

# Exploring Ancient Ayurvedic Wisdom: Concept of Water in Health and Hygiene

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**Abstract:** *This article delves into the profound significance of water as an essential gift of nature and its pivotal role in daily human life. Comparing the priorities of air, water and food, water emerges as an unavoidable necessity, second only to air. The abundance of water sources, while indispensable, also holds the potential to be a source of diseases. Thus, ensuring the judicious and quality-based utilization of water for both internal and external purposes becomes imperative. Scientific studies and international protocols for water testing and disease identification are in place. Remarkably, ancient human societies, including the wisdom of scholars like Charaka, Susruta and Bagbhata have long recognized the importance of water for various aspects of life. This article embarks on a discussion of their perspectives on water, encompassing sources, quality assessment, usage and criteria for rejection. By rekindling ancient Ayurvedic insights, this effort aims to shed light on the invaluable lessons regarding water from our ancestors and the timeless teachings of nature.*

**Keywords:** water, gift of the nature, ancient human society, Charaka, Susruta and Bagbhata

## 1. Introduction

Nature, being the mother of the whole creation and caretaker provides all the essentials to the creatures in different forms without any hesitation. The creatures can get and use air and water that are the most essential and unavoidable substances for life abundantly without cost and sponsor. Air is the first need of life. One cannot think to live without air even for some minutes. Water is the second need for the creatures to live though one can live up to some hours without it. After water food comes as one can live up to some days even without food. Air is everywhere. Water is made available by the nature in certain sources which can be easily collected and used by the human, animal/ bird and other living organisms. Considering the need of water for life it is also designated as “**the life of the livings**”. As it synergises the life at the same time also proves to be aetiology of some diseases under certain circumstances. Considering the fact the modern scientists have vividly studied about water with special reference to its character, causes of contamination, examination of quality, harm can be caused in use of polluted / contaminated water, purification etc.

Interestingly, when the Ayurvedic classics are studied it becomes clear that, the scholars of those days were also aware of all these aspects and studied in detail with proper attention and justification. Hence it is considered that, a search and collection of the views and observations of the ancient scholars of Ayurveda on water is the need of time which may help to open a new field in research.

## 2. Aims and Objectives

This is a literary study aimed to -

- 1) Study the concepts of the Ayurvedic scholars, Charaka, Susruta and Bagbhata, on water with special reference to origin, natural properties, use, impurities/ pollution, examination before use, purification etc.

- 2) Compile the concepts of the 3 scholars on the topic as mentioned
- 3) Conduct a comparative study on the concepts of the 3 scholars as mentioned in the 4 books (Samhita) viz. Charaka Samhita, Susruta Samhita, Ashtanga Samgraha and Ashtanga Hridaya
- 4) Incorporate a discussion on the concepts already collected giving effort to justify with reference to acceptability, applicability and benefit
- 5) Ultimately, adding Summary, Conclusion and References giving the shape of a scientific article, sending to popular, peer reviewed, index journal for publication to appraise the information to the scholars, researchers and scientists to discuss, justify and evaluate in modern parameter, where felt necessary.

## 3. Materials and Methods

The study was conducted following the below mentioned materials and methods-

- 1) 4 authentic and oldest books Charaka Samhita, Susruta Samhita, Ashtanga Sangraha and Ashtanga Hridaya (collectively known as Brihatrayee counting as Charaka Samhita, Susruta Samhita and Ashtanga Hridaya/Ashtanga Sangraha) were studied in detail in the Central Library of Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India
- 2) All information on water observed were noted systematically and discussed with justification
- 3) Ultimately a Summary and a Conclusion were developed and references were added
- 4) When it came to a state of article was sent for publication in popular, wide circulated, peer reviewed journal

#### 4. Observation and Result

The observations, after thorough study of the four classics, are incorporated below -

##### (A) CHARAKA SAMHITA

Charaka Samhita, the well accepted 1<sup>st</sup> written document of Ayurveda, contains the below mentioned information on water -

- 1) Description of water is available in Sutrasthana, chapter 27 (Annapanavidhimadhyam - chapter in which discussion on food and drinks are there) after description of Shukadhanya (crops), Shamidhanya (pulses), Mamsa (meat), Shaka (vegetables), Fala (fruits), Harita (food additives like rhizomes, leaves etc.) and Madyavarga (different fermented substances). Total 21 No. of Sloka are used (196-216) by Charaka to discuss about water [1]
- 2) Water (Jala) is said to be of one type initially and that is the rain water (aindrajala). This water fall on the ground from the sky (nabhastalat) after which becomes of different quality basing upon soil (desha) and time (kala) [2]
- 3) Rain water, after falling on the ground, according to the effect of the Sun, Moon and Air (according to season) and soil (mahigoona) gets induced with cold (sita), hot (ushna), sliminess-oiliness (snigdha), dryness (ruksha) and other qualities [3]
- 4) Natural water (Prakritajala - rain water) contains 6 qualities-cold (sita), clean (suchi), beneficial (useful) (siva), tasty (mrsta), clean (bimala) and light (laghu) [4] [198]
- 5) After coming to the ground water takes 6 qualities according to the soil where it becomes collected [5], like
  - a) White coloured soil (swetabhumi) - astringent (kashaya rasa)
  - b) Pale soil (pandurabhumi) - bitter taste (tikta rasa)
  - c) Blackish soil (kapilabhumi) -alkaline (ksharasangsrisata)
  - d) Salty soil (usharabhumi) - salty (lavanawita)
  - e) Hilly soil (parbatabhumi) - pungent (katu) and
  - f) Black soil (krishnabhumi) -sweet (Madhura)
- 6) Rain water (aindrajala) and ice water (himajala) have no taste (avyaktarasa) [6]
- 7) If rain water, before falling on the ground, is collected in clean vessel it is considered as usable for the king (narendrapangsalilang pradhanam-undoubtedly pure and useful) [7]
- 8) The water that is of slightly astringent and sweet in taste (kashaya - madhura rasa), clean (bishada, swaccha), light (laghu), not produces dryness (aruksha), does not cause obstruction of the channels (anabhisyadi) should be considered as the best [8] [202]
- 9) New rain water of rainy season (barsharitu) is heavy (guru), can produce obstruction of the channels (abhisyadi) and of sweet taste (Madhur) whereas in autumn season (saradritu) it is tanu (swaccha), light (laghu) and not produces obstruction of the channels (anabhisyadi). The water of this ritu is very helpful. Anybody can take this water without hesitation. Rain water of the cold season just before winter (hemantaritu) produces oiliness (snigdha), good for potency (brishya), good for strength (balahita) and heavy (guru). Rain water of winter season (sisirritu) is lighter than the previous season (laghutara) and pacifies kafa and vata (kafavatajit), of spring season (basantaritu) is astringent and sweet (kashaya-madhura) and produces dryness (ruksha), of summer season (grishmaritu) does not produce obstruction of channels (anabhisyadi) and rain from the clouds of rainy season (bibhrantaritu) produces vitiation of dosha (doshakaraka) [9]
- 10) The kings (raja), rajamasha (wealthy persons) and sukumara (sensitive persons) are advised to collect water in autumn season and advised to use in the whole year [10]
- 11) Quality of river water as per origin [11] -
  - a) Originating from the Himalayas (himabatprabhava) - good for health (pathya), pure (punya) and was used by the Gods and the sages (devarishisevita) (as the gods and the sages are considered as wise and intelligent it indicates the purity and usefulness of the water) because it hits the stones with speed, gets broken and spreaded (pashanavicchinnabikshubhabhihatodaka)
  - b) Originating from Malaya mountain range (malayaprabhava) - like nectar (amritopama) because it flows through stones and sand and becomes cleaned (pashanasikatabahinyobimalodaka)
  - c) Flowing towards west (paschimabhimukha) - beneficial for health (pathya) and clean (Nirmala)
  - d) Flowing towards east (purbasamudraga) - heavy (guru) due to slow speed (mridubaha)
  - e) Originating from pariyatra and Bindhya region (pariyatra, bindhyasahyaprabhava) - causes diseases of the head, heart, skin, filariasis etc. (sirohrogakusthasleepadahetu)
- 12) River water of rainy season (barshajalabahanadi) causes vitiation of all dosha (sarbadoshasamirana) as it becomes mixed and carries soil, sand, insects, snake, rodents, excreta etc. (basudhakitarsarpaakhumalasangdushitodaka) [12]
- 13) To understand the quality of the surface water like wells of different type, pond, spring etc. (bapi, kupa, tadaga, gotsa, sara, prasarabana) the quality of the soil should be taken as standard [13]
- 14) Harmful water (ahitakarajala) - The water having the qualities viz. sliminess (picchila), mixed with insects, worm etc. (krimila), dirty (klinna), mixed with leaves, algae, clay etc. (parna-saibala-kardamayukta) and with abnormal colour (bibarna), abnormal taste (birasa), non transparent (Sandra), foul smell (durgandha) is harmful which is to be rejected [14]
- 15) Sea water (samudrajala) - it contains a peculiar non homologous smell (bisra-amagandhi), causes vitiation of tridosha (tridoshakaraka) and salty (lavanarasa). So it should not be used for drinking purpose [15]

##### (B) SUSRUTA SAMHITA

From Susruta Samhita the following information regarding water is collected -

- 1) Water is discussed in the 45<sup>th</sup> chapter of Sutrasthana (Dravadravyavidhimadhyayam - the chapter dealing with the liquids) as the 1<sup>st</sup> topic which is followed by

- description of milk (kshiravarga), curd (dadhivarga), modified curd (takravarga), ghee (ghritavarga), oils (toilavarga), honey (madhuvarga), sugarcane products (ikshuvarga), alcoholic preparations (madyavarga) etc.
- 2) He used 46 number of sloka (1-46) to discuss on the topic in detail
  - 3) Rain water (antarikshajala) is described to have the qualities like - have no taste (anirdeshyarasa), helpful like nectar (amritatulya), helpful for life (increases life span) (Jivana), nutritious (tarpana), maintains the body (dharana), gives coolness after labour (aswasajanana), helpful in the states like fatigue, tiredness, thirst, at the state of alcoholism, fainting, drowsiness, feeling of sleep and at the state of suffering from burning sensation (srama-klama-pipasa-mada-murcha-tandra-nidra-dahashamana) and useful in all situation (ekantapathya) [16]
  - 4) The rain water, after falling on the earth follows the property of soil and accordingly gets taste like sweet, sour, salt etc. and remains collected in the different reservoirs like river, lake, well and other natural and artificial reservoirs etc. [17]
  - 5) Water gets the taste due to the dominance of natural element (mahabhutautkarsha and apakarsha) like prithvimahabhutadhikya - amla-lavana, jalamahabhutadhikya - madhur, tejodhikya - Kashaya-tikta, vayugunadhikya - Kashaya, akashgunadhikya - avyaktarasa. Avyaktarasayuktajala can be used in non availability of Antariksha jala. (Prithvimahabhuta - consistence is more solid, jala - consistence is loose and watery, teja-red/redish colour, vayu - soft but dry, akasha - rough, dry; Madhura rasa - sweet, amla rasa - sour, lavana-salty, katu - pungent, tikta-bitter, Kashaya - astringent, avyaktarasa - having no specific taste) [18]
  - 6) Antarikshajalais said to be of 4 types - flowing with speed (dhara), water from ice etc. having cold property (kara, taushara and haima). The classification is made in the following way with their qualities -dhara is pradhana as it is laghu. Again classified into 2 types as gangya and Samudra. Gangya - rain water of September-October (Aswinamasa). Gangya-samudrajalariksha- keep some quantity of fresh cooked rice in bolus form in a silver vessel and keep in rain. If after 1 hour of such exposure the rice shows no change in it's quality then it is gangyajala. Change of colour and appearance of dirtiness indicates samudrajala. Samudrajala should not be collected except rained during Aswinamasha (September-October). The water collected by using a clean white cloth in clean vessels made of gold, silver or earth is useful in all seasons in all situations. When this type of water is not available then ground water (bhaumajala) should be used which are of 7 types as - well (kaupa), river (nadeya), sarasa (lake), pond (tadaga), spring (prasravana), water collected by digging the soil (audvida) and chauntya (well without parapet wall) [19].
  - 7) Usable water according to season - barsha - Antariksha or audvida as they have good quality (mahagoona), sarad-from all sources, as during this season all water becomes pure and beneficial (prasannatwat) (swachha), hemanta - Sarasa or tadaga, basanta-kupa or prasravana, grishma - kupa, pravrit-chantya [20]
  - 8) The water that can produce diseases (rogautpadakajala) - If an individual uses water that is contaminated with dead insects, urine, stool, egg, dead body etc. (kita-mutra-purisha-anda-savakothapradushita), mixed with grass, leaves, clay etc. (trina-parna-utkarayukta), dirty (kalusha), poisonous substances (bishasanyukta) for bathing and other external purposes (avagahana) and drinking of new rain water of rainy season (nababarsharituajala) causes different types of external and internal diseases (bahya-abhyantararoga) [21]
  - 9) Impure / contaminated water (dushitajala) - Mixed with clay, sand, algae, grass, leaves of aquatic plants etc. (panka-saivala-hathatrina-padmapatraadiyukta), not touched by Sunrays, Moonrays and Air (ravishashikirana-anilenanabhijustang), having specific smell, colour and taste (gandha-barna-rasoparishta). Water contains 6 dosha as - touch (sparsha) - roughness, sliminess, hot, irritant to teeth (kharata, paicchilya, aushna, dantagrahita); colour (rupa) - mixed with clay, sand, algae etc. with different colour (panka-sikata-saivala-bahubarnata); taste (rasa) - having specific taste (vyaktarasata); smell (gandha)- having unfavourable smell (anistagandhata); effect after digestion (viryya) - if felt thirst, heaviness, abdominal pain /discomfort, salivation etc. after digestion (trishna, gaurava, shoola, kafapraseka); effect during digestion (bipaka) - feeling of abdominal discomfort during digestion (bistabdha). These defects are not found in antarikshyajala [22]
  - 10) Dushitajalashodhana - For water purification the following methods are mentioned [23] -
    - a) Atidushtajala - agnikwathana (If the water is heavily contaminated boiling)
    - b) Alpadoshayultajala - suryyatapapratapana, taptapinda-sikata-loshtanirvapana, prasadana (If the water is mildly contaminated exposure to Sunrays, dipping of hot bolus of iron, soil or other metal and filtration with clean cloth)
    - c) Durgandhayuktajala - naga-champaka-utpalapatalapushpaadhivasana (If the water is having foul smell then submersion of the flowers of Ceylon ironwood - Mesua ferrea, Champak-Magnolia champaca, Lotus - Nymphaea Lotus, Fragrant Padri Tree-Stereospermumsuaveolensetc.)
  - 11) Storage of water - The water should be stored in the vessels made of Suvarna, rajata, tamra, kangshya, moni or bhumi (golden, silver, copper, bronze, gem or earthen pots) [24]
  - 12) Dushitajalajanyaroga (diseases due to contaminated water) - One should avoid dushitajala and vyapannarituajala (rain water except of the rainy season) as they cause many harms. If one drinks or uses such water for external cleaning etc. without purification then it may cause oedema, anaemia, skin diseases, indigestion, breathing difficulty, cough, coryza, pain, tumour, abdominal diseases etc. (swayathu, pandu, twakdosha, avipaka, swasa, kasa, pratishyaya, shoola, gulma, udara, etc.) [25] (Sloka 14-16)
  - 13) Kalushaprasadanadravya - The substances can be used for cleaning of water are-clearing nut (Strychnospotatorum) (kataka-nirmali), Zircon (gomeda) (moni), Lotus root (bisagranthi-kalamoola), root of selected aquatic algae (saivalamoola), cloth (bashtra), pearl (mukta), alum (moni-sphatika) etc. [26]

- 14) 5 types of nikshepana (arrangements for keeping of water vessels) are mentioned like - falaka (stand with flat top), tryastaka (stool with 3 stands), munchabalaya (round arrangements to keep the water pot), udakamanchika (arrangements to keep more number of pots) and shikya (an arrangement made of rope to keep the water pot) [27]
- 15) 7 methods of shitikarana - By opting the methods like (i) keeping in open air (pravatasthapana), (ii) exposing to cold water (udakaprakshepana), (iii) stirring (yastikabhramana), (iv) exposed to fan air (byajana), (v) wrapping the water pot with wet cloth (bastroddharana), (vi) keeping on wet sand (balukaprakshepana) and (vii) keeping the water pot hanged with a special arrangement made of rope (chikyavalambana) water can be made cold up to the expected level [28]
- 16) Characters of uttamajala - The best quality water contains the characters like - has no smell (nirgandha), no taste (avyaktarasa), reduces thirst (trishnaghna), pure (not contaminated) (shuchi), cold (shitala), clean (accha-svaccha), light (laghu), beneficial for heart (hridaya) [29]
- 17) River water (nadeyajala) - River water contains the following characters [30]
- Paschimamukhaha - pathya, laghudakatwat (water of river flowing towards West is useful as it is light)
  - Purbabhimukha - naprasasyate, gurudakatwat (water of the river flowing towards the East is not useful as it is heavy)
  - Dakshinabhimukha - natidoshala, sadharanatwat (water of river flowing towards the South is not bad as it is of average quality)
  - Sahyaprabhava - kusthajanana (river water flowing from sahya mountain can cause skin diseases)
  - Bindhyaprabhava - kustha-pandujanana (river water flowing from Bindhya mountain can cause skin diseases and anaemia)
  - Malayaprabhava - krimijanana (river water flowing from Malaya mountain can cause worm infestation)
  - Mahendraprabhava - sleepada-udarajanana (river water flowing from Mahendra mountain can cause filariasis and abdominal diseases)
  - Himabatprabhava - hridroga, swayathu, shiroroga, sleepada, galagandajanana (river water flowing from the Himalaya can cause heart disease, oedema, headache / other diseases related to head, filariasis, goitre etc.)
  - Prachyavantya-aparavantya-arshajanana (river water flowing from Prachi area may cause piles and other ano-rectal diseases)
  - Pariyatrprabhava - pathya, bala-aogyakaraka (river water flowing from pariyatra area is beneficial, increases strength and cure from diseases)
  - Shighravaha - laghu, (swaccha)amala (water of the rivers flowing with strong current is light and clean, hence beneficial)
  - Shaibalasangsanna, mandaga - kalusha (river water where algae etc. are there and has no current is dirty, hence not usable)
  - Rivers flowing through marupradesha are tikta-lavanarasa, laghu, madhuravipaka, paurushakaraka and balahita (water of the rivers flowing through rocky, sandy area are bitter-salty in taste, light, becomes sweet after digestion, increases vitality and strength)
- 18) Time for collection of surface water (Jalagrahanakala)- All bhaumajala (surface water) should be collected during the morning hour as during this time it remains clean and cold which are the best qualities [31]
- 19) Characters of pure water -The water that is exposed to Sunrays during daytime and Moonlight during night time does not produce dryness on use, not produces obstruction of the channels and has the qualities like Gangambu (the pure rain water) (divarkakiranajusta, nishayamindurashmijustajala is aruksha, anabhisyanidi and gaganambutulya (pure and useful) [32]
- 20) Gaganambu-Rain water of rainy season, if collected in good vessel, is tridoshaghna (pacifies the tridosha), balya (produces strength), rasayana (rejuvenative), medhya (increases memory) [33]
- 21) Chandrakantodbhavajala (water from the place where availability of Chandrakantamoni)- rakshoghna, shitala, hladi, jwaradahabishapaha, pittaghna, Bimala (destroys the external disease causing agents, cold, produces happiness when used, reduces fever, burning sensation and effect of poison, reduces pitta and clean) [34] (Sloka 27)
- 22) Indication of shitalajala -Cold water is indicated in fainting, diseases due to vitiated pitta, persons affected with heat, suffering from burning sensation, affected with poison, diseases due to vitiation of blood, alcoholism, delirium, tiredness, bronchial asthma, emesis and bleeding through the upper body orifices (murcha, pittaroga, ushnapidita, dahapidita, bishapidita, raktarogapidita, madatyaya, bhrama, klama, tamakaswasa, bamana, urdhagaraktapitta) [35]
- 23) Contra-indication of Shitalajala - Cold water should not be used in pain of the flanks, sneezing, neurological disorders, feeling of obstruction of throat, flatulence, weak digestion, person who had just undergone purification therapy, acute fever, hiccough and who had taken oral oliation therapy (parshwashoola, pratishyaya, vataroga, galagraha, adhmana, stimitakostha, sadyahshuddha, navajwara, hikka, snehapita) [36]
- 24) Qualities of the surface water - Surface water bears different qualities as per the source as follows [37]-
- Nadeyajala (river water) - batala, ruksha, dipana, laghu, lekhana (increases vata, dry, increases digestive capacity, light and destroys obstruction in the srotas)
  - Mandabahanadi (river with slow current) - abhisyanidi, Madhura, Sandra, guru, kafabaha (causes obstruction of the channels, sweet, viscus, heavy, increases kafa)
  - Sarasajala (lake water) - trishnaghna, balya, Kashaya, Madhura, laghu (reduces thirst, gives strength, astringent and sweet in taste and light)
  - Tadagajala (pond water) - batala, swadu, Kashaya, katupaki (increases vata, sweet and astringent in taste and becomes pungent after digestion)
  - Bapyajala (water of small pond) - vatashleshmahara, sakshara, pittala (reduces vata and kafa, slightly alkaline and increases pitta)

- f) Kaupajala (wellwater)- sakshara, pittala, shleshmaghna, Deepana, laghu (slightly alkaline, increases pitta, pacifies kafa, increases digestive capacity and light)
- g) Chauntya (water of well without parapet wall) - agnikara, ruksha, Madhura, nakafakrit (increases digestive capacity, produces dryness on use, sweet and not increases kafa)
- h) Prasravanajala (spring water) - kafaghna, deepana, hridya, laghu (reduces kafa, increases digestive capacity, beneficial for the heart, light)
- i) Audvidajala (water collected by digging soil) - madhura, pittashamana, abidahi (sweet, reduces pitta and not produces burning sensation of chest etc.)
- j) Baikirajala (water collected by digging sandy place) - katu, sakshara, shleshmaghna, laghu, deepana (pungent, slightly alkaline, reduces kafa, light, increases digestive capacity)
- k) Kedarajala (water of field)-madhura, guru, doshaprakopaka (sweet, heavy, causes doshaprakopa)
- l) Palvalajala (water collected from small holes covered with leaf etc.)- madhura, guru, bisheshaddoshala (sweet, heavy and causes excessive dosha aggravation)
- m) Samudrajala (sea water)- bisra, labanarasa, sarbadoshakrit (has a specific odour, salty, causes vitiation of all dosha)
- 25) Deshanusarenajalaguna (Quality of water according to soil) [38]-
- a) Anupadesha (where the soil is moist and air contains more humidity) - anekadosha, abhisyandi, garhita (contains many harmful qualities, causes obstruction of the body channels and hence unusable/ should avoid)
- b) Jangaladesha (where the soil is dry and air also contains less humidity)- does not contain the harmful qualities like of the Anupadesha hence good for use (prasasta).
- c) Sadharanadesha (soil and air are of moderate quality) - abidahi, trishnaghna, prasasta, pritibardhana, deepana, swadu, shita, laghu (does not cause burning sensation of chest and abdomen, reduces thirst, good for use, produces happiness, increases digestive capacity, sweet in taste, cold and light)
- 26) Ushnodakaguna (qualities of warm water)- kafa-medanilaghna, deepana, vastishodhana, swasa-kasajwarahara, sadapathya (pacifies kafa, meda and vata, increases digestive capacity, cleans the urinary bladder, reduces breathing difficulty, cough and fever and hence always useful) [39] (Sloka 39-40)
- 27) Kwathitajala (chaturbhagaavashesha) - The water, after boiling, when becomes begarahita (boiling movements and sound automatically stops), fenarahita (froth not formed), Nirmala (becomes clean) and ¼ th residue remains becomes most useful [40]
- 28) Paryushitajala - water kept overnight becomes amla (sour in taste) and kofotledi (causes aggravation of kafa). Hence nobody, at any state (healthy or diseased), should use it [41]
- 29) Shritashitajala - Water after boiling, when made cold is indicated in madyapanjanyaroga, pittotthitaroga and sannipatajaroga (diseases due to alcohol, aggravation of pitta and involvement of all three dosha) [42]. It is specially indicated in daha, atisara, pittaroga, raktaroga, murcha, madya, bishapidita, trishna, cchardiandbhramaroga (burning sensation, loose motion, diseases due to pitta, diseases due to vitiated blood, fainting, alcoholism, affected with poison, thirst, vomiting and delirium) [43]
- 30) Narikelajala (coconut water) - snigdha, swadu, hima, hridya, deepana, vastishodhana, brishya, pitta-pipasaghna, guru (oily, sweet in taste, cold, good for heart, increases digestive capacity, cleans the urinary bladder, increases potency, reduces pitta and thirst, and heavy) [44]
- 31) Jalanishedha (contra indication of water) - water should not drink / should drink in monitored quantity in arochaka, pratishyaya, praseka, swayathu, kshaya, mandagni, udararoga, kustha, jwara, netramaya, branaandmadhumeha (reduces appetite, sneezing /coryza, excessive salivation, oedema, emaciation, reduced digestive capacity, abdominal diseases, skin diseases, fever, eye disease, ulcer and diabetes mellitus) [45]

### (C) ASHTANGASAMGRAHA

Ashtangasamgraha, trusted to be an work of AcharyyaBagbhata reveals the following facts on water-

- 1) Discussed on water in the Drava Dravya Vijnaniya Adhyaya (chapter for discussion about the liquid substances) in 52 No. s of sloka
- 2) Wateris discussed as the first topic in the chapter which is followed by discussion on milk, sugarcane products and other liquid substances
- 3) Jalavargaguna (qualities of water) -Water in general is Jivana, tarpana, hridya, hladi, buddhiprabodhana, avyaktarasa, mrista, shita, laghu, amritopama (good for life, givesnutrition, good for heart, gives well feeling, helpful for intelligence, has no specific taste, pleases the mind, cold, light and like nectar). As it becomes exposed to Sun becomes laghu (light) and reduces vitiated vata and kafa. It is shita, Jivana and Saumya (cold, beneficial for life and soothing) hence pitta-rakta-bisharoganashaka (helps in curing the diseases due to vitiated pitta, blood and poison). Water falling on ground from the sky is known as Gangambu. After being collected on the surface being touched by the Sun, Moon and Air, depending upon desha and Kala (place and time) it gets different qualities [46]
- 4) Gangya-Samudra jalapariksha (test for pure water)- If some quantity of cooked shali rice keeping in a silver vessel is exposed to the rain water for some time does not change it's colour and remains clean then it is Gangyajala otherwise it should be identified as Samudrajala. Gangyajalais useful but samudrajala is prohibited for use except during asvayuja (rain during the rainy season) [47]
- 5) Drinking water-Rain water can be used for drinking purposes from khata (digging the soil), dhauta (flowing from upwards), silapristha (flowing from pit of rock), filtered by clean cloth and kept in abipannahema, mrinmoyapatra (clean gold or earthen pot). In absence

ofantarikshajala (rain water) bhumisthajala (surface/ground water), having the same quality as the rain water should be used [48]

- 6) Relation between soil colour and water quality - Water is said to follow the quality of soil where it remains collected and it gets the taste accordingly as follows
- swetabhumi (white soil) - Kashaya (astringent)
  - krishnabhumi (black soil) - swadu (sweet)
  - pandurabhumi (pale soil - tikta (bitter)
  - nilabhumi (blue soil) - Kashaya-madhura (astringent and sweet)
  - usharabhumi (dry sandy soil) - lavana (salty)
  - kapilabhumi (blackish soil)-sakshara (slightly alkaline)
  - mishrabhumi (mix coloured soil) - mishragoona (mixed taste and quality).

According to mahabhatadhikya also water gets its taste like

- apyabhumi (soft and watery soil) - madhura (sweet)
- parthivabhumi (hard and solid soil) - lavana (salty), and amla (sour)
- agneyabhumi (red, dry soil) - tikta-katu (bitter-pungent)
- vayavyabhumi (rough, dry soil) - kashayarasa (astringent)
- kashiyabhumi (porous, dry soil) - same as divyajala (rain water)

Water from black and white soil exposed to arka (sun) and anila (air) isshuchi (clean and pure) like rain water [49]

- 7) Surface waters and their property - Surface water source may be of 8 types. Their properties are mentioned by Bagbhata as follows [50]-
- Kaupajala (well water)- sakshara, pittakrit, deepana, naativatala (slightly alkaline, vitiates pitta, increases digestive capacity and does not cause more vitiation of vata)
  - Sarasajala (lake water)- swaduandlaghu (sweet in taste and light in quality)
  - Tadaga (pond water) - guru and vatala (heavy in nature and aggravates vata)
  - Chaundya (well water where the parapet wall is not there) - pittala (vitiate pitta)
  - Prasravana (spring water) - doshahara (reduces the aggravated dosha)
  - Audvida (water collected by digging soil)-swaduandpittaghna (sweet in taste and reduces pitta)
  - Bapyajala (water of small holes in soil) - swaduandlaghu (sweet in taste and light in character)
  - Nadeya (river water) - vatala, rukshaandkatu (increases vata, dry in quality and pungent in taste) Soil is considered to be the determinant of the guruta and laghuta of water.
- 8) Qualities of River water according to source and flow [51]-
- Paschimodadhiga (flowing towards West) - shighrabaha, amalodaka, pathya (flows with speed, clear and beneficial)
  - Purbabhikumukha (flowing towards East) - not good for health
  - Himabat, malayodbhuta (originated from Himalaya and Malaya mountain)-pathya as they get strong

friction and becomes broken due to strong hit in stones. When this water becomes stagnated then it becomes cause of krimi, sleepada, hridroga, kantharoga, shiroroga (worminfestation, filariasis, heart disease, diseases of throat and headache and other diseases of head)

- The water of the rivers belonging to prachya, avanti and aparanta cause arsha (piles/diseases of ano-rectal area)
  - Mahendraja (flowing from Mahendra mountain) causes udara, sleepada (abdominal diseases, filariasis) etc.
  - Sahya, bindhyaprabhava (flowing from Sahya and Bindhya mountain) causes kustha, pandu, shiroroga (skin diseases, anaemia and diseases of the head)
  - pariyatraja - doshaghna, bala-paurushakari (pacifies aggravated dosha and produces strength and vigor)
  - Sagarambu (sea water) - tridoshakrit (causes vitiation of tridosha)
- 9) Impure water, their effect and purification [52] - The water should be considered contaminated if it is kita-ahi-mutra-bit-kothatrinajalautkarabilamsangsangristam (presence of putrefied insects, snake, urine, stool, grass etc. and dirty), suryendupavanadristang (not exposed to sunray, moonray and air), kshudrajantujusta (presence of many types of small organisms), panka-pankaja-saivala-hathaparnadiabhibristang (presence of clay, aquatic weeds, algae etc.), bibarnang (of bad colour), kalusha (dirty), sthula (thick), fenila (frothy) birasa (of abnormal taste), gandhabat (abnormal smell), dantagrahyaatisaitiyatah (irritant to teeth due to coolness), anartava (unseasonal), Prathama divyamartava (first rain water), lutaditantubinmutrabishasangshleshadushita (mixed with spider, thread, urine, poison etc.). If such water will be used for external and internal purpose it may cause - Trishna (thirst), adhmana (flatulence), udara (diseases of the stomach), jwara (rise of temperature), kasa (cough), agnisada (depressed digestive capacity), abhisyaanda (eye disease like conjunctivitis), kandu (itching), etc.

For purification of contaminated water the following methods can be used -

- filtration with thick cloth - makes free from kshudrajantu (small organisms like insect etc.),
  - Agnitapana (exposure to sunrays, dipping of hot metallic balls etc.) purifies water
  - parnimoola, bisagranthi, mukta, kataka, saibala, bastra, gomedaka etc. (some plant parts and gems) again cleans water
  - dipping of patala, karabira etc. causes durgandhanashana (some flowers with good smell, when dipped into water, removes foul smell)
- 10) When water should not be taken - After drinking one type of water other type of water should not be taken till the previously taken water is digested, boiled water once taken till its digestion cold water should not be taken and vis versa [53].
- 11) Importance of water for life - Water is like the life of all livings. The earth is also made of water. Total abstinence from water is impossible. In non availability of water one suffers from ashyashosha (dryness of

- mouth), angasada (weakness /looseness of the body even mrityu (death). Neither a healthy nor a diseased person can work without water [54]
- 12) Judicious use of water in any form like kevala, saushadha, pakwa, ushna or ama (only water, prepared with medicines, boiled, hot or cold) works as nectar. Otherwise it acts like bisha (poison) [55]
  - 13) Specially in jwaritatrishita purusha (person suffering from thirst due to fever) if water is taken in more quantity it can cause kafa-pittadosha and may lead to ama, Trishna, nidra, tandra, adhma, angagaurava, kasa, agnisada, hrillasa, praseka, swasa, pinasa (undigested particles in the system, thirst, sleep, drowsiness, flatulence, heaviness of the body, cough, reduced digestive capacity, palpitation, salivation, breathing difficulty, coryza) etc. [56]
  - 14) Jalapanavidhi - amaodakanishedh (contra indication of cold water) - anavasthitadosha, anavasthitaagni, byadhikshina as it is tridoshakrit (cold water causes vitiation of all three dosha, hence should not use when the tridosha is not in equilibrium, digestive capacity is disturbed and the person is weak due to disease). In mandagni (weak digestive capacity)cold water is avoided due to biparitaguna (opposite quality). In the diseases like abhisya, pleeharoga, bidradhi, gulma, pandu, udara, arsa, grahani, shosha, sofa (conjunctivitis, diseases of the spleen, abscess, tumour, anaemia, abdominal diseases, piles, digestive disorders, imaciation, oedema) etc. In emergency they should take aushadhasanskritajala (water prepared by mixing with medicine. Except during grishma and saradritu (summer and autumn seasons) even a healthy person should take limited quantity of water [57]
  - 15) Drinking water at the beginning of food produces agnisada (weakness of digestion) leading to krishangata (thinness) whereas at the end causes sthaulya (obesity) and accumulation of kafa in amashayordha and madhyavastha (drinking water during foods) causes equilibrium of dhatu leading to proper digestion and comfort [58]
  - 16) Shitajalaguna (qualities of cold water)-Cold water is madatyaya-glani-murcha-cchardi-shrama-bhrama-trishna-ushma-daha-pittaroga-raktaroga-bisharoganashaka (alcoholism, depression, fainting, emesis, tiredness, delirium, thirst, affected with fire, burning sensation, diseases due to pitta, blood and poisoning) [59]
  - 17) Kshinapada, tribhaga, ardhaavasheshakwathita, fenarahita, avegajala is amala andhita. It is useful in hikka, adhma, anilaroga, shleshmaroga, Trishna, kasa, swasa, pinasa, parshwashoola, ama, meda, sadyashuddharogiandnabajwararogi (water reduced by boiling up to 1/3rd or 1/2 residue and up to the state of no froth, no boiling movement is clean and useful. It is beneficial in hiccough, flatulence, neurological disorders, kafaja diseases, thirst, cough, breathing difficulty, coryza, flank pain, indigestion, obesity, just after purification therapy, acute fever etc.). It is Deepana, pachana, kanthya, laghu, bastishodhana (increases digestive power, helpful for throat, light and cleans the urinary bladder) [60]
  - 18) Pashana-rupya-mrid-hema-jatu-arkatapatijala is shita, tridoshaghna, trishnaghna (water made hot with hot stone, silver, soil, gold, lac and sunray etc. is cold, pacifies tridosha and thirst). Kwathitashitalajala is laghu, ruksha, klamaghna and good in pitta, kafa and sannipata (boiled water when made cold becomes light, produces dryness in use, reduces tiredness and beneficial in pitta, kafa and sannipata). Paryushitajalalooses all guna of bahni and becomes amlapaka and sarbadoshakrit (water, when kept overnight, loses the warmth totally, becomes of sour taste after digestion and vitiates all dosha) [61]
  - 19) Himakarodbhavajala (water of cold natural reservoirs) - It isatishita, guru, sthirasanghata, kafabatakrit (excessive cold, heavy, stagnated, and vitiates kafa and vata) [62]
- Chandrakantodbhavajala (water of the place where zircon is available)- It is raksha-bisha-pitta-jwarapaha, dritimedhabapusthairryakara, anilahara, swadu, hima, laghu (acts on external disease causing agents, poison, pittajaroga, fever, helpful for vision, intelligence, body, pacifies vayu, sweet in taste, cold and light)
- Narikelodaka (Coconut water) -It issnigdha, swadu, brishya, hima, laghu, trishnapitta-anilahara, deepana, bastishodhana (oily, sweet, helpful for vitality, cold, light, reduces thirst, pitta and vayu, increases digestive capacity and purifies the urinary bladder)
- Divyabari (rain water of rainy season) - bara (best among all water)
- Barshanadeyajala (river water of rainy season) isavara (worst)

**(D) ASHTANGAHRIDAYA -**

- 1) Discussed water in the Dravadvayavigyaniyaadhya (Sutrasthan, Chapter 5) under the heading Toyavarga using 19 sloka
- 2) Gangambuguna - Jivana, tarpana, hridya, hladi, buddhiprabodhana, tanu (swaccha), avyaktarasa, mrista, shita, laghu, amritopama (helpful for life, nutritious, good for heart, produces happiness, increases intelligence, clean, has no taste, sweet, cold, light and like nectar). This water, after falling from the sky, comes to the touch of arka, indu and maruta (sun, moon and air) takes the hita and ahitaguna (useful and harmful quality) according to desha and kala (soil and time) [63]
- 3) Inavailability of gangyajalasadrajala is available which should not be used except during Aswinamasha (September, October) [64]
- 4) Alwaysaindrajala (rain water) kept in supatra (good vessel) should be used for drinking purpose. If it is not available then bhumisthajala (surface water) having same qualities as Antariksha jala (rain water) like shuchi (clean), Prithu (bistrita) (stored in wide natural reservoirs)and stored in ashita (black) and sweta (white)desha and always exposed to arka (sun) and pavana (air) should be used [65]
- 5) Water having the following qualities should not be used [66]- panka-saivala-trina-parna-abila (dirty due to presence of clay, algae, grass, leaves etc.)suryendupavanadristam (not touched by sunray, moonray and air), abhibristam (newly rained), ghana (thick), guru (heavy), fenila frothy), jantummat (mixed with insects etc.), tapta (hot), dantagrahyaatishaityatah (irritant to teeth due to excessive cold), anartava (not seasonal), divyamartavaprathama (first rain water),

- lutaditantubinmutrabishasangshleshadushita (mixed with spider, thread, stool, urine, poison etc.)
- 6) Qualities of river water [67] -
    - a) Paschimadghigani (rivers flowing towards the West) - shighrabaha (have strong current), amalodaka (clean) and pathya (good for health).
    - b) Himabat-malayodbhutanadijala (rivers originating from Himalaya and Malaya mountain)- pathya (good) due to upalaspalanaakshepaviccheda and kheda (as it gets strong friction and hit with the stones and breaks into innumerable pieces). When this water becomes stagnated then causes krimi, sleepada, hridroga, kantharoga, shiroroga (worm, filariasis, heart disease, throat disease, headache and other diseases of the head)
    - c) Prachya-aparantottha (rivers originating from prachya and aparanta area) - durnamakara (causes piles and other ano-rectal diseases)
    - d) Mahendraja (rivers originating from Mahendra mountain)-udara-sleepadakara (causes abdominal diseases and filariasis)
    - e) Sahyabindhobhava (rivers originating from sahya and bindhyamountain)-kustha-pandu-sirorogakara (causes skin diseases, anaemia, headache and other diseases of the head)
    - f) Pariyatraja (rivers originating from pariyatraarea)-doshaghna (reduces vitiated dosha, balapaurushakari (produces strength and vigour)
    - g) Sagarambu (sea water)-tridoshakrit (vitiates all dosha)
  - 7) Qualities of surface water-kaupa, tadagajala (water of well, pond etc.) follows the property of the desha like jangala, anupa etc. [68]
  - 8) Jalapanavidhi (rules of drinking water) - The patients suffering from alpagni, gulma, pandu, udara, atisara, arsha, grahani, shosha, shotha (reduced digestive capacity, tumour, anaemia, abdominal diseases, loose motion, piles, emaciation, oedema etc.) should drink no water or if feels more weakness due to thirst then also very less quantity should be taken. Even the healthy persons should take less quantity of water frequently except during the sarad and nidagha (autumn and summer season) [69]
  - 9) Jalapana and bhojana (effect of drinking water in relation to food) - bhuktamadyajalapana (drinking water during food) - samadhātu (maintains the equilibrium of the body components), bhuktantajalapana (drinking water at the end of food) - sthulakara (produces obesity), bhuktaprathamajalapana (drinking water at the beginning of food)- krishakara (causes thinness) [70]
  - 10) Shitajalaguna (qualities of cold water)-Shitalajala is madatyaya, glani, murcha, cchardi, shrama, bhrama, trishna, ushna, daha, pittaroga, raktaroga, bishanashaka (beneficial in alcoholism, depression, fainting, vomiting, tiredness, delirium, thirst, exposure to heat, diseases due to pitta, diseases due to vitiated blood, exposure to poison etc.) [71]
  - 11) Ushnajalaguna (qualities of warm water) -deepana, pachana, kanthya, laghu, ushna, bastishodhana, hidhma, adhma, anila, shlashma, sadyahsuddhi, nabajwara, kasa, ama, pinasa, swasa, parshwaruknashaka (increases digestive capacity, helpful for the throat, light, hot, purifies the urinary bladder and useful in hiccough, flatulence, vatajaroga, kafajaroga, patients who has undergone purification therapy, acute fever, cough, coryza, breathing difficulty, pain on the back and flanks etc.) [72]
  - 12) Kwathitashitalajala (boiled water - water is boiled, reduced to 1/2, 1/3rd or 1/4th, made cool and used)-anabhisyadi (not produces obstruction of the body channels, laghu (light), pittadoshahita (beneficial for pittajaroga). When becomes paryushita (kept for the night) becomes tridoshakrit (vitiates all the dosha) [73]
  - 13) Narikelodaka (coconut water) - snigdha, swadu, brishya, hima, laghu, trishnapitta-anilahara, deepana, bastishodhana (oily, sweet, increases nutrition, cold, light, reduces thirst, pittaja and vatajaroga, increases digestive capacity and cleans the urinary bladder) [74]

## 5. Discussion

After the detail study of the 4 basic classics of Ayurveda the discussion on their concepts on water can be made in the following way-

- 1) Charaka, Susruta and Bagbhatain Charaka Samhita, Susruta Samhita, Ashtanga Sangraha and Ashtanga Hridaya have discussed in detail about water. All the 4 books say about the qualities of rain water (aindrajala) and consider it as the best among all available water. But it is mentioned that, when this water falls on the earth gets induced with different qualities depending upon the character of the soil where it is collected. It is also said that, continent / state etc. are also determines the water quality with special reference to taste, causation of disease etc.
- 2) The rain water, after falling on the earth, is stored in different natural reservoirs like pond, well, lake etc. Accordingly the quality of the water varies and the priority of taking for use also becomes different which is vividly discussed in the 4 books with some difference in language. Probably this difference in quality was observed due to depth, expansion, exposure to sun, moon and air etc.
- 3) For selection of water for external and/or internal use advice is given with regards to taste, colour, consistency, smell, scope of exposure to sun, moon and air, presence/absence of grass, leaf, algae, insects, putrefied substance etc. which are scientific, beneficial and easily applicable without any help of instruments, finance etc.
- 4) Speed, friction with stones, flow through sand, stone etc. have role in regulating the quality and character of river water. For purification of water in large as well as small scale exposure to sun, air, breaking the water into small drops sending with strong speed etc. are being used even now-a-days. Mentioning of the quality and character of river water is mentioned in all the 4 books keeping all the facts in mind. The speed and character of soil through where the river flows is also dependent upon the source. Considering this fact the character of river water is also stated by the scholars which reflects the depth of their study and observation.
- 5) Water can cause a number of diseases if comes to the contact in contaminated/ impure state. The modern scientists have identified the diseases can be caused by



contaminated water and already enlisted as “water borne diseases”. In the same way Susruta and Bagbhata have also incorporated a list of diseases can be caused by “dushitajala”. These diseases include external diseases like skin diseases and internal ones like G. I. problems, fever, cough etc.

- 6) Since there is existence of impure / contaminated/ polluted water around and water is unavoidable for the livings hence the measures needed for purification of such water should also be discussed. Considering the fact Susruta and Bagbhata discussed on the methods of water purification which include filtration, boiling, dipping of some selected gems, good smelling flowers etc.
- 7) Specially Ashtanga Sangraha has mentioned the word “prana” to express the role of water in maintenance of life of a living. He also mentions the sufferings in non availability of water.
- 8) As a practice water is taken by every individual before, during and after food. Each of this habit is said to have effect on health specially in relation to thinness, obesity and equilibrium by Bagbhata.
- 9) In addition to the discussion on the other water Susruta and Bagbhata have added “coconut water” in their discussion which draws special attention and witnesses the depth of study and research of the scholars.
- 10) The indications, contra-indications, harm etc. of use of cold water, warm water, boiled water up to  $\frac{1}{2}$ ,  $\frac{1}{3}$ <sup>rd</sup>,  $\frac{1}{4}$ <sup>th</sup> etc. residue can be considered as unique contribution of the 3 scholars not only to the human society but also to the scientific forum.
- 11) It can be said that, though there is some difference in the description of water of Charaka, Susruta and Bagbhata then also basically their concepts are based on same type of research, observation and experience.

## 6. Summary

From the study the following points can be proposed as summary -

- 1) Charaka, Susruta and Bagbhata, in their authentic and resourceful books, Charaka Samhita, Susruta Samhita, Ashtanga Samgraha and Ashtanga Hridaya incorporate discussion on water rich with their experience, observation and research.
- 2) Their observations are scientific, close and well justified. No fact is stated without proper observation and justification.
- 3) The importance of water and all good and bad facts related with it were considered seriously by all the scholars, hence discussed with priority after study and observation.
- 4) Though in some points some difference is observed in the opinions of the three scholars in the 4 books then also, if observed sincerely it proves that, they worked with same level of sincerity and drew their scientific opinions which are founded on almost same base.
- 5) The facts available in these 4 books only need modern explanation in global platform.

## 7. Conclusion

As conclusion it can be said that, the time demands study, review and exploration of the concepts kept hidden in the richest treasure of Indian literatures, specially in this context, of the health sector. For this a multi disciplinary effort is needed.

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