Research Article

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PREPARATION OF CHATURTHAMALAKA RASAYANA, A CLASSICAL FORMULATION IN CHARAKA SAMHITA

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ABSTRACT

Introduction: Ayurveda, the oldest traditional healthcare system gives utmost importance to the prevention of diseases by adopting a healthy lifestyle and restoration of health through Rasayana (Rejuvenation therapy). In various texts of Ayurveda, a number of formulations has been mentioned as Rasayana therapies. Out of this, the formulation mentioned after Chyavanprasha Avaleha in classical text is 'Chaturthamalaka Rasayana', which was selected for the study. Its classical preparation methodology quoted for four different combinations of ingredients were practically explored with the aim to provide a standardization strategy for forthcoming preparations. **Methods:** Initially, we collected all the raw ingredients in fresh form and then they were authenticated and further standardized as per the classical and modern parameters. The formulations were prepared by strictly adhering to the instructions mentioned in the classical text for each and every step. **Result and discussion:** When we practically prepared these formulations by adopting the classical methodology, we encountered few difficulties in its preparation and we forced to make few alterations which are addressed in this paper. **Conclusion:** The preparation of 'Chaturthamalaka Rasayana' by the classical method theoretically seems to be very easy, but practically we have to make extra efforts and alterations so that we can get a good quality product. However, it can also be served as a cost-effective alternative to many other Rasayanas like Chyavanprasha.

KEY WORDS: Ayurveda, Rasayana, Chaturthamalaka, Chyavanprasha, Charaka

INTRODUCTION

Ayurveda is the science of life. It is also popularly known as an ancient Indian traditional healing science. Now a days, as technologies get advanced, modern medicine can provide results for the prevention and cure of diseases, but they are complicated and unsatisfactory. One of the best answer is hidden in Ayurveda i.e. Rasayana (Rejuvenation therapy). The term Rasayana is a compound word comprising of two words, 'Rasa' and 'Ayana'. Rasa is derived from the verb root 'Rasa' in the sense of Gati (movement) and thus rasa is so called as it moves constantly¹. In present context of Rasayana, the word Ayana has the sense of attainment. Thus the term Rasayana is a compound word which denotes the process of attaining Ahara Rasa (nutrition) of good quality for the body.

In Charaka Samhita, Chyavanprasha² is mentioned, which is one of the popular and commonly used Rasayana formulation. Just

after this, Chaturthamalaka Rasayana³ is mentioned which has equal benefits, as same as Chyavanprasha. The method of preparation of Chaturthamalaka Rasayana is unique, which substantiates the knowledge of alchemy prevailing in ancient India. Also after online search of articles and reviewing past Rasayana based thesis works, it seems that no one yet studied it before. So we decided to attempt its preparation according to classical text.

Drug Preparation

Chaturthamalaka Rasayana having permutation-combination of three simple Dravyas (material) with four Yoga (combinations) which has property of enhancing the immunity of body and its assumed to keep man healthy alive up to several centuries³. Chaturthamalaka Rasayana has total nine ingredients in the preparation as per listed in table 1.

Table 1: Ingredients of Chaturthamalaka Rasayana

Sr. No.	Dravya	English Name	Latin Name	Family	Part used
1.	Amalaki	Indian gooseberry	<i>Embolia officinalis</i> Gaertn	Euphorbiaceae	Fruit
2.	Haritaki	Chebulic myrobalan	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit
3.	Bibhitaki	Belleric myrobalan	<i>Terminalia bellerica</i> Roxb	Combretaceae	Fruit
4.	Dadhi	Curd	-	-	-
5.	Madhu	Honey	-	-	-
6.	Ghrita	Ghee	-	-	-
7.	Tila Palala (Kalka)	Sesame paste	<i>Sesamum indicum</i> Linn.	Pedaliaceae	Seed
8.	Tila Tailam	Sesame oil	<i>Sesamum indicum</i> Linn.	Pedaliaceae	Oil
9.	Sharkara	Sugar	-	-	-

Collection of raw drugs

Fresh fruits of Amalaki & Bibhitaki were self-collected from Amboli Ghat, Konkan Region, Dist. Sindhudurga, Haritaki from Bhimashankara, Dist. Pune, Maharashtra state. Tila and other remaining ingredients were collected from Jaipur, Rajasthan, in the month of January, after proper identification. All the collected raw materials used in the preparation of Chaturthamalaka Rasayana are in Fig 1.

The collected sample of Amalaki fruit found to be, having wt. of an average 27gm. For the Bibhitaki, as per mentioned in the

classics, average weight should be 1 Karsha⁴ and the collected sample found to be having an average weight of 8gm. For Haritaki, an average weight should be Dwikarshita and the collected sample found to be having an average weight of 18gm. Ghana and Gurvi parameters of Haritaki were found prominent and all the samples of Haritaki when put down in the water sinks at basement proved they possess Jala Nimajjana parameter⁵. All the fresh raw drug samples were identified and authenticated by Mr. Amit Kotiya (specialisation in plant taxonomy and ecology), assistant professor, under the direction of the convener of the herbarium committee held at the department of Botany, University of Rajasthan, Jaipur.

Amalaki Ardra Phala

Haritaki Ardra Phala

Bibhitaki Ardra Phala

Ghrita

Madhu

Tila (Krishna)

Tila Tailam

Sharkara

Dadhi

Palasha Twaka

Fig 1: Raw Materials used in the preparation of Chaturthamalaka Rasayana

Classical method of Chaturthamalaka Rasayana preparation⁶

After attempting 3 trails, we got the final steps as per classical text. In previous few attempts, the number of Upala (cow dung cake) makes the fresh fruit over cooked or under cooked. So after minimizing previous errors, we considered to using the middle sized 8-10 Upala along with Madhyamagni (moderate fire). After authentication of raw drugs, they were washed & cleaned properly. [Ardra Dravya Sankalana]. Then we took them in the alternate combinations as, [A] Amalaki + Haritaki, [B] Amalaki + Bibhitaki [C] Haritaki + Bibhitaki [D] Amalaki + Haritaki + Bibhitaki. Then all of the samples were wrapped with stem of Palasha (Tvaka) with source *Butea monosperma* Linn. and then covered with mud (Mruttika Lepana) up to thickness of Anguli Pramana (approximately 2-2.5cm)⁷. [Mrida Avalipta]. Then kept in sunlight for 5-6 hrs for drying. This dried mud balls were roasted in the fire generated by Upala [Kukulake Swinna] up to it gets hot around 45 minutes. After that it was allowed to cool little bit and upper coating of balls were removed. The steamed fruits

were collected. The pulp and seeds were separated and only pulp was taken to prepare a paste by mortar and pestle [Ulukhale Sampothha]. Equal quantity of Ghrita, Tila Pishti, Tila Tailam and Sharkara were added together in the above prepared four combinations and mild heat was given just to evaporate the extra moisture. After that it was allowed to cool. After cooling, Madhu was added in a quantity discussed before and the whole prepared mixture packed in air tight containers [Dadhi-Ghrita-Madhu-Palala-Taila-Sharkara Samyuktam]. Dadhi is one of the ingredient of the formulations, due to its nature mostly it will reduce the stability and self-life of the test drug formulation. Therefore it was planned to prepare the test drugs without adding Dadhi, which were added later only at the time of experimental studies.

In this way, the four test drugs were prepared and labelled as test drug I, II, III, IV. The raw drugs were taken in a quantity such that they were in the proportion mentioned in the classical reference. (Table 2 and Fig 2)

Table 2: Quantity of raw drugs in the preparation of Chaturthamalaka Rasayana

Sr.No.	Dravya	Test drug I	Test drug II	Test drug III	Test drug IV
1.	Amalaki (Swinna)	125gm	125gm	--	100gm
2.	Bibhitaki (Swinna)	--	125gm	125gm	100gm
3.	Haritaki (Swinna)	125gm	--	125gm	100gm
Total Pulp (wt.)		250gm	250gm	250gm	300gm
4.	Ghrita	250gm	250gm	250gm	300gm
5.	Madhu	250gm	250gm	250gm	300gm
6.	Tila	250gm	250gm	250gm	300gm
7.	Tila Tailam	250gm	250gm	250gm	300gm
8.	Sharkara	250gm	250gm	250gm	300gm
Test drug (wt.)		1500gm	1500gm	1500gm	1800gm
9.	Dadhi	Added in an equal quantity, same as other constituents, at the time of examination.

1.Mruda Avalipta

2.Kukula (Upala)

3.Kukula (Upala)

4.Putapaka

**5.Amalaki + Haritaki Phala
(Lt. Ardra and Rt. Swinna)**

**6.Amalaki + Bibhitaki Phala
(Lt. Ardra and Rt. Swinna)**

**7.Bibhitaki + Haritaki Phala
(Lt. Ardra and Rt. Swinna)**

**8.Amalaki+Haritaki+Bibhitaki Phala
(Lt. Ardra and Rt. Swinna)**

9.Ulukhale Sampothha

10.Agnipaka

11. Test drug I

11(a). Test drug I

12. Test drug II

12(a). Test drug II

13. Test drug III

13(a). Test drug III

14. Test drug IV

14(a). Test drug IV

15. Final Test drugs I, II, III and IV

Fig 2: Chaturthamalaka Rasayana Nirmana Vidhi (Drug preparation)

RESULTS AND DISCUSSION

The quest of man to live longer periods and remain healthy as large as alive, has laid to a fanatic search for miracle or remedies that may produce the desired results. To accomplish the best health, with delayed aging system is also a most desirable thing, even within the life span set by the genetic pattern. For this goal 'Rasayana' are mentioned in Ayurveda, which bestows excellent Rasa, ultimately results in promotion of longevity, alleviation of old age and diseases. Rasayana therapy works at the level of Rasa (nutrition), Agni (Digestion & metabolism), Strotasa (microcirculation) enabling the organism to procure the best quality of different Dhatus (seven primitive factors). Prabhava (exceptional activity) of Rasayana Dravya results in achievement of certain divine effects as well.

On the other hand, to prove the Rasayana effects scientifically, there should be various lab experiments as well as clinical trials of this Rasayana formulation. In a trial, selection of a drug is a milestone because success of the project totally depends on that. Trial drug should be effective, safe, economic, with easily available samples and easy for preparation and administration as well. To fulfil all these criteria. Chaturthamalaka Rasayana might be considered as one of the best formulation which has to be prepared by classical methods to verify its classical claims. In the preparation of Chaturthamalaka Rasayana, we followed the exact classical steps mentioned in Charaka Samhita. The quantity of Swinna Phala (stemmed fruit pulp of Amalaki, Haritaki and Bibhitaki) has been mentioned to be take in a quantity of

Palasahastram (1 Pala = 40gm). The quantity of other raw drugs like Dadhi, Tila Palala, Madhu etc was not mentioned. We took less quantity of a Swinna Phala and by applying the rule of Anukta Pramana⁸, we also took the remaining raw drugs in an equal quantity that of the quantity of total pulp per formulation. Initially, the quantity we decided to take was just for considering the experimental study and not for the commercial purpose. One might be take the quantity of raw drug pulp as much as he wants and the remaining raw drugs same in an equal quantity that of the pulp. In such way we prepared test drugs I, II, III and IV as per classical methods.

The Gandha (odour), Varna (color), Rasa (taste) etc. of the drug in the final product indicates the proper extraction of drugs. On organoleptic examination we observed that, the best drug I, III and IV shows greenish brown colour with non-specific unpleasant odour and with sour-sweet followed by bitter in taste while test drug II shows brownish black colour, odour of Ghrita, sour-sweet followed by astringent taste. A drug (Dravya) performs certain actions (Karma) in the body by virtue of its properties called as Rasapanchaka i.e. Guna (properties), Rasa (taste), Virya (potency), Vipaka (metabolism) and Prabhava, which is available in it in a state of co-inherence (Table 3). Uniformity of proto-elements of the drug on one hand and the proto-elemental constituents of the body on the other hand forms the basis of the Samanya-Visheshha Siddhanta (principle). These principles suggest that the predominant proto-elements of the drug will increase similar proto-elements in the body and the dissimilar will decrease the proto-elements.

Table 3: Rasapanchaka of contents of Chaturthamalaka Rasayana

Sr. No.	Dravya	Rasa	Vipaka	Virya	Guna	Karma/Prabhava
1.	Amalaki	Pancharasa (Lavana Varjita)	Madhura	Shita	Guru, Ruksha	Rasayana ⁹
2.	Haritaki	Pancharasa (Lavana Varjita)	Madhura	Ushna	Laghu, Ruksha	Rasayana ¹⁰
3.	Bibhitaki	Kashaya	Madhura	Ushna	Laghu, Ruksha	Netrya, Keshya, Vaisvaryanashana ¹¹
4.	Dadhi	Amla, Kashaya	Amla	Ushna	Guru, Snigdha	Dipana, Hridya, Pushtikrita ¹²
5.	Madhu	Madhura, Kashaya	Katu	Shita	Laghu, Ruksha	Yogavahi, Chedana, Lekhana ¹³
6.	Ghrita	Madhura	Madhura	Shita	Guru, Snigdha	Rasayana, Dipana, Netrya ¹⁴
7.	Tila	Katu, Tikta, Madhura, Kashaya	Katu	Ushna	Guru, Snigdha	Balya, Keshya, Agnivardhaka, Medhya ¹⁵
8.	Tila Tailam	Madhura, Kashaya, Tikta	Madhura	Ushna	Guru, Snigdha	Bala Varnakaraka, Vrishya, Dipana ¹⁶
9.	Sharkara	Madhura	Madhura	Shita	Laghu, Snigdha	Brihana, Vata-Rakta Pitta-Daha Shamana, Netrya ¹⁷

We used Amalaki with source *Embolica officinalis* Gaertn. which was easily available, get steamed easily and gives maximum quantity of pulp. Someone might be taking the variety of Amalaki with source *Phyllanthus acidus* (L.) Skeels¹⁸, locally known as Rai Amla (Country Gooseberry), for the experimental point of view. Also one may be experimentally utilized modern cooking tools in the preparation of Chaturthamalaka Rasayana especially

for steaming with fresh fruit and may be compared with the final preparations for those with made by classical textual methods.

All the ingredients of the Chaturthamalaka Rasayana show those properties which give overall benefits to keep a healthy life mentioned in Table 3. In Charaka Samhita, as Chaturthamalaka Rasayana comes just after Chyavanprasha which is an Avaleha, it seems that Chaturthamalaka Rasayana also resembles in the form

of Avaleha. From the above all discussion, we consider Chaturthamalaka Rasayana as a one of the alternative to Chyavanprasha.

CONCLUSION

Now a day, there are many popular market products sold in the name of nutraceuticals worldwide which contain vitamins, fats, proteins, carbohydrates, minerals as well as active principles that act in diseases. Chyavanprasha Avaleha is a popular preparation which can be considered as a nutraceutical and has huge annual turnover in the market but simultaneously it has issues of adulteration and cost also. Now a day, the Dashamula with forty ingredients of Chyavanprasha are not readily available. To overcome all these issue, Chaturthamalaka Rasayana is one of the best alternative options in the form of Avaleha. It can be compared with nutraceutical but not with functional food or dietary supplement. Generally it was found that, Avaleha contains proteins, carbohydrates, minerals, vitamins and fats with pharmacologically active substances. Similarly we may explore the Chaturthamalaka Rasayana maximum potential if one follows classical methods of preparation absolutely. In future, It will be an area of research to compare the Chaturthamalaka Rasayana, prepared with classical methods and those with prepared by using modern cooking tools.

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