



CRITICAL EVALUATION OF WATER PURIFYING METHODS IN ANCIENT INDIA W.S.R. TO AYURVEDA

SUBHASH WAGHE^{1*} DHANASHRI JOSHI²

Professor and HOD, Dept. of Roganidana, Sarvepalli Radhakrishnan College of Ayurveda & Research Center, SRK University, Bhopal (M.P.), INDIA

Professor and HOD, Dept. of Kriyasharir, Amrapali Ayurvedic Medical College & Hospital, Behta Mujawar Unnao (UP), INDIA

Corresponding Email id: carenidan@rediffmail.com Access this article online: www.jahm.co.in

Published by Atreya Ayurveda Publications under the license CC-by-NC-SA 4.0

ABSTRACT:

Water is essential component of the human body. Impure water contains many impurities. Safe and palatable water drinking is essential for maintaining the health. Ancient Indian medical science, Ayurveda emphasizes on safe water drinking practices. Ayurveda had described different types of water sources like well, river, ocean, waterfall, pond etc. Ayurveda had mentioned the hazards of drinking unclean and unpalatable water. Ayurvedic acharya Sushruta had not only mentioned about the water purifying process but also about disinfecting the water to avoid the water borne diseases. As per Ayurveda, drinking unsafe and impure water may lead to diseases like oedema, anaemia, indigestion, skin diseases, cough, rhinorrhoea, abdominal pain, abdominal distension, fever, anorexia, conjunctivitis and goitre. Ayurveda had advocated the use of *Nirmali* seeds, Lotus root, Spirogyra root, cloth, pearl, Hessonite stone water and alum for purifying the water. Similarly, the ancient methods to disinfect the water include keeping the water in sunlight, boiling the water under heat, immersing the hot iron ball in the water etc. For making the water palatable and removing the bad odour from the water, Ayurveda had suggested to make it scented with lotus, pandamus (*Ketaki*), Mesua ferrea (*Nagakeshar*), Michelia (*Champa*), Stereospermum suuaveolens (*Patala*). In ancient water purifying process, water was used to stirred with Alum primarily. Alum is well known for settling the dust to the bottom. Cloth was used to arrest the impurities in water by straining. Later water was used to get treated with Strychnus potatorum seeds to make it clean. Later water was heated to boiling point to make it germ free. It is observed that drinking impurified water leads to water borne diseases. It is concluded that water purifying and disinfecting methods are very well described in ancient Indian medical science, Ayurveda.

KEYWORDS – *Dushita Jala, Nirmalikaarana, Prasadana*, purification, disinfection

INTRODUCTION

Water is an essential component of the human body. Safe and palatable water drinking is essential for maintaining health. Ancient Indian medical science, Ayurveda emphasizes on safe water drinking practices. Ayurveda had described different types of water sources like well, river, ocean, waterfall, pond etc. Ayurveda had mentioned the hazards of drinking unclean and unpalatable water. Acharya Sushruta, had given the detail account of water purifying and disinfecting process in 46th chapter of *Sutrasthana* of his text Sushrut Samhita. Ayurvedic acharya Sushruta had not only mentioned about the water purifying process but also about disinfecting the water to avoid the water borne diseases. Acharya Vagbhata had mentioned the impurities in uncleaned water, hazards of drinking impurified water and process of cleaning the water in 6th chapter of *Sutrsthana* of his text Ashtang Samgraha. As per Ayurveda, drinking unsafe and impure water may lead to diseases like edema, anemia, indigestion, skin diseases, cough, rhinorrhoea, abdominal pain, abdominal distension, fever, anorexia, conjunctivitis and goitre. Ayurveda had advocated the use of *Nirmali beeja* (Strychnus potatorum seeds), Lotus root, Spirogyra root, cloth, pearl, Hessonite stone water and alum for purifying the water. Similarly, the ancient

methods to disinfect the water include keeping the water in sunlight, boiling the water under heat, immersing the hot iron ball in the water etc. For making the water palatable and removing the bad odour from the water, Ayurveda had suggested to make it scented with lotus, pandamus (*Ketaki*), Mesua ferrea (*Nagakeshar*), Michelia (*Champa*), Stereospermum suuaveolens (*Patala*).

MATERIAL & METHODS

Literary analytical method of research is adopted in present study. Classical Ayurvedic texts such as Sushrut Samhita, Charak Samhita, Ashtang Samgraha have been referred for literary search.

REVIEW OF LITERATURE

Impurities & Contamination of water

The water which is contaminated with insects, urine, stool, eggs of flies, dead body, bush, poison, mud, algae and the water which does not get the sunlight is said to be contaminated.^[1]

Pathological water

The water which develops pathological taste, odour, colour, touch and which is full with waste and to which aquatic animals and birds have left, which had lost its natural qualities is a pathological water.^[2]

The water which is slimy, with microbes, with waste, with algae, with altered odour, taste,

and colour, which is concentrated is Pathological. [3]

Drawbacks of contaminated water

Contaminated water develops six drawbacks.

1. Roughness (*Kharata*), Sliminess (*Pichhilata*), hotness (*Aushnya*), Sensitiveness (*Danta Agrahita*) are the tactile drawbacks (*Sparsha doshas*). 2. Mud (*Panka*), Sand (*Sikata*), Algae (*Shaiwal*), multiple colour (*Bahu Varnata*) are the appearance drawbacks (*Rupa doshas*). 3. Appearance of taste is a *Rasa dosha* (taste drawback). 4. Lack of natural scent is *gandha dosha* (olfactory drawback). 5. If on consumption individual develops salivation, thirst, heaviness, then it indicates *Veerya dosha* (Potency related drawback). 6. If on consumption individual develops indigestion, abdominal gurgling then it indicates *Vipak dosha* (metabolization related drawback). [4]

Hazards of Impure water

Drinking unsafe and impure water may lead to diseases like oedema (*Shotha*), anaemia (*Pandu*), indigestion (*Ajirna*), skin diseases (*Twak Vikara*), cough (*Kasa*), rhinorrhoea (*Pratikshyaya*), abdominal pain (*Udar Shoola*), abdominal distension (*Udar Addhman*), fever (*Jwara*), anorexia (*Agni Sada*), conjunctivitis (*Netra Abhisyanda*), Itching (*Kandu*) and boils (*Ganda*). [5] [6]

Purification of water

The water should be made clean with cleaners like grass root (*Parni moola*), Lotus root (*Bisa Granthi*), Pearl (*Moti*), Strychnus potatorum seeds (*Katak/Nirmali Beeja*) and cloth (*Vastra*), Spyrogyra (*Shaival*), Hessonite water (*Gomedaka*) and with precious stones (*manis*). [7] [8]

Disinfection of water

The water should be made disinfected by keeping the water in sunlight, boiling the water under heat, immersing the hot iron ball in the water etc. [9]

Scenting of water

The water should be made scented with deodorants like Pandamus (*Ketaki*), Mesua ferrea (*Nagakeshar*), Michelia (*Champa*), Stereospermum suuaveolens (*Patala*) and Neria indicum (*Karveera*) [10] [11]

DISCUSSION

Acharya Sushruta had given the detail account of water purifying and disinfecting process in 45th chapter of *Sutrasthana* of his text Sushrut Samhita. Acharya Charaka had mentioned about the unsafe and uncleaned water in 27th chapter of *Sutrasthana* and 3rd chapter of *Vimansthana* of his text Charaka Samhita. Acharya Vagbhata had mentioned the impurities in uncleaned water, hazards of drinking impurified water and process of cleaning the water in 6th chapter of *Sutrsthana* of his text Ashtang Samgraha. Acharya

Sushruta not only mentioned purifying the water but also about disinfecting the water to avoid the water born diseases. Water was used to stirred with Alum primarily. Alum is well known for settling the dust to the bottom. Cloth was used to arrest the impurities in water by straining. Later water was used to get treated with *Strychnus potatorum* seeds *Nirmali beeja* (*Strychnus potatorum*) seeds is also called as water filter tree in English. It acts as wormicidal. It is also useful in abdominal pain, cough and anaemia. Pearl was also used for cleaning process. The ancient disinfection process included procedures like keeping the water in sunlight, boiling the water under heat, immersing the hot iron ball in the water etc. Heating the water to the boiling point kills all disease-causing germs. Ancient method of water disinfection like keeping the water in sunlight, may be correlated with modern method of solar purification in which the ultraviolet sunrays kill the germs in the water. Pandamus (*Ketaki*), Mesua ferrea (*Nagakeshar*), Michelia (*Champa*), Stereospermum suuaveolens (*Patala*) are the famous scented drugs (*Sugandhi Dravyas*) in Ayurveda. They were used to remove the bad odour from the water and thereby to make it palatable. In modern era also alum is used for purifying the water. In Indian villages, purification by alum (*Kankshi*) is still practiced.

The ancient method boiling as method of disinfection is practiced both in urban as well as rural parts of the India. *Ushira* (*Vitivera zizanoides*) and *Chandana* (*Santalum album*) is still used to give pleasant odour to the water across India. Thus, we find that ancient methods of water purification and disinfection are still practiced in India. The other modern method of water purification includes Ultra filtration, reverse osmosis Modern method of water disinfection include chlorination, iodination and boiling of water.

CONCLUSIONS

Drinking impurified water leads to water borne diseases. Water purifying and disinfecting methods are very well described in Ayurveda. Water can be made more palatable using Ayurvedic herbs. Aroma of medically treated water may induce the pleasant sensation in the body. Ancient methods of water purification are still used in many parts of the India.

REFERENCES

1. Atrideva (Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 45, verse no. 9-11, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975 :164
2. Vidyadhar Shukla, Ravidutta Tripathi, **Charak samhita** of Charaka and Agnivesha, Vimansthana, chapter 3, verse no. 2, 1st edition, published by Chaukhamba Sanskrit Pratishthan, 4360/4, ansari road, , New Delhi, 2019 :569

3. Vidyadhar Shukla, Ravidutta Tripathi, **Charak samhita** of Charaka and Agnivesha, Sutrasthana, chapter 27, verse no. 215, 1st edition, published by Chaukhamba Sanskrit Pratishthan, 4360/4, Ansari rd, New Delhi, 2019 :410

4. Atrideva (Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 45, verse no. 11, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975:164

5. Atrideva (Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 45, verse no. 12, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975:164

6. Lalchandshastri, Ashtangsangraha of Vagbhata, sutrasthana, chapter 6, verse no. 24, 2nd edition, published by Shree Baidynath Ayurved Bhavan Ltd, Nagpur, 1981:210

7. Atrideva(Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 45, verse no. 12,

hindi translation, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975:164

8. Lalchandshastri, Ashtangsangraha of Vagbhata, sutrasthana, chapter 6, verse no. 8, 2nd edition, published by Shree Baidynath Ayurved Bhavan Ltd, Nagpur, 1981:210

9. Atrideva (Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 45, verse no. 12, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975: 164

10. Atrideva (Translator), Sushruta Samhita of Sushruta, Sutrasthana, chapter 4, verse no. /12, 5th edition, published by Motilal Banarasidas, Jawahar Nagar, Banglo rd, New Delhi, 1975:164

11. Lalchandshastri, Ashtangsangraha of Vagbhata, sutrasthana, chapter 6, verse no. 28, hindi translation, 2nd edition, published by Shree Baidynath Ayurved Bhavan Ltd, Nagpur, 1981:210

CITE THIS ARTICLE AS

Subhash Waghe, Dhanashri Joshi. Critical evaluation of water purifying methods in ancient India W.S.R. to Ayurveda. *J of Ayurveda and Hol Med (JAHM)*. 2023;11(4):109-113

Conflict of interest: None

Source of support: None