



A SURVEY ON USAGE OF *KOLA KANDA* (HERBAL GRUEL) AMONG SRI LANKAN POPULATION

Gamlath G.R.R.S.¹,

Waratenne P. R.²

¹BAMS Scholar (Final year)

Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka.

²Senior Lecturer, Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka.

ABSTRACT

The Charaka Samhita has mentioned the three pillars of life, i.e. *Ahara* (Food), *Nidra* (Sleep) & *Brahmacharya* (observance of celibacy). Among these, food is a major supporting pillar which helps in sustenance of life and maintenance of health. Malnutrition is the most prevalent disease due to lack of having proper food. Malnutrition is a major health problem in Sri Lanka. To overcome the malnutrition a lots of nutritious and profitable food supplements can be implemented. Among them *Kola kanda* (herbal gruel) is a most profitable breakfast. The study was aimed to survey on usage of *Kola kanda* among Sri Lankan population. Data collected by using convenience sampling from randomly selected ten participants from each province of Sri Lanka, by a questionnaire in Sinhala or Tamil. Questionnaire was filled by the participants. The juice of edible leaves is the very specific ingredient in *Kola kanda* which are rich in vitamins and minerals. Hence they are very essential for human body as micro nutrition; a glass of *Kola kanda* fulfills that requirement easily. The other ingredients; i.e. grains and coconut milk in *Kola kanda* are very rich in carbohydrates, proteins and fats. The calories includes in ingredients of *Kola kanda*, it is obvious that one glass of *Kola kanda* contains enough calories as a breakfast. As per the findings the usage of *Kola kanda* among Sri Lankan population was very low percentage, which may be due to the busy life styles. So the study proposed to make aware the society about this divine drink.

Keywords: Ayurveda, *Kola kanda*, Nutrition, Herbal gruel, Malnutrition

INTRODUCTION: As per Charaka Samhita, there are three supports of life, i.e. *Ahara* (Food), *Nidra* (sleep) & *Brahmacharya* (observance of celibacy). Being supported by these three well regulated factors of life, the body is endowed with strength, complexion & growth, and continues until the full span of life, provided a person does not indulge in such regimen as are detrimental to health¹. Among those food is the most important necessity of life. The importance of food has mentioned as;

Aharasambavam vastu rogashchaharasam bhava Hitahitavisheshachcha visheshah sukhaduhkayoh (Cha.Su.28/45)

The body as well as diseases is caused by food. Wholesome and unwholesome foods are responsible for happiness and misery respectively².

There are some characteristics of foods specified by Ayurveda. They are quality, quantity, time which varies with age, constitution, digestive power, season, disease and also from person to person. Person should consume the diet which suitable to him in all features, if deviation from these caused diseases.

Considering the relation of food with the diseases, the most prevalent disease is due to lack of having food; i.e. malnutrition. Malnutrition is a major health problem in Sri Lanka. According to Demographic and Health Survey 2016/17 percentages of under five children are underweight 20.5%, wasting 15.1% and stunting 17.3%. Recent nutritional estimate of this survey doesn't show a positive picture about the current status in Sri Lanka.

The nutritional status of a person highly depends on the quantity and the quality of the food which they consume in day to day life. According to the results of the Income and Expenditure Survey conducted in 2002, nearly one fourth (23.9%) of households in Sri Lanka falls into the group of "poor household". However dietary inadequacy is the basic cause of malnutrition under five children in Sri Lanka³.

In response to this malnutrition in the country can introduce a lots of nutritious and profitable food supplements to be prepared at home in daily. Among of them *Kola kanda* is easy to prepare as a drink that can include in our daily routine, before breakfast to cleanse the body and to get many health benefits. But unfortunately, because of the busy day today schedule, this divine drink has drifted away from us. Therefore this research study was conducted to survey on usage of *Kola kanda* among Sri Lankan population and further makes the society aware of this divine drink.

METHODLOGY: Data was collected by using convenience sampling from randomly selected ten participants from each province of Sri Lanka, by giving the prepared questionnaire in Sinhala/Tamil. The questionnaire was distributed with the help of the institute students. The

questionnaire was filled by the participants and collected data was analyzed. Nutritional values and Ayurveda pharmacodynamics properties of the most prevalence ingredients were collected from the authentic Ayurveda texts and analyzed.

RESULTS AND DISCUSSION

Distribution of Age, Race and Religion of the participants

The age of the 90 participants ranges from 18-73 years and the maximum percentage i.e.31% of participants was in 26-33 years age group and minimum was 66-73 years age group. The most of young people tend to use *Kola kanda*.

The race wise distribution of the participants shows that, Sinhalese was 79 (88%), Tamil was 10 (11%) and Muslim was 01 (01%). This indicates the *Kola kanda* was famous among Sinhalese more than other races. Because of *Kola kanda* endemic drink for years it is more popular among Sinhalese. As most of the Sinhalese people are Buddhist among the participants also 75 (83%) were Buddhist. The religion wise distribution of the participants shows that, Buddhist was 75 (83%), Catholic was 04 (05%), Hindu was 10 (11%), Islam was 01 (01%). As per this people belong to main religions in this country use *Kola kanda*. Maximum 83% (75) were Buddhist people and minimum 1% (1) was Islamic people.

Usage of Kola kanda per month

The highest number of participant i.e.71% (64) drinks *Kola kanda* between 1-5 times per month. That means almost once a week or less than. There are only 7% percentage of participants frequently drink *Kola kanda*.

Sources of collecting leaves

Maximum number of participants were collected the leaves which is the main source of the herbal gruel from their home

garden 73 (73%) and some were bought them from the market 10 (11%) and some 07 (08%) follow the both.

Utilized ingredients

For preparing a *Kola kanda*, 3 main ingredients are used and as per the preference of the individuals they are varied. They are grains, fresh leaves & liquid base. In addition to them some more flavors also can add.

Variations of Grains

When considering use of grains 4 types of grains i.e. Rice (*Oryza sativa*), Mung beans (*Vigna radiata*), Red lentils (*Lens culinaris*) and Black-eyed pea (*Vigna unguiculata*) were observed. 94% of participants were used rice and the rest 6% were used rice flour instead of rice. Small

amount of Mung beans, Red lentils and Black-eyed pea also added with rice flour.

Variations of leaves

Adding one or more leaves juice is very specific for *Kola kanda* comparing with the other gruel. There were 08 types of leaves used by the participants. Among them 05 types of leaves was more prevalence. They were *Gotukola* (*Centella asiatica*), *Hathawariya* (*Asparagus racemosus*), *Karapincha* (*Murraya koenigii*), *Mukunuwanna* (*Alternanthera sessilis*) and *Walpenela* (*Cardiospermum halicacabum*). Their percentage values and other details are mentioned in the table No. 01. The 17% (15) of participants used mixture of the leaves.

Table 01 – Mostly used Leaves with the percentage

Se. No.	Leaves	<i>Dosha Karma</i> ⁴	Participants	
			Number	Percentage
1.	 <p><i>Gotukola</i> <i>Centella asiatica</i></p>	<i>Thridosha shamaka</i>	23	26%
2.	 <p><i>Hathawariya</i> <i>Asparagus racemosus</i></p>	<i>Vata Pitta shamaka</i>	21	23%
3.	 <p><i>Karapincha</i> <i>Murraya koenigii</i></p>	<i>Kapha Vata shamaka</i>	13	14%

4.	 <i>Mukunuwana</i> <i>Alternanthera sessilis</i>	<i>Kapha Pitta shamaka</i>	8	9%
5.	 <i>Walpenela</i> <i>Cardiospermum</i> <i>halicacabum</i>	<i>Vata Kapha shamaka</i>	5	6%

The liquid base: All the participants were used water and Coconut milk as the liquid base i.e. 100%. The method of preparation; especially the time of adding each ingredients, duration of cooking and final processing was differed.

Use of additional ingredients

To increase the taste, odor, appetite etc. various substances were added other than the main ingredients. They are shown in the Table No.02.

Table No.02: Use of additional ingredients

Ingredient	No. of Users	Percentage
Salt	86	96%
Garlic	64	71%
Onion	18	20%
Ginger	13	14%
Pepper	12	13%
Cardamom	05	6%
Lemon Juice	04	4%
Cinnamon	04	4%
Green Chili	03	3%
Tamarind Juice	02	2%
Clove	02	2%

According to the findings the Salt and Garlic were mostly used additional ingredients. Generally all the additional ingredients are adding a specific taste and odor to the herbal gruel and act as appetizers.

Method of preparation: The 84% (76) of people prepared as follows; first cook the rice (about 100g) with 200mL of water and

then add about 100mL of coconut milk and 200mL juice of leaves and salt as per taste to the rice when rice almost well cooked. The 16% (14) was mixed all ingredients with juice of leaves and then cooked.

Use of additional flavors while drinking

The most of participants like to use jaggery (51%) or sugar (6%) while drinking *Kola kanda*.

Analysis of the Nutritional values of the main ingredients⁵.

Table No. 03: Nutritional values of the Main ingredients

Ingredients (100g)	Nutritional values						
	Water	Protein	Fat	Carbs	Vitamins	Calories kcal	Others
Rice	69 g	2.4 g	0.2 g (Omega-3-0.01g)	28.7 g	-	130	-
Coconut Milk		0.72 g	0.2 g	3.7 g	B1, B2, B3, B6, C,E,K	19	Ca, Iron, Mg, P, K, Zn
<i>Gotukola</i>	86.9 g	32.1 g	0.5 g	6 g	C, B1, B2	37	Ca, P, Iron, Zn, Cu
<i>Hathawariya</i>	93.22g	2.2 g	0.12 g	3.3 g	C,E,K	20	Fiber, Glucose, Fructose
<i>Karapincha</i>	66.3 g	6.1 g	1 g	16 g	A, C, B1, B2	-	Fiber, Minerals, Ca, Iron, P
<i>Mukunuwanna</i>	77.4 g	5 g	0.7 g	11.6 g	A, B1, B2, B3	73	Ca, P, Iron
<i>Walpenela</i>	83.3 g	4.7 g	0.6 g	9.1 g	-	61	Minerals, Glucose, Fructose

When considering as a whole ingredients in a one dish it fulfills the components which should include in a balanced diet with the adequate quantity.

CONCLUSION: The daily use of *Kola kanda* among the population was very low but there were considerable amount of participants used to drink *Kola kanda* between 1-5 times per month. Though there are various varieties of edible leaves grow in Sri Lanka, most of the participants were limited for few varieties. Actually these leaves give not only the nutritional values but also give medicinal values too. Instead of using one type of leave mixture of leaves might be more profitable. Finally

it can conclude that implementation of awareness programme in the society about the benefits of this divine herbal drink as a supplementary food for breakfast will lead to a healthy society.

REFERENCES

1. Sharma RK, Dash VB, Agnivesa's Charaka Samhita. (Text with English translation & critical exposition Based on Chakrapani Datta's Ayurveda Dipika), Volume I, Suthra Sthana, 11th chapter (Tisraishaniya), 34. Chowkhamba Sanskrit Series office publishers, Varanasi. Reprint 2017, P.219.
2. Sharma RK, Dash VB, Agnivesa's Charaka Samhita. (Text with English

translation & critical exposition Based on Chakrapani Datta's Ayurveda Dipika) Volume I, Suthra Sthana, 28th Chapter (Vividhashitapitiya), 45. Chowkhamba Sanskrit Series office publishers, Varanasi. Reprint 2017, P.583

3. Department of Census and statistics, Sri Lanka Demographic & Health Survey 2016 Key Finding[Internet] 2017 Available from: https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.statistics.gov.lk/social/DHS_2016a/DHS_presentation/Key%2520Findings.pdf&ved=2ahUKEwiB6su_3sfjAhUy4XMBHQewBrwQFjABegQIBxAI&usg=AOvVaw0JIAC1N3xJDudogu7Ov0by

4. Department of Ayurveda, Ayurveda Pharmacopoeia, Volume I, Part III, published by Department of Ayurveda, Colombo, Sri Lanka. 2006

5. Myfitnesspal.com, Carbs-Calorie Charts, Nutrition Facts, Calories in Food[Internet] 2020, Available from: <https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.myfitnesspal.com/food/>

Corresponding Author: Name: G.R.R.S. Gamlath, BAMS Scholar (Final year) Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka. Email: sripaligamlath@gmail.com

Source of support: Nil Conflict of interest: None Declared

Cite this Article as : [Gamlath G.R.R.S. et al : A Survey on Usage of *Kola Kanda* (Herbal Gruel) Among Sri Lankan Population] *www.ijaar.in* : IJAAR VOLUME V ISSUE I MARCH-APRIL 2021 Page No:13-18