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Review Article

A CONTEMPORARY STUDY OF YAVAGU (PREPARED FROM RICE) AS PATHYAKALPANA

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Abstract

The goal of Ayurveda is to achieve healthy life by its preventive and curable measures. Ayurvedic texts like Carak Samhita, Susruta Samhita and Astanga Hridaya, the whole dravyas (materials) are classified into two categories viz. Ausadha (drugs) and Aahara (food items). The second part which is known as pathya kalpana is very important while dealing with the patients and disease. Yavagu is one of the common types of pathya kalpana. Its basic ingredient is rice which is easily digestible and having lot of nutrients. It is having the medicinal uses also.

Key words: Aahar dravya; Yavagu; Manda; Peya; Vilepi; Pathya kalpana.

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INTRODUCTION

According to Ayurveda, Arogya (health) is based on diet. Arogya is defined as – a state of no disease with which the physician is primarily concerned.[1] As per Ayurvedic classics, the whole preparations are broadly classified in two categories. Ausadha (Medicinal formulations) having different dosage forms like svarasa (expressed juice), kvatha (decoction) and snehakalpana (oily preparations). Aahara - Dietetic preparations like yavagu (using rice), yusa (from pulses) and mamsa rasa (prepared from flesh).These can be used by a healthy person as well as by a patient.

The dietetic preparations are again classified into two groups:

i. Krtannakalpana,[2] which are prescribed for healthy beings and
ii. pathyakalpana, which are prescribed for patients.

Both of these groups contain same basic preparations like yavagu, manda, peya, vilepi and mamsa rasa. However, in case of pathyakalpana, the liquid media taken for the preparation are generally the decoction of medicinal herbs as required. Pathya can be defined as recipes which should relish the mind and after ingestion should not produce any untoward effect.[3] Pathyakalpana has been described in almost all Ayurvedic texts.

Some of the dietetic preparations mentioned in Ayurvedic classics are:[4]

i. Yavagu / manda (the main ingredient is rice).
ii. Yusa (the main ingredient is pulse).
iii. Mamsarasa (main ingredient is flesh of various animals as indicated).
iv. Raga – ksadava (the main ingredients are sugar, rock salt and juice of Pomegranate.
v. Takrakalpana (curd and water in different ratio).

Out of these, the dietetic preparations made up of rice are the most common. Caraka samhita has described twenty eight types of yavagu altering the decoction of drugs specified for individual disease.[5] Yavagu is prescribed in post operative part of sansodhana karma (purificatory procedure).

Preparation

Yavagu can be prepared with the following ingredients.[6]

- Rice {emphasis is given to swastika/rakta Sali (*Oryza sativa*) (red color rice)},
- Water (depending upon use, it can be plain water for healthy person whereas kvatha prepared from prescribed drugs for diseased)
- Adjuvants like pippali (*Piper longum*), marica (*Piper nigrum*), rock salt and cow's ghee can be used according to taste.

The ratio of rice and water for preparing various pathyakalpana[7] are described in Table 1. The ratio of rice and water may vary according to the preparation and the final recipe. Yavagu is prepared by taking six times of water or decoction and one part of rice. Then it is boiled on mild fire till the rice is cooked and a little amount of water is left in the final recipe. The additives can be added according to taste before serving.

Quality and dose

Kasyapa samhita has described the standard quality of yavagu.[8]

A quality yavagu should possess normal semisolid texture and should not be excessive concentrated or dilute. It should be prescribed

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in warm and fresh condition and not after cooling. The rice grains should be remained intact after the preparation as it can be separated from each other and the ultimate quality is its pleasant and palatable appearance. The dose is prescribed as per digestive capability of the individual i.e. of daily routine diet.[9]

Table 1: Ratio of rice and water in various pathyakalpana

Sl. No.	Food particle	Rice: water
1	Yavagu	1:6
2	Vilepi	1:4
3	Manda	1:14
4	Anna	1:5
5	Krsara	1:6

Table 2: Ratio of rice and water in different finished recipes

Sl.No.	Recipe	Quantity of rice	Quantity of water
1	Manda	Nil	Only water
2	Peya	Almost ½ part	Amount ½ year
3	Yavagu	Mostly rice	A little
4	Vilepi	Only rice	Nil

Pharmacological properties

Commonly, yavagu possesses grahi (digestive and absorbable), balya (strengthen the body), tarpani (nutritious) and vatanasini (pacify the vitiated vata) properties.[10] It also adopts the pharmacological properties of the drug decoction used for specific disease as described by Caraka in the form of 28 types of Yvagu kalpana.

Indications

Yavagu may be prescribed as antipyretic, antidysentric, anticolic, antihel – minthic and antitoxic.[5]

DISCUSSION

In India, rice is generally cooked with water and is usually taken with cooked pulses, vegetables, fish or meat. Since ancient period, several Indian dishes are prepared from rice like yavagu, manda, vilepi, etc. and flavored with spices like pippali, marica, etc. The major carbohydrate constituent of rice is starch which is 72-75%. The amylase content of the starch varies according to grain types. The long grained and superior types are containing up to 17.5% amylase.[11] The detail composition of rice is mentioned in Table 3. This aspect may also have been considered by our Acharyas while indicating that maha tandula and dirghasuka (long grains) are having good digestive property.[12]

Table 3: Composition of rice

Constituent	Husked	Raw	
		HP	Milled
Moisture (%)	9.7	9.6	9.7
Protein (%)	7.7	7.3	6.9
Fat (%)	1.8	1.5	0.54
Carbohydrate (%)	78.1	80.1	82.06
Crude fiber (%)	1.1	0.7	0.2
Mineral matter (%)	1.6	1.1	0.6
Calcium (mg/100g)	15.6	13.0	10
Phosphorous (mg/100g)	386	182	87
Iron (mg/100g)	4.0	28	2.2
Thiamine (mg/100g)	360	210	105
Nicotinic acid (mg/100g)	8.5	2.5	1.0

(Source: Wealth of India, Vol. VII, CSIR, New Delhi)

Starch molecules, which are the source of calories in diets, prepared from rice, when heated in an aqueous or moist environment, swell and rupture and thus permits greater enzymatic digestion by the activity of enzymes like amylases. Resistant starch acts like soluble fiber in the gastrointestinal tract, thus providing the health benefits. Resistant starch has a low glycemic index because of the slow release of glucose.

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Increasing resistant starch content in the diet has the potential to provide several significant health benefits and add value to rice.[13] Application of heat during cooking increases the digestibility of carbohydrates. Keeping these facts in consideration, the ancient Ayurvedic seers has indicated that the patient who is administered for Ayurvedic emetic or purgation therapy in the morning should remain empty stomach in the noon and in the evening, yavagu/peya should be prescribed and continued the same for two meal times of the next day. By doing this, the enzymes in the body responsible for digestion and metabolism, which are generally subdued because of purificatory measures, in a purified person grows strong, stable and becomes capable of digesting all types of food.[14] Studies show that parboiled rice or rice powder gruel, rice water and extrusion – cooked rice has been effectively used for the treatment of non – infectious diarrhea since starch has a lower osmolality than glucose. Even the high concentration of 80 g rice per liter in an oral rehydration solution is drinkable by patients and is highly effective, providing four times more energy than the standard glucose oral rehydration solution (20%). Boiling in excess water, results in leaching out of water soluble nutrients including starch and they are lost when the cooking liquid is discarded. For example, 0.8 percent of the starch was found removed on two washings of the milled rice, but 14.3 percent of the starch by weight was lost from the rice gruel after cooking for about 20 minutes in 10 times (by weight) of water. Protein removal was 0.4 percent during washing and 0.5 percent during cooking.[15]

The protein content of rice is lower than that of wheat. The proteins of the husked and polished rice have a lower biological value but a higher digestibility than those of rice bran and polished rice.[16] The nutritive value of rice protein is high in order, being superior to that of wheat and other cereal products. Colored variety of rice (like rakta sali) contains more iron value than white rice.[17] This may be the reason behind the use of rakta Sali variety of rice in Ayurveda. It has greater nutritive value than that of other varieties of rice.[18]

CONCLUSION

Yavagu is a good pathya kalpana in Ayurveda. Rice, the main ingredient in yavagu is rich in carbohydrate and its easily digestive property with high nutritive value; make it the appropriate food article for patients as well as healthy persons, who have mandagni (low digestive capacity). It also works as the media for various drugs by utilizing drug decoctions in place of water and drug power as adjuvant.

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