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Dietetic and Lifestyle Approach of Ayurveda in Certain Urinary Disorders

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ABSTRACT

Ayurveda, the most ancient system of medicine not only emphasizes on proper diets and conducts; as a part of treatment of every disease but also considers that improper diets and conducts are the major reasons of several diseases. *Mutravaha Srotas* is one of the important systems of the body being a detoxifying and excretory organ system, in which role of dietetic and lifestyle modifications play a major role for prevention and cure of diseases. **Aim:** To provide rich scientific knowledge pertaining to *Pathya apathyas* (Do's and don't) in terms of diet and lifestyle for the avoidance and management of certain urinary disorders like *Mutrakricchra* (Dysuria), *Mutrashmari* (Nephrolithiasis) and *Mutrasthila* (BPH). **Review result:** In spite of being *Mutravahasrotogata* origin, *Mutrakricchra*, *Mutrashmari* and *Mutrasthila* have different dietetic approach because of different *Samprapti* but lifestyle approach is almost same. Avoidance of holding natural urges, hygiene and yoga practices are key to prevention of urinary diseases. **Conclusion:** This review can be route-finder for researchers and clinicians for the prevention of disease and understanding the role of *Pathya apathyas* in disease management. **Clinical significance:** Encourage and educate community to prevent urinary disorders by means of diet and lifestyles changes.

KEYWORDS

Urinary disorders, *Mutrakricchra*, *Mutrashmari*, *Mutrasthila*, *Pathyapathyas*



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INTRODUCTION

Ayurveda gives unique emphasis on "Ahara" (diet) for good living, health and wellness. Healthy and wholesome food nurture the mind, body and soul. The *Ahara-Vihara*, which do not adversely affect the body and mind are called as wholesome and those which adversely affect them are thought to be unwholesome. The intention of intake of wholesome diets and follow healthy lifestyles is to maintain health and alleviate the various diseases. *Ayurveda* has given so much value to *Mutravaha Srotas* (urinary system) and its *Vikaras* (urinary disorders). Being a system responsible for homeostasis of fluids in the body, it also detoxifies the body by removing many waste products by the route of urine. *Basti* (Urinary Bladder) comes under *Trimarma* of Ayurveda classics¹ and it is known as *pranayatana* (where life resides). Many diseases such as *Mutraghata* (*Benign Prostate Hyperplasia*) and *Mutrakrichhra* (Difficult micturition) occurred in *Basti*². Most of the urinary tract disorders are described in the form of 8 types of *Mutrakricchra*, 13 types of *Mutraghata*, 4 types of *Ashmari*. Acharya Vagbhata classified *Mutraroga* into two major types i.e. *Mutra-apravratijanya* and *Mutra-atipravrtijanya* disorders³. Urinary tract infection is the second most common

infection in community practices. Worldwide, approximately 150 million people are diagnosed with urinary tract infections every year, costing the global economy in excess of 6 billion US dollars⁴. The widespread use of antimicrobial agent has resulted in the development of antibiotic resistance, which has become a major problem worldwide⁵. In modern science, target of treatment is to abolish the pathogen by antibiotics, which gradually becomes resistant over a period of time. Globally, in the year 2010, benign prostatic hyperplasia has affected about 210 million males. Incidence rates have increased from 3 cases per 1000 men/ year at the age 45–49 years, to 38 cases per 1000 men/ year at the age 75–79 years. Prevalence rate is 2.7% for men aged 45–49 which increases to 24% by the age of 80 years⁶. At old age, dietetic and lifestyle modification plays a significant role in decreasing symptoms of BPH. Urolithiasis is most common disease of present era, which has very much impact of diet and lifestyle modifications. Men usually experience their first episode of Urolithiasis between 30 to 40 years of age, whereas women experience first episode of Urolithiasis somewhat later. Ayurveda is a science, in which treatment of a diseased person not only depends on medicine, but also on *Pathyapathya*, *Dinacharya*, *Swasthvritta* and *Sadvritta*. The Ayurvedic



texts place big importance on the compatibility and incompatibility of foods. This review article is an attempt to highlight the dietetic and lifestyle approach of Ayurveda in *Mutrakricchra*, *Mutrashmari* and *Mutrasthila*.

MATERIAL AND METHODS

Various available *Samhitas* (treatise), *Samgraha grantha* (compendia) were observed for the *Pathya apanya* concept of above mentioned diseases. Collected data for respective diseases were arranged systematically with brief introduction and presented in tabular form under the heading of diet, drug, fruit and miscellaneous for easy assessment and understanding.

OBSERVATIONS AND RESULTS

Mutrakricchra(Urinary Tract Infection):

Mutrakricchra is a disease of the *Mutravaha Srotas* (Urinary system) in which painful micturition occurs⁷. Partial

obstruction to *Mutravaha Srotas* along with painful voiding leads to *Mutrakricchra* in which micturition occurs with difficulty. Ayurvedic term *Mutrakricchra* is more nearer to dysuria which denotes to difficulty or discomfort during urination⁸. All such articles which are “*Mutrala*” (Diuretic) and “*Anulomana*” (it helps in redirecting the flow of *Vayu* downwards) are *Pathya* (Wholesome/beneficial) while the things having opposite properties to it are *Apanya* for *Mutrakricchra*. *Mutrakricchra* has been described under *Santarpanoth Vyadhi* (diseases due to over nourishment) & thus *Aptarpana Chikitsa* (emaciated treatment) is mentioned for it⁹. *Ikshu* (*Saccharum officinarum*) is said to be best *Mutrajanan Dravya* (diuretic) & *Gokshura* (*Tribulus terrestris*) is said to be best. *Mutrakricchrahara dravya* (pacifying dysuria)¹⁰. *Pathyapathya*:^{11,12,13}. *Ahara Vihara* in *Mutrakricchra* are mentioned in table no-1 and 2.

Table 1 *Pathya Ahara*(Beneficial diet), *Vihara*(Beneficial life style) in *Mutrakricchra*

Diet	<i>Purana Raktashali</i> (old red variety of rice), <i>Yava</i> (barley), <i>Kshara</i> (alkali), <i>Takra</i> (butter milk), <i>Dadhi</i> (curd of cow milk), <i>Ksheera</i> (milk of cow), <i>Mudga</i> (green gram), <i>Jangala Mamsa</i> (meat of wild animals), <i>Sharkara</i> (sugar)
Drug	<i>Gokshura</i> (<i>Tribulus terrestris</i>), <i>Kumari</i> (<i>Aloe vera</i>) <i>Patola</i> (<i>Trichosanthes dioica</i>), <i>Haritaki</i> (<i>Terminalia chebula</i>), <i>Truti</i> (<i>Elettaria cardamomum</i>), <i>Eranda patra</i> (leaf of <i>Ricinus communis</i>), <i>Munja</i> (<i>Saccharum munja</i>), <i>Gundra</i> (<i>Typha australis</i>), <i>Darbha</i> (<i>Desmostachya bipinnata</i>), <i>Nagdamani</i> (<i>Crinum asiaticum</i>), <i>Kasisa</i> (Bell metal), <i>Sura</i> (strong distilled <u>alcoholic</u> beverage), <i>Karpura</i> (<i>Cinnamomum camphora</i>)
Fruit	<i>Purana kushmanda Phala</i> (old Fruit of <i>Benincasa hispida</i>), <i>Puga</i> (<i>Areca catechu</i>), <i>Kharjura</i> (<i>Phoenix dactylifera</i>) <i>Narikela</i> (<i>Cocos nucifera</i>), <i>Taladrumsira Talasthimajja</i> , (<i>Borassus flabellifer</i>), <i>Trapusha</i> (<i>Cucumis sativus</i>)
Miscellaneous	pure water of <i>Nadi</i> (river water) <i>Shitannapana</i> (Diet and liquid diet having cold property)
Pathya Vihara	<i>Abhyanga</i> (massage), <i>Swedana</i> (fomentation), <i>Avagahana</i> (Tub bath), <i>Anuvasana</i> (enema with medicated oil), <i>Niruha</i> (enema with decoction) and <i>Uttara Basti</i> (urethral and vaginal douche)



Table 2 Apathya Ahara (Harmful diet) and Vihara (Harmful life style) in Mutrakrichhra

Diet	<i>Lavana</i> (common salt), <i>Ardraka</i> (ginger), <i>Matsya</i> (Fish) <i>Tail</i> (oil), <i>Hingu</i> (<i>Ferula assa-foetida</i>), <i>Tila</i> (<i>Sesamum indicum</i>), <i>Sarshapa</i> (<i>Brassica nigra</i>), <i>Masha</i> (Black gram)
Drug	<i>Tambula</i> (Leave of <i>piper betel</i>)
Fruits	<i>Karira</i> (<i>Capparis decidua</i>)
Miscellaneous	<i>Madhya</i> (alcohol), <i>Viruddha</i> (incompatible food), <i>Vishamashana</i> (irregular intake of food), <i>Atitikshna</i> (over spicy food), <i>Vidahi</i> (causing burning sensation after digestion), <i>Ruksha</i> (dry-lack of oil), <i>Amla</i> (sour)taste.
Apathya Vihara	<i>Ati Vyayama</i> (over exercise), <i>Ati Maithuna</i> (excessive indulgence in sexual act), riding on elephant, horse, excessive travelling on uneven surface. etc.

Mutrashmari (Urolithiasis):

Ashmari (Urolithiasis) is a very common worldwide problem and one of the major cause of abdominal pain. It is one of the most distressing disease among the various urinary disorders. Dietary intake and regimen has a direct link with the formation of *Ashmari*. The predominant *Dosha* in *Ashmari* is *Kapha*¹⁴. So diet and regimen which increase *Kapha*, may cause *Ashmari*. Excessive intake of *Guru*, *Sheeta*, *Snigdha*, *Madhura Aahaara*, irregular food habits, *Diwaswapna* (day sleep) etc. may increase *Kapha* leading to formation of *Ashmari*. *Pathyapathya*^{15,16} *ahara vihara* in *Mutrashmari* are mentioned in table no-3 and 4.

Mutrasthila (Benign Prostate Hyperplasia):

When vitiated *Vata* gets lodged between the *Basti* and *Guda* and produces the stony hard swelling, it results in cessation of *Mutramarga*, thus produced *Mutrasthila*¹⁷. The *Sushruta Samhita*, one of the main texts among *Brihatrayi*, has described 12

types of *Mutraghata* and *Mutrasthila* is one of them¹⁸. Its signs and symptoms as well as anatomical structure bears a close resemblance to benign prostatic hyperplasia (BPH). It is a noncancerous (benign) enlargement of the prostate gland. The word “Benign prostate hyperplasia” refers to the growth of tissues due to increase in the number of cells in the prostate. Dietary intake and regimen has a direct connection in development of BPH. The predominant *Dosha* in *Mutrasthila* is *Vata*, so diet and regimen which increase *Vata*, may cause formation of *Vatasthila*. *Pathyapathya*^{19,20}. *Ahara vihara* in *Mutrasthila* are mentioned in table no-5 and 6.

DISCUSSION

Ahara and *Vihara*, which are compatible for the body channels, are termed as *Pathya*. On the other side, those having a harmful effect on them are *Apathya*²¹. If a person follow the rules and regulations of *Pathya* for a particular disease, there is very

**Table 3** *Pathya Ahara* (Beneficial diet) and *Vihara* (Beneficial life style) in *Mutrashmari*

Diet	<i>Yava</i> (Barley), <i>kulattha</i> (<i>Dolichos biflorus</i>) , <i>Purana shali</i> (old red variety of rice), <i>Mudaga</i> (<i>Vigna radiata</i>), <i>Ginger</i> (<i>Zingiber officinale</i>), <i>Yava Kshara</i> (<i>Hordeum vulgare</i>), <i>Varunashaka</i> (<i>Crateva religiosa</i>), <i>Godhuma</i> (<i>Triticum. aestivum</i>), <i>Tanduliya</i> (<i>Amaranthus viridis</i>) , <i>Jangala mansa</i> (meat of wild animals)
Drug	<i>Gokshura</i> (<i>Tribulus terrestris</i>), <i>Pashanabheda</i> (<i>Bergenia ligulata</i>) , <i>Shaliparni</i> (<i>Desmodium gangeticum</i>)
Fruit	<i>Purana Kushmanda</i> (old Fruit of <i>Benincasa hispida</i>)
Miscellaneous	<i>Madhya</i> (alcohol)
Pathya Vihara	<i>Avagahana</i> (Tub bath), <i>Anuvasana</i> (enema), <i>Langhana</i> (Fasting), <i>Vamana</i> (<i>Therapeutic emesis</i>), <i>Swedana</i> (<i>Fomentation</i>), <i>Virechana</i> (<i>Therapeutic Purgation</i>) and regular exercise

Table 4 *Apathya Ahaara*(Harmful Diet) and *Vihara*(Harmful lifestyle) in *Mutrashmari*.

Diet	<i>Viruddha anna</i> , <i>Ruksha</i> , <i>Madhura</i> , <i>Guru</i> , <i>Amla</i> , <i>Vishtambhi ahara</i> , <i>Kashaya Rasa Sevana</i> .
Fruits	<i>Jamuna</i> (<i>Syzygium cumini</i>), <i>Kapittha</i> (<i>Limonia acidissima</i>)
Miscellaneous	<i>Bisamrinaala</i>
Apathya Vihara	<i>Mutravegavrodha</i> (Holding the urine), <i>Shukravegavrodha</i> (Holding the semen), <i>Vyayama</i> (Excessive practice of exercise)

Table 5 *Pathya Ahara*(Beneficial diet) and *Vihara* (Beneficial life style) in *Mutrasthila*

Diet	<i>Purana Raktashali</i> (old red variety of rice), <i>Dadhi</i> (curd of cow milk), <i>Ksheera</i> (milk of cow), <i>Takra</i> (Buttermilk), <i>Dhanva mamsa</i> (meat of wild animals)
Drug	<i>Patola</i> (<i>Tricosanthus dioca</i>), <i>Turmeric</i> (<i>Curcuma longa</i>), <i>Haritaki</i> (<i>Terminalia chebula</i>) , <i>Supari</i> (<i>Areca catechu</i>), <i>Aardraka</i> (<i>Zingiber officinale</i>)
Fruit	<i>Purana Kushmanda Phala</i> (<i>Benincasa hispida</i>), <i>Kharjura</i> (<i>Phoenix dactylifera</i>), <i>Narikela</i> (<i>Cocos nucifera</i>)
Miscellaneous	<i>Madhya</i> (Alcohol)
Pathya Vihara	<i>Abhyanga</i> (massage), <i>Snehapana</i> , <i>Swedana</i> (fomentation), <i>Avagahana</i> (Tub bath), <i>Basti</i> (enema with decoction or oil) and <i>Uttara Basti</i> (urethral and vaginal douche)

Table 6 *Apathya Ahara*(Harmful diet) and *Vihara* (Harmful lifestyle) in *Mutrasthila*:

Diet	<i>Ruksha</i> , <i>Vidahi</i> , <i>Visthambhi</i> , <i>Viruddha Ahara</i> ,
Fruits	<i>Jambu</i> (<i>Syzygium cumini</i>), <i>kareera</i> (<i>Capparis deciduas</i>)
Apathya Vihara	<i>Ativyaayaama</i> (excessive practice of Exercise), <i>Ativyaavaya</i> (Excessive indulgence in sex), <i>Vegaavarodha</i> (<i>Hplding natural urges</i>)

little role of drug treatment, and when a person intake *Apathya* then drug treatment has of no value. *Aushadha Sevana* alone cannot alleviate the disease if defective diet and lifestyle are followed. On the other side, if appropriate food habits and lifestyle acting as *Pathya* are included in daily routine, even drug treatment can be reduced or prevented. Although above mentioned diseases belong to *Mutravaha Sansthan* but *Ahara Vihara* are quite different in every

disease, as the basic *Dosha* vitiation in *Mutrakricchra*, *Ashmari* and *Mutasthila* are respectively *Tridosha*, *Kapha* and *Vata*. *Vatashamaka*, *Madhura Rasa pradhan* and *Madhura Vipaka Dravya* eg. Milk, *Rakta shali*, *Purana kushmanda* etc should be introduced in the diet in a balanced way to prevent *Mutravaha srotas Vyadhi* because *Basti* (urinary bladder) is main place for *Vayu* in the body but above said *dravyas* are not indicated in *Ashmari* being a *Kapha*



Pradhana Vyadhi ²². Milk and yoghurt used in diet have bactericidal effect in urinary tract infections. Milk products help keep the urine acidic, which work as a germicide to some strains of bacteria ²³. Probiotics are helpful microorganisms that could protect against various urinary tract infections. *Lactobacilli* are the best-known probiotics which are mainly found in fermented milk products eg. Yogurt ²⁴. *Madhura, Guru Ahara* like milk or yoghurt are *Apathya* in *Ashmari* because of having *Kaphavardhaka* property. Modern studies say that calcium should not be limited in diet because body does not take up more calcium than is needed. So it can be an area of interest for further research. *Yavakshara* is *Pathya* and *Amla Rasa Pradhana Ahara* are *Apathya* in *Ashmari*. *Kumari* (anti-inflammatory and antibacterial), *Haritaki* (Antimicrobial, antifungal), *Eranda patra* (anti-inflammatory) are herbal drugs indicated in *Mutrakrichhra* due to their various properties²⁵. *Gokshura* have diuretic, analgesic, anti-urolithiatic property²⁶. Pharmacologically, *Pashanabheda* (*Berginia ligulata*) has shown no effect in prevention of stone formation but it was found beneficial in dissolving zinc calculi in the urinary bladder in experimental rats²⁷. Oxalate, cystine and urate stones did not dissolve in *Varuna* and *Kulattha*. *Gokshur kwath*

(decoction) dissolve urate and cystine stones to some extent. Phosphatic stones dissolve in all the three drugs. Among them *kulattha* had noticeable dissolving property that makes the stones friable ²⁸. Occurrence of Urinary stones is rising in the society because of salty diet ²⁹, high protein rich ³⁰ and less physical exercise. Restriction of methionine-containing foods like pistachio, popcorns, peanuts, broccoli, cauliflower, mushroom, avocado, bean sprouts, potatoes, green peas, spinach, tofu, kidney beans may avoid cystine crystal formation ³¹. Beer, like any other alcoholic beverage, acts as a diuretic and removes water from the body. Regular beer drinkers are at more risk of formation of oxalate kidney stones ³². Fast food, Red meat, *Chana* (*Cicer areintum*), *Palak* (*Spinacia oleracea*), *Tomato* (*Solanum lycopersicum*), *Sarso* (*Brassica juncea*)³³ are also contraindicated in BPH nowadays. *Nidana parivarjana* is primary aspect for prevention of diseases. Causative factors e.g., *Ativyayama*, *Atimaitihuna*, *Mutravegadharana* and *Nityadrutaprustyana* leads to vitiation of *Apana Vayu*. Excessive intake of *Matsya*, *Madhya*, *Katu*, *Amla*, *Lavana Ahara* cause vitiation of *Pitta Dosha*. *Ajirna*, *Adhyashana* and excessive intake of *Anupamatsya* aggravate *kapha dosha*. These all cumulatively causes vitiation of tridosha. *Ativyavaya* (excessive



intercourse) cause introduction of pathogens in urinary system, thus can produce cystitis³⁴. *Ativyayama* (excessive exercise) leads to excessive sweating may concentrate the urine, which result in alteration of urinary pH. Altered pH is an important cause for various urinary diseases³⁵. *Ativyayama* cause vitiation of *Vata*. Old age is *Vata Pradhana* thus *Ativyayama* cause further aggravation of *Vata* in old age. Modern theory says basically BPH is an inflammatory disorder, over exercise can cause elevated level of PSA (prostate specific antigen), thus inflammatory changes of prostate i.e. prostatitis occurs. If an old age man practices over exercise, chronic prostatitis occurs, hence it produces more symptoms of BPH³⁶. When a person indulges in drinking water or eating under urge of micturition, the *Apana Vayu* get vitiated. *Teekshna aushadha* (drugs of strong potency) cause vitiation of *Pitta*. Certain medications e.g. chemotherapy drugs can cause inflammation of bladder³⁷. BPH is the main cause of acute urine retention, which can be worsened due to some medications e.g. drugs with anticholinergic properties cause urinary retention by reducing bladder detrusor muscle contraction. Sympathomimetic drugs (e.g., oral decongestants) cause urinary retention by increasing alpha-adrenergic tone in the

prostate and bladder neck³⁸, *Nityadrutaprishtayaanat* (Riding on the back of fast moving animals regularly) can cause vitiation of *Vata*. Physical activities such as horse riding or bicycling can lead to dysuria³⁹. Excessive intake of *madhya* alcoholic beverages can change pH of urine, which may lead to various diseases of urinary system. Risk of urinary infections is more in peoples who take alcoholic beverages⁴⁰. *Lavana rasa* (high salt intake) can increase urinary calcium and lower urinary citrate level, hence this produces stone formation. Spicy food articles also tend to irritate bladder and produce cystitis. *Anupamatsya* (flesh of wet land creatures), *Adhyashana* (eating food before the digestion of previous meal), *Ajeerna* (Indigestion) can cause vitiation of *Kapha* and production of *Ama*. It may be correlated to free radicals and free radicals are main cause of inflammation⁴¹. So avoiding these causative factors may help in prevention of diseases. Basti is main place of *Vata* in the body and *Basti chikitsa* is the treatment of choice in *Vatavyadhi*⁴². So basti chikitsa is pathya for almost every mutravaha srotas vyadhi. *Pranayama* (yogic breathing practices) and meditation are beneficial to manage urinary tract infections⁴³. Urinary tract infection is due to problems of *Swadhisthana*, *Manipoura* and *Anahata* chakra. Thus, *Asanas* that involve pelvis,



abdomen and chest region can be beneficial for the condition e.g *Paschimottanasana*, *Halasana*, *Vajrasana*, *Shashankasana*, *Trikonasana*, *Bhujangasana* *Marjariasana*. *Moolabandha* and *Vajroli mudra* both of the *Asanas* be practiced 25 times per day, both in cases of urinary tract infections and BPH⁴⁴.

CONCLUSION

A disease cannot be treated only by the medication alone but preventive aspect of disease is equally useful in its management. Everyone must follow *Pathya* and *Apathya* described in Ayurveda, this may not only be helpful to control the disease but may also prove to be beneficial to cure the disease. These does and don'ts in Ayurveda have scientific evidence to cure the disease and thus should be followed. Thus having a rich knowledge pertaining to *Pathya* *apathya* of Ayurveda can contribute promising attribute to the restoration of health.

CLINICAL SIGNIFICANCE:

This review work may help to encourage and educate mankind to prevent urinary disorders by means of diet and lifestyles changes.



REFERENCES

1. Charaka. Charaka samhita. Chakrapanidatta, Ayurvedadipika, Sanskrit commentary by Yadavaji Trikamji, Siddhi sthana Chapter 9/3, Varanasi: Chaukhamba surbharti Prakashan; 2013.p.716.
2. Sushruta. Sushruta samhita. Dalhanacharya,s Nibandsamgraha, Sanskrit commentary by Yadavaji Trikamji, Nidana sthana, chapter 3/28, Varanasi: Chaukhamba surbharti Prakashan; 2012.p.280.
3. Vagbhata. Astanga Hridayam with Nirmala, Hindi commentary by Acharaya Brahmanand Tripathi, nidana sthana chapter 9/40, Delhi: Chaukhamba Sanskrit Pratishtan; Reprint 2009.p.493.
4. Gonzalez CM. Schaeffer AJ, Treatment of urinary tract infection: what's old, what's new, and what works, World J Urol. 1999; 6: 372-382.
5. Kumar MS. Lakshmi V. Rajagopalan R., Occurrence of extended spectrum beta-lactamases among Enterobacteriaceae spp. isolated at a tertiary care institute, Indian J Med Microbiol: 2006. 24(3): 208-11.
6. Epidemiology of Benign Prostate Hyperplasia downloaded from https://en.wikipedia.org/wiki/Benign_prostatic_hyperplasia#Epidemiology
7. Charaka. Charaka samhita. Chakrapanidatta, Ayurvedadipika, Sanskrit commentary by Yadavaji Trikamji, Vimana sthana Chapter 5/8, Varanasi: Chaukhamba surbharti Prakashan; 2013.
8. Dysuria at the US National Library of Medicine Medical Subject Headings (MeSH) downloaded from <https://en.wikipedia.org/wiki/Dysuria>
9. Ibidem(1) Charaksamhita, Sutrasthana 23/6.
10. Ibidem(1) Charaksamhita, Sutrasthana 25/40
11. Shri Govindadas. Bhaishajyaratnavali. vidyotini hindi commentary by Ambikadatta Shashtri, Mutrakruhra Adhikara, Varanasi: Choukhamba Prakashan, 19th edition, 2008, pg.706.
12. Yogratnakar. Vidyotini Hindi commentary by lakshmi pati shastri, choukhamba prakashan Varanasi: 7th reprint edition, 1999. pg.61.
13. Bhavamishra. Bhavaprakashanighantu. commentary by KC Chunekar, GS Pandey, Varanasi, reprint 2006
14. Yogratnakar. Vidyotini Hindi commentary by lakshmi pati shastri. choukhamba prakashan Varanasi: reprint edition 1999. pg. 68.
15. Shri Govindadas. Bhaishajyaratnavali. vidyotini hindi commentary by Ambikadatta Shashtri, Choukhamba Prakashan; 19th edition, 2008. Ashmari Adhikara. pg. 567.



16. Yogratnakar. Vidyotini Hindi commentary by lakshmipati shastri. reprint edition 2007 choukhamba prakashan Varanasi: pg. 698.
17. Yogratnaka. vaidya Shrilaxmipatishastri. Mutraghatachikitsa/4. Vidhyotini commentary, Chaukhamba surbhaaratiprakashana; varanasi: reprint 1999.
18. Sushruta. Sushruta Samhita. Ayurveda Tatvasandipika Hindi commentary. Shashtri AD. Uttarantra- 58/3-4. 17th ed. Varanasi: Chaukhambha Sanskrita Sansthana; 2003. p. 423.
19. Shri Govind Das. Bhaishjya Ratnavali, Mutraghata chikitsa prakarana, Reprint 2005, New Delhi: Motilal Banarasidas Publishers: p.711.
20. Yogratnakar. Vidyotini Hindi commentary by lakshmipati shastri, choukhamba prakashan; Varanasi: reprint edition seventh.1999.pg.67-68.
21. Agnivesha. Charaka. Chakrapani. SutraSthana.Chapter 25/45. In: Sharma RK, Dash B(editors). Charaka Samhita with Chakrapaanidatta. edition. Ayurved Dipika, Commentary. Reprinted.Varanasi: Chowkambha Sanskrit Series; 2012: 1:438.
22. Yogratnaka. vaidya Shrilaxmipatishastri. Ashmarinidanam. Vidhyotini commentary, Chaukhamba surbhaaratiprakashana; varanasi: reprint 1999. pg.68.
23. MayrerAR. Andriole VT. Urinary tract antiseptics. Med Clin North Am. 1982; 66:199–208
24. Ahmed Al-Badr. Ghadeer Al-Shaikh. Recurrent Urinary tract infections Management in Women Sultan Qaboos Univ Med J. 2013 ; 13(3): 359–367.
25. Rabinarayan Acharya. A Pharmacotherapy of Urinary Tract Infectional Analysis Of Herbal Drugs Indicated In Mutrakricchra (Dysuria). J. Res. Educ. Indian Med 2010. 16 (1-2) : 7-17
26. Verma Priyanka. Galib. Patgiri BJ. Prajapati PK. Tribulus terrestris linn.: A phytopharmacological review, JAHM 2015,1(3): 37-43
27. Seth SDS. Prabhakar MC. Bupha BC. Arora RB. Berginia ligulata as a antilithiatic. J. Res. Indian Med 1974. 9:1-3.
28. Dilip Kumar Chanchal. Pankaj Niranjana. Shashi Alok. Surabhi Kulshreshtha. Archana Dongray. Shweta Dwivedi. A Brief Review On Medicinal Plant And Screening Method Of Antilithiatic Activity, Ijp 2016. 3(1).
29. Andrea Ticinesi. Antonio Nouvenne. Naim M. Maalouf. Loris Borghi. Tiziana Meschi. Salt and nephrolithiasis, Nephrol Dial Transplant 2016. 31 (1): 39-45
30. Scott Gottlieb. High protein diet brings risk of kidney stones. BMJ. 2002. 24; 325(7361): 408



31. Anita Saxena. R. K. Sharma. Nutritional aspect of nephrolithiasis, Indian J Urol. 2010. 26(4): 523–53.
32. <http://timesofindia.indiatimes.com/home/science/Beer-in-summer-causes-kidney-stones/articleshow/32570843.cms>.
33. <https://www.prostateresearchlabs.com/admin/pdf/Dr-Geos-Natural-Treatments-for-Prostate-Health-2013Rev.pdf>(cited on 17-4-2017).
34. Harrisons. Principal of internal medicine, edited by Eugene Braun Wald, Anthony S.Fauciet. 16th edition. 2005.1716.
35. Bihl G. Meyers A. Recurrent renal stone disease advances in pathogenesis and clinical management. The Lancet Journal 2001.358(9282):651-6
36. J. Curtis Nickel. Mostafa Elhilali. Vallancien. Benign prostatic hyperplasia (BPH) and prostatitis: prevalence of painful ejaculation in men with clinical BPH for the ALF-ONE Study Group. BJU International; 2005. 95. 571–574.
37. F.J.Bramble. R.Morley. Drug induced cystitis. The need of vigilance. British Journal of Urology. 1997.79:3-7
38. Brian A. Selius. DO. Rajesh Subedi. Urinary Retention in Adults: Diagnosis and Initial Management. American Family Physician; 2008. 77(5):56-59.
39. Judy D. Bremnor, Richard Sadovsky Evaluation of Dysuria In Adult. Am Fam Physician 2002.65(8):1589-1597.
40. Hegde Gajanana. Priya Bhat. Concept of Lower Urinary Tract Infection In Ayurveda, IAMJ 2014. 2 (4):555-559
41. Bijita Chutia. Khagen Basumatary. Concept of Ama w.s.r. to Free Radicals as a Causative Factor of Diseases, Int J Ayu Pharm Chem, 2015.4 (1).
42. Agnivesha. Charaka. Dridhabala. Charaka Samhita Chikitsa Sthana Vatavyadhi Chikitsa Adhyaya 28/77. In: Tripathi B, Deshpande PJ, editors. reprint ed. Varanasi: Chaukambha Sanskrit Pratishtan; 2003. p. 951.
43. Urinary tract infection Western and Ayurvedic Diagnosis and Treatment Approaches. By: Mahsa Ranjbarian downloaded from <http://www.ayurvedacollege.com/sites>
44. Dr Swami Karmananda Saraswati. Urinary system disorder <http://www.yogamag.net/archives/1980/joct80/urodis.shtml>