

A Scientio-Vedic Approach for Use of Lotay as an Appropriate Drinking Water Vessel

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Abstract:- Water is an essential element for the survival of all living creatures on earth. No life is possible without water. Drinking water is quite essential, similarly, proper drinking manners are significant in maintaining health. In the present study, we recommend a specific shape of drinking water utensil as an essential and influencing factor for human health. The shape of the drinking water utensil should be a curved surface, rather than a plain cylindrical water bottle, we recommend the old Indian Lotay for the best drinking water utensil. To support our hypothesis we conducted a questionnaire-based double-blind study based on STORB guidelines. The study was conducted on 400 people from different circumstantial and age groups, based on 16 questions. We found that the people drinking directly with the modern day plastic water bottles are more prone to the digestive issues such as indigestion, acidity, and gastritis. Hence we strongly oppose the existing water bottle shape (cylindrical with a narrow neck) for drinking, because it physiologically harms the human health.

Keywords:- Drinking Water Vessel, Lotay, Water Bottle, Oxidation, Gastrointestinal Diseases.

I. INTRODUCTION

Indian literature advocates five major elements of Panchamahabhuta as the base of all cosmic formations [1]. Water is the fourth important element of panchamahabhuta and the base of development of life. Ayurvedic drinking water rules propose a balanced food and water ratio for healthy and balanced life which is known as aahar pana balance [2]. Procedures for purifying drinking water have been reported in Ayurveda. Ayurveda also emphasizes the therapeutic, contra-indications, and medicinal uses of water. It plays a major role as an essential body-forming component of all the living beings, water consist of 73% of the total body mass of the brain, and 83% of the lungs and it is also found in bones. Water is reported as the restorative source as well as an essential unit of life on earth [3]. It is a major source of hydration, proper digestion, elimination, assimilation, temperature, and health maintenance [4]. Any valid scientific evidence is not yet reported that may define the principle of water intake for a healthy life. Ayurveda reports that water should be taken neither in very less quantity nor in excess, which can harm human health in various undefined manners. Ayurveda defines water drinking before any meal cause scragginess whereas, after the meal, it is potent enough to cause obesity and indigestion [5,6] (Sushrut Samhita). It is been widely observed that it plays a significant

role in electrolyte and fluid balance. Excess water intake can even harm by causing toxicity. Less water intake in diarrhea, anemia, and hemorrhoids is strictly restricted [7]. Different methods of drinking water are mentioned in Ayurveda, but the modern scientific world is still unaware of the perfect drinking water utensil (figure 1) and its impact on human health.

II. LIST OF FIGURES



Fig 1. Proposed drinking water vessel design (Lotay).



Fig 2. Ancient drinking water vessel from Harappa (a) and Egyptian civilization (b).

III. METHODOLOGY ADOPTED

A double-blind questionnaire-based study was conducted on 400 people, beyond the limitations of age, race, ethnicity, and gender. 16 questions related to the water drinking habits of the people were included in the questionnaire based on STROBE guidelines. The included questions were 1. Amount of water intake daily by an individual, 2. Most preferable drinking water, 3. Frequency of water intake 4. Type of vessel preferred for drinking, 5. Most compatible water vessel shape, 6. Most preferred posture for drinking water, 7. Stomach problems appeared in the last five years such as gastritis, acidity, IBS, and indigestion, 8. Frequency of acidity, 9. Frequency of appearance of gastritis, 10. The appearance of renal pain, 11. Painful urination, 12. The intensity of joint pain appeared in the last 5 years, 13. The appearance of swelling and joint pain in the last 5 years, 14. Frequency of alcohol consumption and Locality of the participants, 15. Preferred drinking water is either very cold, cold, normal, lukewarm, and hot, or 16. The body type of the participants. These questions were included in the study because obesity, drinking water habits, amount of water intake, and posture of water intake are directly proportional to the appearance of gastrointestinal and arthritis symptoms. No evidence of the importance of the shape of the drinking water vessel is reported.

IV. RESULT AND DISCUSSION

Based on conducted double-blind questionnaire study we evaluated that only 10 percent of the total population drink 10 liters of water daily, 32 percent of the total population drink 6 liters, whereas 45% of the total population drink only 4 liters of water daily (figure 3). 68 percent of the total population prefer fresh filtered water for drinking, 21 percent of participants drink unfiltered water and 7 percent of the population drink packed water (figure 4).

The frequency of water intake in 50% of participants was hourly whereas 35 percent of the participants take water once in two hours, and nine percent claimed to drink water at the time of meal only (figure 5). Rational water intake is very important for a healthy life, less water intake or water intake at the time of meal only, can badly harm and cause fluid imbalance.

The most preferable drinking water vessel was the bottle, whereas only 12 % of participants drink water from Lotay (Figure 6). On analyzing their individually filled forms, we found such participants mostly belong to the rural area and are less prone to GI tract disorders.

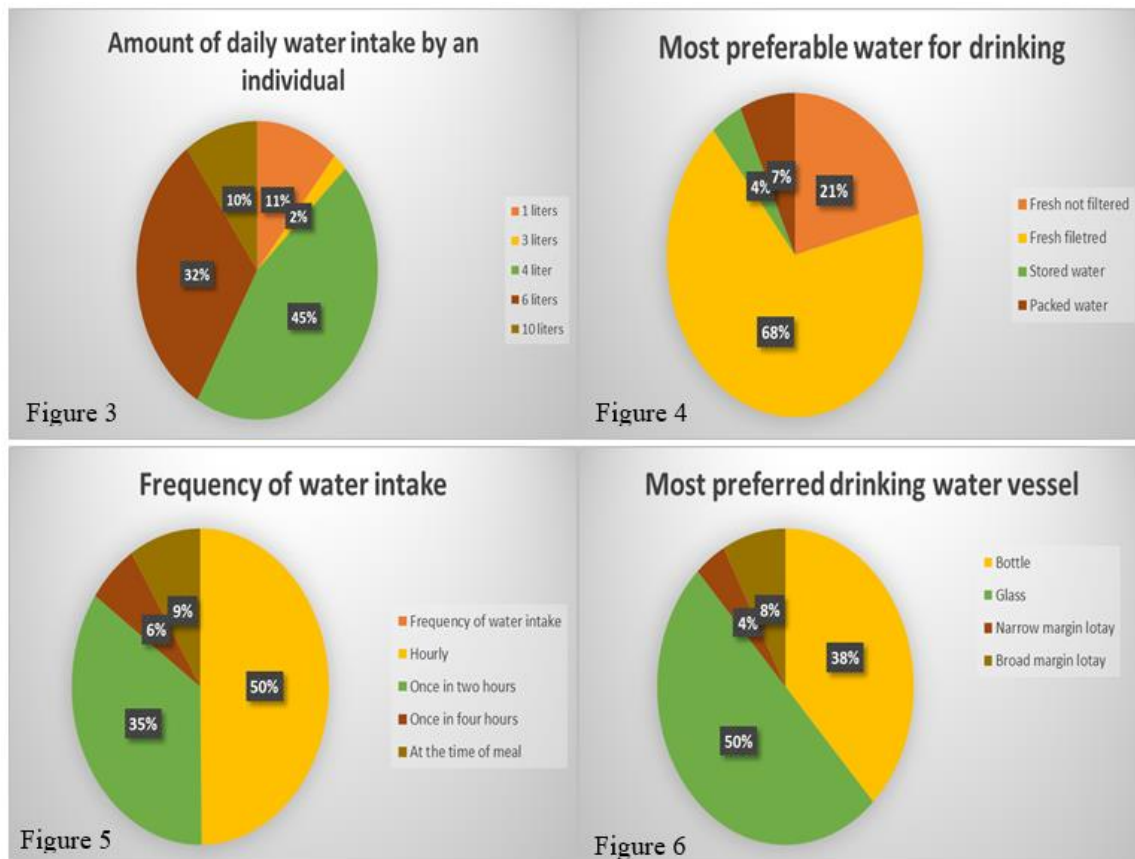


Fig 3a. Showing study results on different parameters studied.

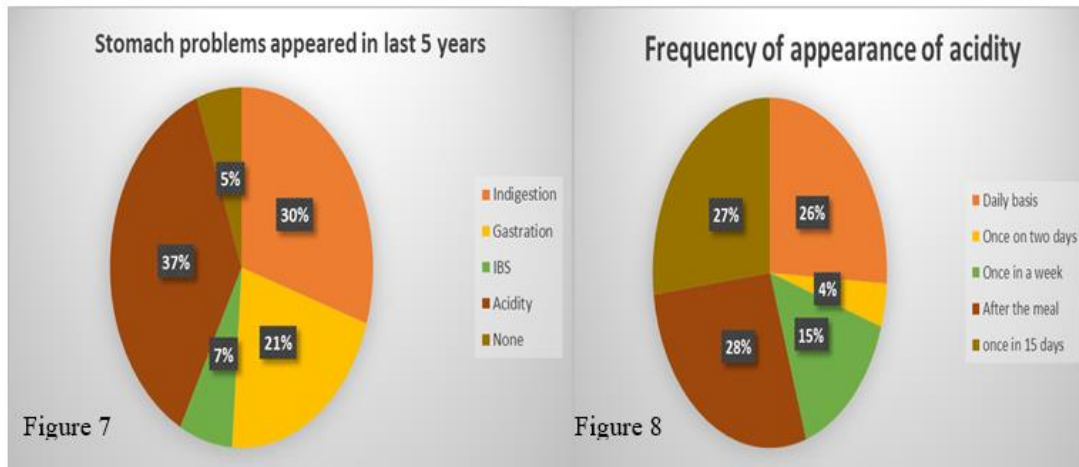


Fig 3b. Showing associated health issues studied due to wrong drinking habits.

In the last five years, the most prominent GI tract disorder that appeared was acidity 37 percent, indigestion 30 percent, and gastritis 21 percent, whereas 7 percent of participants complained of other IBS symptoms. It is well-established fact that disturbed fluid balance in the body is responsible for such (IBS) disorders [8,9,10] (figure 6). In more detailed studies based on acidity, the study results reveals that frequency of appearance of gastritis was 26 percent, which is a higher rate, 28 percent of the participants reported gastric trouble after the meal and 27 percent claim its appearance once in 15% days (figure 7). In a details analysis of individual results, we found no or at least gastric issues were seen in students and comparatively decreased symptoms were seen in people residing in the rural area and their preferred water vessel was Lotay and glass. It has been evaluated from the archeological aspects that ancient civilizations such as Harappa and Egyptians also use curved utensil for drinking water (figure 2).

V. ADVANTAGE OF INVENTION

1. An advantage of the present invention is, it increases the oxidation level of the water. Oxygenated water also increases the level of oxygen radicals in the body. Oxygenated water boosts immunity up to 100 percent for 120 minutes [8].
2. It increases the secretion of liver enzymes in the body which promotes digestion and deteriorates IBS symptoms [9].
3. An advantage of the present invention is, that it plays a major role in re-balancing the fluid imbalance in the body, which helps in decreasing acidity, gastritis, and indigestion (Figure 1).
4. An advantage of the present study is its curved surface and specific structure, which regulate the capillary action and help in proper filtration through nephrons.
5. The vital use of Lotay will also provide a great passage, to get rid of hazardous impact of plastic wares, which are harmful for entire planet in uncountable manners. The lotay are reusable with zero side-effect towards the nature and society as well. Via a questionnaire-based double-blind

study we evaluated that, people drinking water by lotay are less prone to joint pains.

6. People drinking water from lotay are more immune because of water getting oxygenated, and atmospheric oxygen directly gets mixed in the water due to turbulence.
7. The specific design of lotay psychologically influences the person to drink water in a controlled amount, because of the specific design of the neck, which inhibit water dysphasia in the esophagus.

As the result of the present double-blind trial our hypothesis was proved and based on an above study we claim lotay to be a safe drinking water vessel from health aspects because the present scenario of modern sedentary lifestyle people are more prone to GI tract disorders. Drinking water utensils, frequency of water taken, and amount of water play a vital role in the appearance of such disorders. Lotay will also help in avoiding the use of plastic wares in daily life, which have longest decay period and causing irreversible harm to the planet.

REFERENCES

- [1]. Srikanthamurthy, K., Eds., Shushrut Samhita, English Translation. Varanasi: Chaukhamba Orientalia, Sutrasthan. 2012; 41/3, pp. 290.
- [2]. Acharya Y.T. Eds., Charaka Samhita. Varanasi: Chaukhamba Sanskrit Sansthan. Chikitsa Sthana.2001; 15/39-40. pp. 516.
- [3]. Yadav Sharma Eds., Sushruta with Bhanumati commentary by Chakrapani. Jaipur: Shri Swami Lakshmi Ram Trust Series, Sutrasthan. 1939; 45/ 3 pp.307.
- [4]. Jéquier E, Constant F. Water as an essential nutrient: the physiological basis of hydration. Eur J Clin Nutr. 2011;65(7):877-877. doi:10.1038/ejcn.
- [5]. Upadhyay, Y., Eds., VagbhataAstanghrdayam with Vidyotini commentary of KavirajaAtridev Gupta. Varanasi: ChoukhambaPrakashan, Sutrasthan.2009; 8/46, pp.103

- [6]. Sushrut Samhita with Nibandhsangrah commentary of Dalhana Sutra Chikitsa 27/6 retrieved from niihm.nic.in/ebooks/esushruta.
- [7]. Szinnai, G., Schachinger, H., ArNAUD, m.j., Linder, L., Keller U. Effect of water deprivation on cognitive motor performance in healthy men and women, *American Journal of Physiology Regulatory Integrative and Comparative Physiology*. 2004; 289,275-280.
- [8]. Schoenberg MH, Hierl TC, Zhao J, Wohlgemuth N, Nilsson UA. The generation of oxygen radicals after drinking of oxygenated water. *Eur J Med Res*. 2002; 28;7(3):109-16. PMID: 11953281.
- [9]. Gruber R, Axmann S, Schoenberg MH. The influence of oxygenated water on the immune status, liver enzymes, and the generation of oxygen radicals: a prospective, randomised, blinded clinical study. *Clin Nutr*. 2005 Jun;24(3):407-14. doi: 10.1016/j.clnu.2004.12.007. Epub 2005 Apr 21. PMID: 15896427
- [10]. Das Bhagwan Eds., *Ayurveda SoukhyamTodaranda*, New Delhi: Concept Publishing Company 1980, Chapter 14/90, pp.232.
- [11]. Madhava Nidana with Madhukosh commentary by Vijayrakshit chapter 6/7-8 retrieved from niihm.nic.in/ebooks/emadhavnidana.