

THERAPEUTIC USE OF URINE IN EARLY INDIAN MEDICINE

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Urine is composed mainly of water with little quantities of urea, uric acid, salts (phosphates, oxalates of sodium, calcium etc.) and some hormones in varying proportion. It is although a waste product of the body, none the less it has many medicinal properties, which had been recognised by the ancient medical practitioners, and as such used both internally and externally as medicine. Apart from cow's urine which was used more commonly because of the special sanctity attached to the cow in India, the urines of the other animals such as goat, sheep, buffalo, elephant, horse, camel, donkey etc. were also very much in use as remedies for the treatment of worms, dropsy, abdominal enlargements, flatulence, colic, anaemia, abdominal tumor, loss of appetite, tuberculosis, poison, haemorrhoids, amenorrhoea, leucoderma, leprosy, aggravation of *kapha* and *vāta* and in several other mental diseases.

An attempt has been made in this article to bring forth the therapeutic use of this 'heretical' potion as was in vogue in ancient Indian system of medicine as gleaned from the ancient medical texts.

Key words : *Caraka Saṃhitā*, *Drāva drāvya vijñānīya*, *Mūtravarga*, *Pañcagavya*, *Urine therapy*.

Human susceptibility to illness and injury suggests and extensive reading of Indian literature confirms that medical lore touched the lives of all the human beings from Vedic to modern, irrespective of their settings whether traditional or cosmopolitan. In order to alleviate the human sufferings, a system was developed for managing the whole life as to prolong it by preserving health and vitality, as far as possible and was duly termed as *āyurveda* or 'the science of living to a ripe age'. This system reached to its classical form in the early centuries

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of the christian era, especially during the dynasty of the imperial Guptas when the Culture of India was at its peak.

In those times, Health was believed to be conditioned by the balance of three primary basic elements in the body viz, wind (*vāta*), gall (*pitta*) and mucus (*kapha*). It was held that any discord among these three primary fluids resulted in diseases while their concord brought health ‘*vikāro dhātuvaiṣamyam, sāmayaṃ prakṛtir ucyate*’¹.

To maintain the equilibrium of these vital fluids, which were incidentally also practiced by classical and medieval European Physicians,² the regimen of proper diet and other household arrangements were emphasized. As such the concept of medicine as a means of preserving health rather than curing diseases led to much emphasis on dietetics, which not only included among other things, herbs, shrubs but even excretions, especially the urine of animals.

Urine is a liquid produced from the blood or interstitial fluids by a process of filtration, re-absorption and tubular secretion and most commonly serves for flushing the waste molecules collected from the blood by the kidneys and for the homeostasis of the body liquids.

The watery solution of urine is made up of metabolic and suspended solid wastes and other substances. The two main components are simple salt and a compound called Urea. Other elements include hormones, proteins, antibodies and other beneficial pharmacological agents. The presence of urea in the urine is the result of the body’s chemical balancing of Sodium Chloride and water ratio.

The use of urine is frequently mentioned in the early ayurvedic treatises as a principal ingredient in numerous therapies and medical recipes as referred to in the *Caraka Saṃhitā*, *Suśruta Saṃhitā*, *Kāś’yapa Saṃhitā*, *Aṣṭāṅga Saṃgraha*, *Cakradatta* as also in *Yogacandrikā*, *Rājanighaṇṭu* etc. Interestingly, this therapy from animal waste products, was pretty much in vogue during the time of Buddha and which is manifested verily in the Buddhist tradition where prior to the admission to the order (*samgha*) as a monk, a new entrant would necessarily subscribe to the “four resolutions” (*nissayas*) in order to qualify for ordination. One of the four such resolutions was about taking the medicine of putrid urine (of cattle) as and when needed³. The inclusion of urine as a form

of medicine and as one of the essential life resources points towards the fact that the wandering ascetics had a knowledge about the therapeutic properties of animals' urine. Thus keeping the medicinal value of urine central in view, eight prominent types of urine have been mentioned in the scripture of Atreya as described in the *Caraka Samhitā*, which is the earliest surviving classical medical Sanskrit manual authored by Caraka who was a contemporary of Kuṣāṇa King Kanīṣka.⁴ These were urines of sheep, goat, cow, buffalo, elephant, camel, horse and ass:

*avimūtramajā mūtram gomūtram mahiṣam ca yat /
hastimūtramathostrasya hayasya ca kharasya ca //*⁵

Further, dwelling upon the properties and usage of urine, the great sage-physician referred the urine to be sharp, slightly non-unctuous, pungent-saline which was useful in anointing, pasting, non-unctuous enema, purgatives, fomentations for acute distension (*ānāha*), poisoning, haemorrhoids (*arśa*), hardening and swelling of spleen (*gulma*), chronic skin diseases (*kuṣṭha*) and fresh leprosy lesions (*kilāsa*) and also as unguents and for sprinklings.⁶ Apart from its medicinal values, urine also helped in promoting appetite and digestion, being antipoissonous and antihelminthic and beneficial for those afflicted with jaundice (*pāṇḍuroga and kāmalā*).⁷

Elaborating the general description of the properties of urine on the three primary fluids of the body, it has been referred that the urine pacifies *kapha*, carminates *vāta* and draws *pitta* with purgation.⁸

Following the above mentioned general properties and description of urine, a detailed survey of the usage of different types of animal urines as medicine in the ancient Indian medical system has been attempted in this article. The specific animals about which references are available in the ancient treatises have been placed in an alphabetical order :

1. Ass (Sanskrit : *Khara*; Latin : *Asinus equidae*)

The urine of Ass has been mentioned useful as destroyer of epilepsy (*apasmāra*), insanity (*unmāda*) and in seizures. The mode of its use has been mentioned as internal as drink.⁹ Apart from the above mentioned diseases, the urine of Ass has also been prescribed to cure diabetes and various diseases caused by worms.¹⁰

2. **Buffalo** (Skt. : *Mahiṣa* ; Lat. : *Bos bubalus*)

The urine of the she-buffalo has been prescribed to be taken internally for the treatment of piles, oedema, and several abdominal diseases.¹¹ This urine (of she-buffalo) has extensively been prescribed as an ingredient of a concoction for alleviating the loss of appetite.^{12,13}

3. **Cat** (Skt.: *Mārjāra* or *Viḍāla*; Lat. : *Felis domesticus*)

The therapeutic value of the urine of Cat has been indicated in the ancient āyurveda as to cure the condition of insanity and also for epilepsy. The administration of the Cat urine was primarily external as an ingredient of eye-ointment or the inhalation of the fumes of the urine for the treatment. However, for both insanity and epilepsy, a nasal medication of the Cat's urine has been indicated¹⁴ to bring the patient under control.

4. **Camel** (Skt.: *Uṣṭra*; Lat : *Camelus dromedarius*).

In the *Caraka-Saṃhitā*, the urine of Camel has been mentioned to be slightly bitter and has been indicated for the remedy of hiccups, cough and in the complaints of piles.¹⁵ However, in *Yogacandrikā*, the urine of Camel is referred to having remedial effect in various abdominal ailments.¹⁶

Furthermore, the urine of Camel has been prescribed to alleviate the condition of inflammation/edema as per *Kāśyapa Saṃhitā*.¹⁷

5. **Cow** (Skt.: *Dhenu*, *Gau*; Lat. : *Bos taurus*)

Having a special place in the Hindu culture and mythology, Cow is not only considered under favourable auspices, in general, but she has been stated to be akin to mother (*mātā*, *gaumātā*) in the Indian tradition. Cow's urine as such has also been the most widely referred, used and venerated animal urine owing to its immense therapeutical speciality.

Various medicinal properties of its urine has been mentioned since ancient times and is still in vogue in the Indian System of Medicine for a large number of ailments. Its therapeutic usages are both external as well as internal. While externally Cow urine has been used as lotion and ointment, internally it has been mentioned to be used as drink and in preparation of the medicated ghee (clarified butter).

Caraka Samhitā contains a large number of therapeutical indications based on Cow's urine in the treatment of Epilepsy (*apasmāra*).¹⁸ Further, the cow's urine has also been prescribed as an ingredient for massage and bath in order to treat the cases of epilepsy.¹⁹ For a successful treatment of abdominal lump (*gulma*) and hardness in bowels the use of cow's urine has been recommended.²⁰ To break the lump an enema of the extract of ten roots (*das'amūla*) added with milk, cow's urine and alkali have been recommended.²¹ Interestingly, in one place it is mentioned that eighteen formularies with cow's urine had been prescribed for curing the *tridoṣa* (*vāta*, *pitta* and *kapha*) as well as destroying worms, treating pruritis, jaundice, leucoderma and snake bites.²²

An exhaustive reference of cow's urine having curative properties in alleviating various skin diseases, especially leprosy, is referred to in *Caraka Samhitā*.²³ Furthermore, in the treatment of falling body parts, discharging lymphs and organism infested organs, use of cow's urine (alongwith some other ingredients) has been recommended for bath, anointing and intake.²⁴

In the case of leucoderma (*śvitra*) also, the use of cow's urine has been indicated for cure.²⁵ A decoction *pañcagavya* comprising of cow's dung, curd, milk and ghee in cow's urine has been prescribed for alleviating epilepsy, jaundice and fever.²⁶

In the ancient medical science, cow urine has been recommended also as an antidote to various kind of animate and inanimate poison.²⁷

In *Suśruta Samhitā* also, the usage of cow's urine for alleviating several diseases has been mentioned. Elucidating its properties, it says that *go-mūtra* (cow-urine) is pungent, penetrating, hot in potency, in view of its alkaline property; it does not increase *vāta*; easily digestible, kindles digestion, improves intellect, increases *pitta*, mitigates *kapha* and *vāta*; it is used in diseases like colic, abdominal tumor, enlargement of the abdomen and flatulence, for therapies such as purgation, decoction, enema etc. Interestingly and markedly it is mentioned that in diseases (which are) curable by urines, only the cow's urine should be used.²⁸

In *Suśruta Samhitā*, cow's urine has been indicated as useful in the treatment of amenorrhoea.²⁹ The usage of cow's urine in the treatment of anaemia (*pāñduroga*) is extensively mentioned in the ayurvedic treatise *Cakradatta*.³⁰

Apart from anaemia and jaundice, this treatise also mentions the alleviating properties of cow's urine in the complaints of oedema, hardness of bowel, piles, spleen enlargement, worms and in the diseases of throat.³¹ Furthermore, cow's urine as a drink has been suggested as an effective treatment for weakness of voice as per the authoritative ancient ayurvedic text *Aṣṭāṅga Saṃgraha* of Vāgbhaṭa.³²

There are innumerable instances, in the various ancient medical texts, of the curative properties of the cow urine for a horde of human ailment as it has been mentioned above. It seems that possibly in the ancient Indian system of medicine, the urine of the cow was accepted and used almost as a broad-spectrum antibiotic quite akin to that of the twentieth century.

6. **Dog** (Skt.: *Svān*; Lat. : *Canis familiaris*)

In the *Caraka Saṃhitā*, for the treatment of epilepsy, the dog's urine as snuff used to be recommended by the physicians.³³ Possibly in absence of any scientific and biological evidences or without any confirmation regarding the origin and cause of epilepsy, the disease was considered to be a manifestation of bad *gṛahas* (or spirit) on the individual concerned. Consequently, in order to eradicate the evil spirit, fumigation of the patient with the urine of dog alongwith other materials used to be advised by the medical practitioners.³⁴

7. **She-elephant** (Skt.: *Gaja, Kuñjara*; Lat.: *Elephus indicus*)

The use of the urine of she-elephant (*hastinī-mūtra*) was recommended for alleviating the skin disease like leucoderma in lotion form.³⁵ Internally also, it was prescribed in drink form to the patients suffering from worms like helminthiasis and dermatosis.³⁶ It was also recommended in the treatment of complaints for retention of urine, faeces, poisons and in the disorders of *kapha* and piles.³⁷

8. **Goat** (Skt.: *Aja, Basta, Chāga*; Lat.: *Capra hircus*)

After the urine of cow, the urine of goat is referred with great importance in the ancient medical treatises. Goat urine is said to be astringent-sweet, beneficial for channels (?) and alleviates all *doṣas*.³⁸ Interestingly the urine of male and female goat is referred to have different effects in curing disease and

as such urines of he-goat and she-goat used to be prescribed separately for alleviating different diseases.

The usage of he-goat urine has been recommended both externally and internally. Externally it has been prescribed (i) in ointment for alleviating epilepsy, toxicosis, etc. (ii) in nasal medication as snuff for curing insanity; (iii) in eye ointment for curing the dimness of vision, infection and discharge of pus etc.³⁹ while internally, the he-goat urine has been prescribed to be taken in medicated ghee in complaints of cardiac seizures.⁴⁰

The urine of she-goat has been prescribed extensively in the complaints of gynaecological diseases such as vaginitis, cervicitis etc.⁴¹

However, while the āyurvedic treatise *Yogacandrikā* mentions the efficacy of he-goat urine for the treatment of menometrorrhagia and several other such diseases⁴², Cakradatta has mentioned the goat urine in treatment of cervical erosion (*karnini*).⁴³ Again, in the same work, goat's urine has been mentioned as a major ingredient of a paste efficacious for treating piles.⁴⁴

Furthermore, in *Aṣṭāṅga Saṃgraha* of Vāgbhaṭa, the goat urine has also been referred as having the curing properties in ailment of cough, respiratory difficulties and in earache.⁴⁵

9. **Jackal** (Skt.: *Śṛṅāla*, Lat.: *Canis aurcus*)

There are various references to the therapeutic value of the urine of Jackal in treatment of insanity⁴⁶ and epilepsy⁴⁷ in the ancient medical texts. The mode of application are either sprinkling, blowing, snuffing and smoking or in preparation of collyrium from the urine.

10. **Lion** (Skt.: *Simha*, Lat.: *Felis leo*)

The urine of lion has been prescribed as having the medicinal properties for curing epilepsy. The application of this medication is external as snuff.⁴⁸

11. **Osprey** (Skt.: *Kurara*; Lat.: *Pandion heliactus*)

The urine of this bird has been mentioned to be beneficial in piles. The usage of the urine are both external i.e. as an ingredient of ointment as well as internal i.e. inhalation of the fumes of the urine when burnt.⁴⁹

12. **Owl** (Skt.: *Ulūka*; Lat.: *Bubo bengalensis*)

The urine of owl has been prescribed as an effective medicine in the cases of insanity.⁵⁰ The application was both internal and external. The fumes of the urine was to be taken internally when urine is burnt. Externally, the urine had to be applied locally, i.e. on and around the head region for effecting cure from the disease.

13. **Porcupine** (Skt.: *Śallaka*; Lat.: *Acanthion leucura*)

The urine of porcupine has been referred to be useful for epilepsy and in insanity. For epileptic patient, the use of urine as ingredient of ointment has been recommended while in insanity, the inhalation of the fumes, when the urine was subjected to very high degree of heat (as if to burnt it) was said to be beneficial.⁵¹

14. **Sheep** (Skt.: *Avi*, *Meṣa*; Lat.: *Ovis vignei*)

Considered to be one of the eight prominent urines as per scripture of Ātreya,⁵² sheep urine is said to be slightly bitter, unctuous and non-antagonist of *pitta*⁵³. The efficacy of sheep urine has also been indicated in the complaints of epilepsy, leucoderma, insanity and intermittent fever etc.⁵⁴ The *Yogacandrikā* further mentions that sheep urine helps in destroying stone of urinary bladder (*aśmari*).⁵⁵ Interestingly, sheep urine has been mentioned as an ingredient for a powder for blackening of hair also.⁵⁶

15. **Wolf** (Skt.: *Vṛka*, Lat.: *Canis lupus*)

In the ancient Indian medical treatises the urine of wolf is mentioned to have medicinal properties and used to be prescribed for curing insanity⁵⁷. Inhalation of fumes of the urine and as ingredient in preparation for local application were the two important ways of use for the treatment of the disease.

CONCLUDING REMARKS

Although Urine is commonly believed to be 'dirty', this is not actually the case. Urine is virtually sterile and nearly odourless when it leaves the body. However, afterward, the bacteria contaminate the urine converting it into smelling chemicals that are responsible for the distinctive smell of stale urine, in particular ammonia which is produced from Urea.

Urea is commonly recognized as an effective antibacterial, antifungal and antiviral agent. When used on a wound, urea causes an osmotic imbalance that kills bacteria and fungus. Its extreme effectiveness has made its use in many topical ointments and creams sold pharmaceutically – both in prescription and over the counter. Of late, a bi-product of urine, an enzyme, Urokinase has been found extremely useful in dissolving the blood clots and is being used to treat the patients with blood clots in the arteries of heart and elsewhere in the body.

According to ancient Indian medical system in general and in the Ayurveda, in particular, it was perhaps, not necessary to know the names or forms of diseases. Rather it was more important to know the attributes of the humors and their state of imbalance behind different diseases. Once the aggravated humor was ascertained, alongwith its site of manifestation, an integral regimen for reducing such complaints or diseases used to be implemented to resume the balance (of the humors). However, in order to augment and replenish the best possible state of health for the ailing persons, the medical practitioners relied not only on the foodstuffs alone but also employed certain matters which were although seemingly esoteric, yet had enormous specific action against the disease prevention, health maintenance and longevity enhancement. Animals' urine was one such type of substance whose taste, digestibility, metabolism, physiological actions and specific medicinal properties were extensively researched by the ancient physicians and recommended in alleviating several afflictions of the mankind as shown above in this paper.

Abbreviations

<i>Ca</i>	<i>Caraka Saṃhitā</i>
<i>Ca. Sū</i>	<i>Caraka Saṃhitā, Sūtra sthāna</i>
<i>Ca Ci</i>	<i>Caraka Saṃhitā, Cikitsāsthāna</i>
<i>Ch.</i>	<i>Chapter</i>
<i>Lat.</i>	<i>Latin</i>
<i>Skt.</i>	<i>Sanskrit</i>
<i>v.</i>	<i>Verse</i>
<i>Vol.</i>	<i>Volume</i>

NOTES AND REFERENCES

1. *Caraka Samhitā*, ed. & tr. P.V. Sharma, Chaukhambha Orientalia, Varanasi, 2003, Vol. I Sū. 9.4, p.62.
2. A.L. Basham, "Practices of Medicine in Ancient India" in *Asian Medical Systems : A Comparative Study*, (ed) by Charles Leslie, Motilal Banarsidass, Delhi, 1998, p.22.
3. *Mahāvagga*, ed. Bhiksu J.Kashyap, Nalanda, 1956, 1.30.4.77:
rukhamūla senā sanam (lodging at the foot of the tree)
piṇḍiyālopa bhojanam (taking meals of morsels of food acquired by begging)
paṃsukalam cīvaram (making robes of rags, picked from dustheaps)
pūtimūta bheṣajam (taking putrid urine (of cattle) as medicine)
4. A.L. Basham, op. cit. p.20.
5. *Ca. Sū.1.92-104.*
6. *ibid.* 94-96 :
uśnamtikṣnamatho ruṣam kaṭukam lavaṇā nvitam /
mūtramutsādane yuktam yuktamā lepaneṣ u ca //
yuktamāsthāpane mūtram yuktam ca'pi virecane /
svedeṣ vapi ca tadyuktamā nā heṣvagadeṣ u ca //
udareṣvatha c'arśahsu gulmikuṣṭhi kilā siṣ u /
7. *ibid.* 97-98 :
dīpaniyam viṣ aghnam ca kṛimighnam cōpadiśyate/
pāṇḍurogopsṛstānāmuttam sarma ca'ucyate//
8. *ibid.* 98-99:
śleṣmanam śamayeta pītam mārutam ca'nulomayeta/
karṣet pittam dhobhagamityasmin guṇasam grahaḥ//
9. *ibid.* 104:
kharamūtrampasmaronmā dagrahavenāśanam
10. *Aṣṭāṅga Samgraha* of Vāgbhaṭa, ed. K.R. Srikantha Murthy, Chaukhambha Orientalia, Varanasi, 2002, vol. I, ch.6.138; p.113 *hantyunmādam'pasmāram kṛiminmehanca rā sabham*
11. *Ca.Sū.1.102 :*
arśah'sophodaragham tu sakṣ ram māhiṣam saram.

12. *Ca. Ci.* 13.151:
saptāhaṃ mahiṣam mūtram kṣiram cānannabhuka pibet
13. *ibid.* 15.181:
*bhūnimbaṃ rohiṇīm tiktāṃ paṭolaṃ nimbaparpatam /
dahenamahiṣmutrena kṣāra eṣo'gnivardhana //*
14. *ibid.* 9.74-75 (see also, *Ci.*10.41):
*sallakolūkamārjārājambūkavṛ kavastajaiḥ/
sekānjanam pradhanam nasyam dhumam ca kāryeta //*
15. *Ca. Sū.* 1.103:
satiktam svāskā saghnamarsoghnam ca'uṣtramucyate
16. *Yogacandrikā by Sri Lakṣmaṇa Paṇḍita*, ed. & tr. Asha Kumari & P. V. Tewari, Chowkhambha Visvabharati, Varanasi, 1998. ch. XXXVIII, v.14; p.451.
17. *Kāśyapa Saṃhitā or Vṛddhajīvakīya Tantra*, ed. P V Tewari, Chaukhambha Visvabharati, Varanasi, 1996, *Khila-Sthānam*, ch. XVII, vv 37-38; p.642
*gomūtram mahiṣimūtram uṣtramūtramatho pibet /
yathā svaṃ vam kṣirasiddham pibedetadyasya
syacchavayathurmahan //*
18. *Ca. Ci.*10.41:
kapilā nāmgavām mūtram nāvanam paramam hitam
19. *ibid.*10. 32-33.
20. *ibid.* 5.96 :
*tailam prasanna gomūtram āranālam yavāgrajam /
gulmam jatharamanaham pītamekatra sādhyeta //*
21. *ibid.* 5.178 :
bastim sakṣiragomūtram sakṣāram dāśamūlikam
22. *Ca. Sū.* 3.13 :
karaṇjabījaidagajam sakṣtham gomūtrapīṣtam ca paraḥ pradehaḥ
23. *Ca. Ci.* 7.86 :
kṣārena gavānmūtrastrutena tenāsyamaṇḍalānyaśu
also, *Ca. Ci.* 7.105:
*śvetakarvīrakarso gomūtram citrako vidaṇgaśca /
kuṣṭheṣu tailayogaḥ siddhoyam sanato bhiṣajām //*
24. *Ca. Ci.* 7.157 :
*prapatatsu lasīkaprastruteṣu gātreṣu jantujagdeṣu /
mūtram nimbavidaṅge snānam pānam pradehaśca //*

25. *Ca. Ci. 7.169–70:*
mūlakabījā valgujalepaḥ piṣṭo gavāṃ mūtre /
kā kodumbarikā vāsā valgujacitraka gavāṃ mūtre //
26. *Ca. Ci. 10.17:*
gosakradrasadadhyamlakṣivamūtraih samaighṛtam /
siddham pibet'apasmā rakā malā jvaranaśanām //
27. *Yogacandrikā, op.cit., ch.XXXVI.1 p. 437:*
purā śvagandhā grhadhūmalā kṣāḥ sameghanā dāiti mūtrapistaḥ /
viśānyāpi sthā varajangamā ni drutam prayuktā stavagado nihanti //
28. *Suśruta Saṃhitā, ed.& tr. K R Srikanta Murthy, Chaukhambha Orientalia, Varanasi, 2000, vol.I, ch.XLV. 220-21, p.367:*
gomūtram kaṭu tikṣṇauṣṇam sakṣaratvanna vā talam /
laghu 'agnidīpanam medhyam pittalam kaphavā tṇuta //
śūlagulmodarā nāhvirekā sihāpanā diṣu /
mūtrprayogsadhyeṣu gavyam mūtram prayojyeta //
29. *Suśruta Saṃhitā, op.cit., vol.II, ch.II.22-24, p.22 f:*
pāne mūtramudasvicca dadhi suktam ca bhojane /...
evamduṣṭasukrah śuddhārtavā ca //
30. *Cakradatta, ed. & tr. P. V. Sharma, Chaukhambha Orientalia, Varanasi, 1994; ch. VIII. 5 - 7 & 10*
31. *ibid. ch. VIII. 42 - 48.*
32. *Aṣṭāṅga Saṃgraha of Vāgbhaṭa, op.cit., vol.II, ch.7.63, p. 342:*
pibet kaṭuni mūtreṇ a kaphaje ruḥṣ habhojane /
33. *Ca. ,op.cit. vol.II, ch. XV. 41, p.175.*
34. *Kāśyapa Saṃhitā, op.cit. Kalpa Sthānam, ch.1.22, p.321:*
śva(a)vinmūtram mayurāṇā m lomānyathvacāghṛtam /
sarṣapāścheti dhūpo'yam grhaghna iti viṣrutah //
35. *Ca. Ci. 7.169:*
nīlotpalam sakuṣṭham sasindhavaṃ hastimūtrapistam vā
36. *Aṣṭāṅga Saṃgraha of Vāgbhaṭa, op.cit. Vol.II, ch. 6.138, p.113 :*
dadyāta kṣāre kilāse ca gajavājisamudbhavam
37. *Ca. Sū. 1.102-3 :*
hāstikam lavaṇam mūtram hitam tu kṛmikusthinā ma /
praśastam baddhaviṇmūtraviṣa ślesmāmyārsa sām //
38. *Ca. Sū.1.100 :*
ājama kaṣāyamadhuram pathyam dosannihanti ca

39. *Ca. Ci.* 9.64 – 65 :
40. *Ca. Ci.* 10.26 :
*ghṛtam saindhavaṅgubhyām vā rse bāste chaturguṇe /
mūtre siddhamā pasmāra hṛdagahā mayā nāsanaṃ //*
41. *Ca.Ci.* 35.80 :
*akṣamā trairajā mūtre kṣire ca dviguṇe pacet /
tailaprasthaṃ picuṃ dadyā dyaunou ca praṇ ayettataḥ //*
42. *Yogacandrikā*, op.cit.,ch. XXXV, v 17-19, p.430.
43. *Cakradatta*,op.cit.,ch. LXII, v. 14, p.530.
44. *ibid*,ch.V, v. 5, p.73.
45. *Aṣṭāṅga Saṃgraha*, op.cit.,ch.VI,v.138, p.113 :
sakā saharāṃ chhāgam pūrṇāta karṇasūlajita
46. *Ca. Ci.* 9.75
47. *Ca. Ci.* 10. 41:
śvaśṛgālavidaḥ lānaṃ siṃhādīnam ca śasyate
48. *ibid.*
49. *Ca.Ci.* 16.118
50. *Ca. Ci.* 9.74-75 :
*śallakaulukamārjārājā mbukavṛ kabastajaiḥ /
mūtrapittasakṛ allomanasvaiḥ carmahireva //*
51. *Ca.Ci.* 9.75
52. See P V Sharma, *Caraka Saṃhitā*, op. cit., vol. I, p.11
53. *Ca.Sū.*1.100 :
avimūtram satiktam syā t snigdham pittāvirodhi ca
54. *Ca.Ci.* 10. 48-49.
55. *Yogacandrikā*, op.cit.,ch.XIII, v. 8, p. 227
56. op. cit, ch. XXXII, v.16, p. 410-11.
57. *Ca.Ci.*9.74-75 , see ref.no.48 above.