



Proceeding Paper Review on Ayurvedic Health Drinks and Liquid Nutrition Explained in Kshemakutuhala.

R.K.Hima, Arun Mohanan and Dhanya.S

Department of Rasashastra and Bhaishajyakalpana (Pharmaceuticals), Amrita School of Ayurveda, Kollam 690525, India; drarunmohanan@gmail.com (A.M.); dhanyas@ay.amrita.edu(D.S) * Correspondence: Correspondence: rkhima123@gmail.com

Abstract: Kshemakutuhala is a remarkable text by Kshema Sharma, the Royal physician of King Vikrama during the 16th century A.D. It was based on culinary science. This text is a compilation of varieties of foods and drinks, both vegetarian and non-vegetarian food, their characteristics and nutritional value. This work is divided into 12 chapters and each chapter is named Utsava. The author had also given importance to liquid nutrition and had dedicated 2 separate Utsava to that. The Eleventh Utsava describes various appetizer preparations. Different types of appetizers are prepared with the main ingredients such as orange, lemon, citron, sesame paste, mango and lotus fibre. The explanation had been given where all of these ingredients have been proven as a good carminative. In the Twelfth Chapter, he mentioned Various milk preparations, cool drinks, beverages, buttermilk etc. Different types of Panaka (sweet drinks) were prepared out of the main ingredients like raw mango, ripen mango, lemon, tamarind, and the fruits of Syzygium cumini, which balance taste and health, were included in it. He mentioned the natural colouring agents like saffron, red sandalwood and sprinkling spices like cardamom, clove, camphor, Indian bay leaf, black pepper so on, which are used to add flavours to food and drinks. This review helps to explore the scientific aspect of Ayurvedic health drinks and their indication to the modern world. Unhealthy drinks are common in the present time, it is necessary to trace back to ancient classical Ayurvedic text which explains healthy nutritious drinks. By adopting these healthy drinks and liquid preparation, we can maintain and enhance human health however further research is needed to confirm this.

Keywords: Kshemakutuhala; Culinary Science; Ayurvedic Health Drinks; Liquid Nutrition; Panaka

1. Introduction

Ayurveda says that "Sarvam Dravyam Pacha Bothikam" which means everything in the univers

e is made up of 5 basic elements. And they are *Prithvi*(Earth), *Agni* (fire), *Jala* (water), *Vayu* (air), and *Akasha* (atmosphere). Our body as well as the food we consume is made up of these elements. If any of these elements move out of normalcy then it leads to imbalance. So, it is important to maintain the balance of these elements to balance our universe as well as our body. It is said that the stomach is divided into 3 parts on behalf of the food intake. The first part should be filled with solid (*Prithvi*), the second to be filled with water (*Jala Mahabootha*) and the third part should be left free (*Akasha*), this helps in digestion. Diet plays an important role in the prevention of diseases, and maintenance of normal body physiology. Ayurveda explains the preparation and use of different types of liquid nutrition, that act as both nutrition and medicine. This information is scattered in the classical textbooks of Ayurveda and one of those books is '*Kshemakuthuhala*'.

The title *Kshemakutuhala* could be explained as a compound of the two Sanskrit words, '*Kshema*' and '*Kutahalam*', meaning, 'well-being' and 'curiosity respectively, the curious enquiry into the nature of well-being of humans, both physical and mental based on

Citation: R.K.Hima, Arun Mohanan and Dhanya.S; Review on Ayurvedic Health Drinks and Liquid Nutrition Explained in Kshemakutuhala 2, x. https://doi.org/10.3390/xxxxx

Published: 1 October 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/). Ayurveda. The author describes various delicious dishes, by adding notes on their Ayurvedic properties.

2. Methods

2.1. Sources of data collection

This work reveals so much information about liquid nutrition along with its indications. *Kshemakutuhala* had been analysed and reviewed. Forty-six other articles regarding ingredients in the preparations, which are explained in this article were downloaded from the internet and reviewed.

3. Results & Discussion

Green gram and Black gram gruel (Mudgakulmasha Yusha)¹⁰

The gruel was prepared by adding adequate water, rock salt and asafoetida to the sprouted grains of green gram and black gram that are cooked till they become soft and semisolid consistency. The Green gram is rich in proteins, carbohydrates, dietary fibre, vitamins, and minerals².

<u>Rock salt-</u> It is considered the best among all salts. It is advised for daily use as per Ayurveda. It contains trace elements required by the body including calcium, iron, zinc, potassium, magnesium, copper and so on. It improves appetite, removes gas and soothes heartburn³. asafoetida is carminative and reduces bloating and other stomach problem⁴.

Krishara⁵

Twelve parts of unbroken and broken rice grains of the sasti variety (*Oryza sativa*) are mixed with eight parts of green gram, water was added and cooked into a thick consistency. It was added with wet ginger, asafoetida and turmeric. This preparation is good to have during the winters. The action of *Oryza sativa* includes antidiabetic, anti-inflammatory for the airway, diuretic and cures ailments of the gastrointestinal tract ⁶. This preparation provides strength to the body

3.1. Appetizers

Preparation using buttermilk⁷

Ginger was added to the buttermilk which was boiled for a long time and was seasoned with the powdered mixture of asafoetida, rock salt, cardamom and pepper. This drink instantly strengthens the dormant digestive fire. Boiled butter milk act as nectar, it is indicated in chronic cold, cough, in the cold season, breathlessness, indigestion and loss of taste⁸.

Vishyandana9

Buttermilk and milk were taken in equal quantities and heated. When it was reduced into half, one-eighth part of unhusked rice and sesame seeds, equal quantities of the seeds of *Buchanania Latif*olia and *Nelumbo nucifera*, half part of ghee and sugar were added to it. After cooking, dried ginger, pepper, long pepper, camphor and ghee were added to it. This is a good appetizing, tasty drink that helps to promote the growth of the body and strengthen it.

Appetizer derived from the new sprouts of mango (Amrapallava Kshudotakam)¹⁰

The new sprouts of mango that are brownish red in hue should be cut into pieces, mixed with salt and made into balls. This should then be sprinkled with asafoetida and cooked in ghee and milk. It removes the chronic loss of appetite.

Appetizer derived from flowers of mango (Amramukula Kshudotakam)¹¹

Mango buds along with those branches are cut into small pieces and mixed with rock salt, pepper and curds. It can be given to the person suffering from chronic loss of appetite.The flower and sprout of the mango tree, remove bad taste in the mouth, stimulate the digestive fire and improve the appetite.

Appetizer derived from Lotus stem (Mrinala Kshudotakam)¹²

Lotus stem was treated with rock salt and lemon and soaked in water to which pieces of ginger were added. Lotus stems are high in fibre, which adds bulk to the stools and prevents constipation. It also helps in good digestion and cures stomach-related problems.¹³

3.2. Milk Preparation

Candraprabha14-

The milk was boiled partially and rice grains smeared with ghee were added and cooked until rice grain completely became soft. For imparting colour saffron was added to it. This can be consumed along with honey. It imparts strength to the body. The milk contains nutrients like calcium, phosphorus, B vitamins, potassium, vitamin A, magnesium, zinc and vitamin D¹⁵ required for the growth and nourishment of the body.

Sasirekha¹⁶

The drink *Sasirekha* was prepared by adding boiled milk with sugar and rice and cooked till rice became soft. It imparts strength, enhances appetite, cures even severe burning sensations and provides nourishment.

Orange-based milk dish16

The fleshy portion of the orange was cooked by adding ghee and sugar. After cooling, it was added with half-boiled milk in the appropriate quantity along with *Ela* (*Elettaria cardamomum*) to impart fragrance.

Coconut-based milk dish17

The fleshy portion of coconut was cut into small pieces and cooked in milk along with sugar. Milk was boiled for some time to extract the essence of coconut into milk, then it was strained and fumigated with *Aquilaria malaccensis* resin. It is a nutritious, sweet, drink that improves appetite and provides coolness to the body.

Buttermilk Preparation¹⁸

Sour curd from buffalo milk was mixed with the four parts of water and placed in a clean earthen vessel. It was churned in the morning and the supernatant portion was removed. Then the powdered mixture of fried asafoetida, cumin seeds, salt and black mustard in small quantities were added to it. Buttermilk enhances appetite, stimulates the digestive fire helps in digestion, destroys abdominal diseases and nourishes the body

3.3. Curd Preparation

'Hamsini'¹⁹

The thick water-free milk of a cow was mixed with curd and strained. Sugar, cardamom and black pepper were added to it, which stimulates and improves the digestive fire.

Lassi (Rasala)20

Rasala was prepared by mixing sweet curd, sugar, ghee, honey, black pepper and cardamom. Then it was churned along with the addition of camphor. It provides strength, improves appetite, is unctuous and it is good to consume during summer.

Watermelon-based Lassi (Kharabuja Rasala)²¹

It was prepared by mixing sweet curd and small pieces of watermelon. The mixture was endowed with fragrance by the addition of a handful of lemongrass. This drink restores the weakened digestive fire, stimulates appetite, and increases urine output.

Watermelon and mango-based (Kharabuja Rasala)²²

It was prepared by mixing pieces of watermelon, sugar, camphor and wet ginger into the juice of ripe mangoes. This drink can be given to a person exposed to excess sunlight.

3.4. Sweet Drinks (Panaka)

Drink prepared from unripe mango (Apakva Amraphala Panaka)²³

Unripe mango was cooked and pressed to obtain its juice. In that, milk mixed with sugar, black pepper and water (half the quantity of milk) was added to prepare *Apakva Amraphala Panaka*. Unripe mangoes have powerful antioxidants and stimulate the digestive tract to secrete digestive enzymes and help in digestion²⁴.

Drink prepared from ripe mangoes (Apakva Amraphala Panaka)²⁵

Fully ripe mango fruit juice was mixed with sugar, cardamom, cloves, wet ginger and saffron. It is an appetizer, a good aphrodisiac and helps in strengthening the body. The ripe mango juice is a restorative tonic and is used in heat stroke ²⁶.

Drink prepared from the Tamarind fruit (Amlika Phala Panaka)27

The ripe fruit of tamarind was crushed in water to draw out its juice, which was then mixed with sugar and black pepper and rendered fragrant by cloves and camphor. It acts as an appetizer and stimulates the digestive fire.

Drink prepared from Jamun fruit (Jambu Phala Panaka)²⁸

The seed-less fruit of Jamun was crushed along with sugar and water to extract its juice. It was then added with pepper and the leaf of Bhringaraja (*Eclipta prostrata*). This drink acts as a good appetizer. Jamun (*Syzygium cumini*) are a good source of iron and is used as an effective medicine against diabetes, heart and liver disease.²⁹

Lemon-based drink (Nimbu Phala Panakam)³⁰

It was prepared with one part of lemon juice to six parts of sugar syrup, mixed with black pepper and cloves. It acts as a good appetiser. Lemon is rich in vitamin C, which has anti-inflammatory, antimicrobial, anticancer and antiparasitic activities.³¹

Orange-based drink (Narangi Phala Panka)³²

Ripen orange juice was mixed with sugar, wet ginger and powdered camphor to make this drink which enhances the appetite. Orange eliminates toxins from the body, maintains hydration, improves appetite and removes constipation³³.

4. Conclusion

Reviewing the book Kshemakutuhala it was observed that many food preparations of the daily regimen are explained in this textbook. It gives us a comprehensive idea about Indian culinary science, which is well known for different spices, with a variety of ingredients and simple cooking methods. There are so many liquid preparations explained in different *Ultsav* of this book. Some of them highlighted in this article can be easily prepared and used in our daily lives. By knowing their health benefits and importance we

can lead a healthy life by enriching our bodies with soulful food.

Author Contributions: R.K.H is the main author. A.M. and D.S directed and gave suitable suggestions throughout the work. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest

REFERENCE

- 1. Ksemakutuhalam of Ksema Sharma with English translation Utsava 6/25.
- Mekkara nikarthil Sudhakaran, S., & Bukkan, D. S. (2021). A review on nutritional composition, antinutritional components and health benefits of green gram (Vigna radiata (L.) Wilczek). *Journal of Food Biochemistry*, 45(6), e13743. <u>https://doi.org/10.1111/JFBC.13743</u>
- 3. Sarker, A., Ghosh, A., Sarker, K., Basu, D., & Jyoti Sen, D. (2016). HALITE; THE ROCK SALT: ENORMOUS HEALTH BENEFITS. Dhrubo et al. World Journal of Pharmaceutical Research World Journal of Pharmaceutical Research SJIF Impact Factor 6, 5, 408. <u>https://doi.org/10.20959/wjpr201612-7482</u>
- 4. Shahrajabian, M. H., Sun, W., Soleymani, A., Khoshkaram, M., & Cheng, Q. (2021). Asafoetida, God's Food, a Natural Medicine. *Pharmacognosy Communications*, 11(1), 36–39. <u>https://doi.org/10.5530/PC.2021.1.8</u>
- 5.Ksemakutuhalam of Ksema Sharma with English translation Utsava 6/45.
- 6. 6. Burlando, B., & Cornara, L. (2014). Therapeutic properties of rice constituents and derivatives (Oryza sativa L.): A review update. *Trends in Food Science and Technology*, 40(1), 82–98. https://doi.org/10.1016/J.TIFS.2014.08.002
- 7.Ksemakutuhalam of Ksema Sharma with English translation Utsava 11/1.
- 8. NUTRITIONAL AND MEDICINAL IMPORTANCE OF BUTTERMILK (TAKRA) | CCRAS | Ministry of AYUSH (Govt. of India). (n.d.). Retrieved August 13, 2022, from <u>http://ccras.nic.in/content/nutritional-and-medicinal-importance-butter-milk-takra</u>
- 9.Ksemakutuhalam of Ksema Sharma with English translation Utsava 11/15-19.
- 10. Ksemakutuhalam of Ksema Sharma with English translation Utsava 11/20,22.
- 11. Ksemakutuhalam of Ksema Sharma with English translation Utsava 11/21-22.
- 12. Ksemakutuhalam of Ksema Sharma with English translation Utsava 11/23-24.
- 13. Lotus Stem Benefits: 5 Healthy Reasons to Include Kamal Kakdi in Your Diet. (n.d.). Retrieved August 14, 2022, from <u>https://www.in-dia.com/health/lotus-stem-benefits-5-healthy-reasons-to-include-kamal-kakdi-in-your-diet-5445915/</u>
- 14. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/1-3
- 15. 5 Proven Health Benefits of Milk. (n.d.). Retrieved August 14, 2022, from <u>https://www.healthline.com/nutrition/milk-bene-fits#TOC TITLE HDR 5</u>
- 16. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/39,40
- 17. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/5,6
- 18. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/7-9
- 19. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/35,36
- 20. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/43,44
- 21. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/48,49
- 22. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/50,51
- 23. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/52,53
- 24. Incredible Health Benefits Of Raw Mango PharmEasy Blog. (n.d.). Retrieved August 14, 2022, from <u>https://pharmeasy.in/blog/9-incredible-health-benefits-of-raw-mango/</u>
- 25.Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/54,55
- 26. Lauricella, M., Emanuele, S., Calvaruso, G., Giuliano, M., & D'anneo, A. (2017). *Multifaceted Health Benefits of Mangifera indica L.* (*Mango*): *The Inestimable Value of Orchards Recently Planted in Sicilian Rural Areas*. <u>https://doi.org/10.3390/nu9050525</u>
- 27. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/56-58
- 28. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/59-60
- 29. Patil, S. S., Thorat, R. M., & Rajasekaran, P. (n.d.). Utilization of Jamun Fruit (Syzygium cumini) for Production of Red Wine.
- 30. Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/65-66

- 31. Klimek-szczykutowicz, M., Szopa, A., & Ekiert, H. (2020). Citrus limon (Lemon) Phenomenon A Review of the Chemistry, Pharmacological Properties, Applications in the Modern Pharmaceutical, Food, and Cosmetics Industries, and Biotechnological Studies. *Plants*, 9(1). https://doi.org/10.3390/PLANTS9010119
- 32.Ksemakutuhalam of Ksema Sharma with English translation Utsava 12/69-70
- 33. Milind, P., & Dev, C. (n.d.). ORANGE: RANGE OF BENEFITS. *IRJP*, 2012(7), 3. Retrieved August 14, 2022, from www.irjponline.com