayoosha	Yoosha, soopa, krishara, khadayoosha, virudhaka, tilapinyaka, kambalika yoosha, vaidala, ullumba,	Yoosha, soopa, krishara, virudhaka, tilapinyaka, kshara parpata, mudga veshavara, khalaka, khalarasa dadhika
3	Mamsa (Meat)	Veshavara, Mamsha, Rasa, Drikalavanika, Khaanishka	Veshavara, Mamsha, Rasa, Khaanishka, Parishushka, ullupta, angara pakva, shoolika prokta, saurava, uddhrita rasa mamsa, palala	Veshavara, Mamsha, Rasa, Drikalavanika, mamsapinda, rasika
4	<i>Shaaka</i> (Vegetables)	Shaaka, Khada	Shaaka, Khada, shushka Shaka, khadayoosha, khadayavagoo	Shaaka, Khada, shushka Shaka,
5	Fala (Fruits)	Vimardaka, Panaka, Raga, Shadava	Panaka, Raga, Shadava, Amla	Panaka, Raga, Shadava, Chandrakanta
6	Harita (Green Vegetables)	Upadamsha, Aasuta, Kaambalika	Upadamsha, Kaambalika	Upadamsha, Kaambalika
7	Madya (Alchohol)	Shukta, Shindaki, Kaalamla	Shindaki, Shindaki vataka	Shindaki, Shindaki vataka
8	Gorasa (Milk And milk products)	Koorchika, Kilata, Rasaalaa, Dadhimanda, Udshvit, Katvaram	Payasa, Koorchika, Kilata, dadhimanda, rasala, kshirakrita bhakshya	Payasa, Koorchika, Kilata, dadhimanda, katvara, rasala
9	Ikshu Vikara (Sugarcane Products)	Leha, Rasapraleha, Rasa Pralepi, fanita	Leha, fanita, Gaudika	Leha, fanita, goodapoora

Table 3: Classification of Ahara Kalpana as per final form :

S. No	Formation	Charaka	Sushruta	Astanga Samgraha
1	Ashita-	Yavaagoo, Odana, Veelepi, Krushara,	Yavagoo, Odana, Veelepi,	Yavagoo, Odana, Veelepi, Kambalika
	eatable	Shashkuli, Kulmasha, Poopavarti, Yavaka,	Kambalika, krishara, Shashkuli,	krishara, Shashkuli, kulmasha, veshavara
		Vatya, Dhana, Madhukroda, Pindaka,	kulmasha, veshavara Khaanishka,	Modaka Utkarika Apoopa Yavaka Vatya

		Poopa, Poopalika, Gaudhoomika, Prithuka, Yava, Sarasaa, Modaka, Utkarika, Vartika, Tarpana, , Yavaudana, Apoopa, Parpata, Veshavara, Khaanishka, Kaambalika, Laja, Lajasaktu, Shushkashaka, Virudhaka, Tila pinyaka, Grinjja	Modaka Utkarika Vatya Dhana Pindaka Poopa Poopalika Parpata Prithuka Laja, Lajasaktu, Shushkashaka, Virudhaka, Tila pinyaka Grinjja khada yavagoo, shindaki vataka Gritapoora, gaudika, madhushirshaka, samyava, sattaka, Vishyanda samita, fenaka, paishtika, vaidala, ulumba, poornakosha, kunavi	Dhana Pindaka PoopalikaParpata Prithuka Laja, Lajasaktu, Shushkashaka, Virudhaka, Tila pinyaka, shindaki vataka samyava, sattaka, kshara parpata, mudga veshavara, aukula, abhyosha, supishtakrita tandula, rasika, chandrika, khalaka, khalarasadadhika, gulika, swastika, lopika, mishraka, gudapoora, haridraka
2	<i>Khadita</i> - chewable	Shaktu, Shaaka, Khada, Vimardaka, Raga, Shadava Upadamsha, Koorchika, Kilata,	Shaktu, Shaaka, Khada, Raga, Shadava, Mamsa- Parishushka, ullupta, Angara Pakva, shoolika prokta, Uddhrita rasa mamsa, palala, kshirakrita bhakshya	Shaktu, Shaaka, Khada, Upadamsha Raga, Shadava, mamsapinda
3	Pita- drinkable	Peya, Udmantha, Mantha, Tandulambu, Yoosha, Soopa, Paayasa, Khadayoosha, Mamsha, Rasa, Drikalavanika, Panaka, Aasuta, Shidhu, Madvika, Madira, Shukta, Shindaki, Kaalamla, Dadhimanda, Udshvit, Katvaram	Peya, Udmantha, Mantha, Yoosha, Soopa, Payasa, rasa, Dadhimanda Panaka Shindaki, Saurav, amla, kambalika yoosha	Peya, Udmantha, Mantha, Yoosha, Soopa, Drikalavanika, Payasa, rasa Dadhimanda, Katvaram Tandulambu Panaka Shindaki, ksharambu, yavagoomanda, lajatarpana
4	<i>Lidha-</i> lickable	Rasaalaa, Leha, Fanita	Leha, Rasaalaa, Fanita	Leha, Rasaalaa

DISCUSSION

Life is impossible without food. It provides nutrition to the body to survive but it is not possible to take all the food articles in their raw form. Many of those cannot be digested by the human digestive system in raw form. It needs to be converted in such a form that can be used by the human tissues to get sufficient nutrition from it. This is the primary aim of food processing or Ahara Kalpana. Palatability is another aspect to be considered regarding making of various Ahara Kalpanas. Nutritious food if is in palatable form, it can serve its aim in better way. Apart from these two, Ayurveda describes one other most important objective for using various Ahara Kalpanas i.e. changing the natural attributes. Same Dravya can be used for different purpose by applying different Procedures. Acharya Chakrapani mentioned the idea behind development of the concept of Ahara Kalpana as 'the properties of substances, if are similar to properties of process the total effect will multiply and if these both are opposite, the total effect decreases' ^[10]. Therefore to control and manage the effect of food articles, different types of Ahara Kalpana applies.

These are all the aspect which *Ayurveda* ancestors keep in mind and described the concept of *Ahara Kalpana*. As *Saushruta Tantra* –the first version of *Sushruta* samhita supposed to be the oldest book of *Ayurveda* it has been considered older than *Brihattrayi*^[11]. Recently available *Sushruta Samhita* contains many concepts from original *Saushruta Tantra* and some more editions have been done by *Nagarjuna* and *Chandrata*. The concept of *Ahara Kalpana* seems to be concluded from *Saushruta Tantra* and therefore *Sushruta* is considered here first for particular this subject.

Acharya Sushruta has given 64 different Ahara Kalpanas which contains use of all different diet articles and all cooking methods like frying, boiling, charcoal cooking etc of that era. Acharya Sushruta divided Ahara Kalpana in two classes as Kritanna and Bhakshya. In Kritanna, all types of routine diet with solid, liquid and semisolid formations are given. Bhakshya denotes mainly sweets and snacks. Acharya Charaka has detailed 68 types of Ahara Kalpana which include many Ahara Kalpana from Sushruta. Some Ahara Kalpana edited and 24 new Ahara Kalpana described like Shukta, Aasuta, Madhukroda, Vimardaka etc. Fermentation process for diet articles is firstly given in Charaka Samhita with properties. Total 24 Ahara Kalpanas differ from Charaka to Sushruta. Ashtanga Samgraha has followed both Charaka Samhita and Sushruta Samhita in relation to Ahara Kalpana. It has described mainly all the common Ahara Kalpana of Charaka and Sushruta. It contains 18 new Ahara Kalpana like Rasika, Chandrakanta, Gulika etc. Recent addition of Sushruta Samhita represents the work of 10th centaury which was revised by Chandrata. This may be the reason of detailed description of Ahara Kalpana includes vedic and medieval both.

The highest numbers of non vegetarian Ahara Kalpana are found in Sushruta Samhita which includes all types of cooking of meat like baking, roasting, frying, dried etc. In Vedic era, use of meat as diet is very common as described in Vedas. Being the foremost Samhita, Sushruta Samhita has more influence of Veda and those Vedic rituals that reflects social circumstances of that period. Gradually use of meat has been decreased and in Charaka Samhita non vegetarian Ahara Kalpana has been described very less i.e. only 6. Very less number of non vegetarian Ahara Kalpana indicates that since the era of Charaka Samhita Mamsa (meat) is not the routine diet in India. In addition to this since the era of Vagbhatta, Bauddha Dharma has influenced India and therefore non vegetarian diet became rare in use. So that in Ashtanga Samgraha and Ashtanga Hridaya only 6 Ahara Kalpanas are described which content meat.

Maximum Ahara Kalpana found in Brihattravi are made from Shooka Dhanya Varga i.e. grains or cereals, followed by Shami Dhanya (pulses) and Mamsa (meat) Varga. The reason behind this is the use of cereals as the principal food article for diet ^[12]. Even today cereals are the chief part of Indian food. It may be rice or wheat. In southern and eastern part of India rice is the main part of regular diet while in western part wheat is the chief part of regular menu. Pulses are the part of regular diet in entire country but not as the principal food. It is used with rice or chapatti as secondary food article. Even though rice and wheat are chief food, the Pishta Kalpana (flour) is used lesser then whole grain. This is due to Pishta is not recommended for daily food or consume in less quantity as it is Guru (heavy) to digest^[13]. Maximum Ahara Kalpana with Pishta is described by Sushruta are in Bhakshya varga.

Agni is medium for transformation. With use of heat, diet articles become soft and easily digestible in comparison to raw food. This is the reason maximum numbers of Ahara Kalpana are Saagni- cooked with heat. Only Agni is capable to change the Panchabhautika composition of any Dravya. It is the Paka or Pachana process which changes the whole composition^[14] Therefore all the principle food articles described in Brihattrayi are Saagni Ahara Kalpana. Use of Agni Samyoga was increased with time period for Ahara Kalpana. Gradually more complex preparations and preparations with more than one method came in use. Effect of different mediums of Agni samyoga is also detailed in Sushruta and Ashtanga which shows day by day development of vessels and types of instrument for Agni Samyoga.

CONCLUSION

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The concept of *Ahara Kalpana* described in all treatises of *Brihattrayi* with details of its properties and uses as per context. Study reveals that *Ahara Kalpana* has effect of time period and culture of particular era in its development and

uses. As the concept grows it includes more complex and advanced method and articles for preparation of *Ahara Kalpana*. Thus the review of gradual development of *Ahara Kalpana* leads one to know the whole process of preparation methods and cooking techniques of diet for treatment and preventive measures in *Brihattrayi*. **REFERENCES**

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