



## JALA JANAPADODHWANSA- AN INDEED SUBJECT TO DISCUSS

## Ayurveda

Dr Jyoti Rani

Assistant Professor (agad Tantra) Shri Baba Mastnath Ayurvedic College, Asthal Bohar, Rohtak, Haryana, India.

Dr Nisha jaglan\*

Assistant Professor (agad Tantra) Shri Baba Mastnath Ayurvedic College, Asthal Bohar, Rohtak, Haryana, India. \*Corresponding Author

## ABSTRACT

Water is essential for life and it is told as *jeeva* in *Ayurveda*. Water pollution becomes threat nowadays because there is no life without water. In *ayurvedic* concept, pollution is described under heading of *janapadodhawansa*. Many method of water purification has been told in *Ayurveda* context in which some can be adopted nowadays also. RO and chemical purification deprive essential nutrients from water and this is not good for health. *Ayurvedic* method should be adopt for water purification so that body gets its nutrients.

## KEYWORDS

Janapadodhwansa, Jeeva, Kalusha, Hamsodaka, Environment

## Introduction

Environment pollution is becoming a threat to human health for which human itself is responsible. People cutting plants; dispose their waste in water and land. Due to which natural disaster takes place. Recently amazon forest which was named as lungs of earth, take on fire. Countless Plants and animal were destroyed. <sup>(1)</sup>

Environment has a direct impact on physical, mental and social wellbeing of every living plant and animal. The ecological concept raises two issues that are imperfect man and imperfect environment. History argues strongly that improvement in human adaptation to natural environment can lead to longer life expectancies and better quality of life – even in the absence of modern health services <sup>(2)</sup>

*Acharya caraka* has explained in detail about *janapadodhwansa* which is related to epidemic disease. Its four types are- *vayu,jala, desha* and *kaala*.

*Acharya caraka* had explained causes for *janapadodhwansa* *Adharma, purvajanamkrit paap* and *pragyaapradha* *Sastraprabhava* *Rakshasha* and *bhoota samooaha* *Abhishapa*

One of essential public health care element is safe drinking water and sanitation. In 1990, more than one billion people in developing world lacked access to safe drinking water <sup>(3)</sup>

## importance of jala

In Ayurveda, water is considered as '*Jeevan*' (life). It is *aaswadam* (sweet), *Sheetala* (cold) and *hardya*( good for heart), *budhipar bodhanam*(gives happiness, amritam(nectar)<sup>(4)</sup>. Cold water destroy *rukshata*(dryness), *pittaja* condition, *visha*(toxin) and relieves *Daha* (thirst), *Moha* (loss of mental block), *Bhrama* (giddiness), *Ajeerna* (helps in digesting food), *murcha*( fainting), *madatyaa*(alcohol intoxication).<sup>(5)</sup>

In contemporary view, same qualities are described. Water is present in each cell of body and it act as building material in many tissue. Water act as excellent solvent for ionic compound and solute for glucose, amino acid, a reactant, a reaction medium and reaction product. It controls body's homeostasis because it transfer nutrients and remove toxin from cell. Water control the body temperature in warm and cold environment and w combination with viscous molecule, forms lubricant for joints, saliva, gastric and intestinal mucus secretion in digestive tract.<sup>(6)</sup>

Synonym of jala- paniya, jala, aapa, ambu, paya, neera, jeevana, vaari

Sudha jala quality

Qualities of water-

According to sushruta <sup>(7)</sup>

- Nirgandha- devoid of odor
- Avayktarasam- devoid of taste
- Trushanaghanam- pacifies thirst

- Suchi- clean and pure
- Sheetlam- cold
- Acha- clear/transparent
- Laghu- light for digestion
- Hrudaya- good for heart
- According to modern safe water is defined as-<sup>(8)</sup>
- Free from pathogenic agent
- Free from harmful chemical substance
- Pleasant to taste i.e free from color and odor
- Usable for domestic purpose
- Water is said to be polluted or contaminated when it does not fulfil the above criteria.

Asudha jala quality<sup>(9)</sup>

In *ayurvedic* text, various sources of contamination of water are explained. '*Kalusha*' word is used to denote impure water when impure water is consumed it produce various external and internal diseases in the body. Contaminated water is water which is dirty, mixed with slush, algae, weeds and leaves, which is not exposed to sunlight and wind, having undesirable color and taste. Water could become impure if water is covered with lotus leaves, moss, grass etc which develops putrid smell. Six *dosas* of impure water are explained –

- Sparsha dosha*- roughness, sliminess, tingling sensation of teeth
- Roopa dosha*- silt, covered with aquatic plant, abnormal color
- Rasa dosha*- taste in water
- Gandha dosha*- bed odor
- Virya dosha*- produces excessive thirst, heaviness, pain, excessive salivation
- Vipaka dosha*- digested in long time

When poison is mixed with water, it became-slimy, strong smell, frothy with streaks and lines, aquatic animal like- frog, fish died and birds became intoxicated and move here and there. <sup>(10)</sup>

## Results of consuming contaminated water

## Ayurvedic view-

*trishana*( excessive thirst), *adhamana*( flatulence), *uadar roga*( abdominal disease), *jwara*( fever), *kasa*( cough), *ksudhamandya*( loss of appetite), *granthi*(tumour), *anga-gaurava*(heaviness), *kosthabaddhata* ( constipation), *sotha*(oedema), *pandu*( anaemia), *ajeerna*( indigestion), *swasa*(asthma), *pratisyaya*( rhinitis) <sup>(11)</sup>

When any animal and human immersed in water intoxicated with poison, they suffer from *chhardi*(vomiting), *jwara*( fever), *daha* (burning sensation), *sopha*( edema).<sup>(12)</sup>

Modern view<sup>(13)</sup>

Man's health may be affected by the ingestion of contaminated water either directly or through food; and by the use of contaminated water –borne disease.

- Biological- viral hepatitis A, hepatitis E, typhoid, amoebiasis, roundworm etc.
- Chemical- due to detergent solvent, cyanides, heavy metal,

- ammonia etc.
- Dental health-due to fluoride
- Cardiovascular disease- due to hardness of water
- Some disease are transmitted through water like scabies, conjunctivitis

### Water Purification Methods

The methods of water treatment included boiling, exposure to sun rays, moonlight, using herbs, stones, metals and minerals.

### 6. Exposure to sun and moon rays

Water which is exposed to sunrays during the day time and to the moon's rays at night) is the best quality water and known as *hamsodaka*.<sup>(14)</sup> It is comparable with antriksha jala in sarad ritu. It is *Rasayana* (rejuvenating), *Balya* (strength promoting), *Medhya* (intellect promoting), alleviates three *doshas*, *anabhishtyandi* (which does not obstruct channels of circulation).<sup>(15)</sup>

### 2. Boiling

*Sushruta* explained the importance of boiling water for maintain health as well as in disease condition. Water which is boiled is known to be free from phena (foam) and nirvega (movement) and nirmala (clean). It is supposed to be laghu (Light), *deepana* (digestive stimulant), *pachana* (carminative), and helps in pacify *Kapha and meda dosha*.<sup>(16)</sup>

Water boiled for different duration was recommended to have different benefits-<sup>(17)</sup>

- Water reduced to ¾th after boiling is said to be pathya (wholesome) and alleviates *Vatadosha*. It should be drink in Hemant ritu (early winter).
- Water reduced to half after boiling alleviates *pitta* and *vatadosha*. Such water is useful in *shishira* (late winter), *grisham* (summer) and *Vasantha* (spring season).
- Water reduced to one fourth after boiling is alleviates all *dosha*.
- Water reduced to one eight after boiling should be used in *varsha ritu* (rainy season)
- If hot water is taken at night, it clears the adhesion of *Kapha*, helps in elimination of *Vatadosha* and helps to relieve indigestion.

### 3. Prasadana

Seven drugs are used to clean water are *kataka*, *gomedaka*, *bisgranthi*, *shaiva mula*, *vastra*, *mukta*, *mani*.<sup>(18)</sup> to protect from micro-organism, one should filter water from thick cloth.<sup>(19)</sup>

if pollution is of mild range, water should be exposed in sunrays, medium range, then red hot ball, sand and mud lumps should be put in water and in highly polluted water, boiling process should be done.<sup>(20)</sup>

### 4. Impregnation with herbs

Herbs such as *Karpura*, *Guggulu*, *punnaga*, *Patala* are put in water. This cleaned water is cooled by adding *Kanaka* (gold), *mukta* (pearl) etc. Drinking this processed water would never aggravate the *Doshas*.

### Intoxicated water-purification-

Ash of herbs such as *Dhava*, *Ashvakarna*, *Asana*, *Paribhadra*, *patala*, *Mokshaka*, *Aragvadha*, *Somavalka*, were recommended to be added about one *anjali* (appr. 160gm) to the pot containing water.

### 5. Storage

Water is recommended to be stored in containers made of *Suvarna* (Gold), *Rajatha* (silver), *Tamra* (copper), *Kamsya* (bronze), *Mani* (crystals/precious stones) or earthen vessel.<sup>(21)</sup>

### Contemporary view-

Modern ways of purification of water<sup>(22)</sup>

On a large scale-

- Storage- it removes 90% of suspended impurities and bacterial count decrease in 5-7 days.
- Filtration- via sand bed and heart of slow sand filters
- Disinfection- via chlorination, ozonation and UV rays
- On small scale-
- Boiling
- Chemical disinfection- bleaching powder, chlorine solution, chlorine tablet, iodine
- Filtration

### Discussion

United Nations Committee elaborated the necessity of drinking water

as a person's right to it. The right to water is the right of a person which authorizes everyone to sufficient, safe, acceptance, physically accessible and affordable water and enjoyed without discrimination. Access to safe water is fundamental human need and a basic human right declared Kofi Annan former United Nations Secretary General.<sup>(23)</sup>

In today's era, RO water is used in every home and this water is said to be pure, but this water have deteriorating effect on body because it eliminate necessary minerals that are essential to human health. Consumption of water stripped of natural minerals had adverse effect on wellbeing of human body. Drinking low mineral content water with low total dissolved salts (TDS) has a negative effect on body's homeostasis and disturbs osmotic pressure and create electrolyte imbalance. Consuming RO demineralised water further deprive the necessary body nutrition and ultimately causes symptoms like headache, tiredness, weakness, muscular cramp and impaired heart rate along with negative impact on hormone secretion, kidney function and bone mineral density.<sup>(24)</sup>

In *Ayurveda samhita* many process and drugs are explained which remove impurities from water and make it drinkable. Some of them we can't use nowadays but some we can e.g- exposure to sun and moon, herbs can be kept in water. Herbs which can be found easily, like *tulsi*, *shunti* etc. many researches had been done on *tulsi* and its leaves extract shows anti-bacterial activity in tap water and river water.<sup>(25)</sup>

Much research work are done to evaluate the anti-microbial effect of copper pot and very encouraging result were found without any physico-chemical change.<sup>(26)</sup> Use of copper, gold, silver made pot for storing water is already prescribed in *Ayurveda*.<sup>(21)</sup>

*Yogratnakar* has told the use of *sunthi* should be boiled with water for *kaphaja* disease and *ajvayan* for *vataja* disorder and simply boiled water alleviates *kapha*, *vata* and *meda dosha*, act as deepan, basti sodhana, good in kasa, swasa and fever.<sup>(27)</sup> modern researches also prove the same effect like boiled does better digestion, detox body, improve blood circulation, helps with pain, help in losing weight and slows aging.<sup>(28)</sup>

### Conclusion

water is essential need of life and it can't be substituted with any other thing. Pure water give nourishment to body and polluted water deteriorate the system functioning. In *Ayurveda* many method are explained and these are significant also. Classical text includes all aspect of quality control like place of collection and season, its color, smell and taste. In modern also same quality are explained. RO purification makes water pure but also deprive essential element which are not good for health. That's why classical methods are in need to understand and should be tried with modern scientific techniques so that they can be used for public health and wellness.

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