

Miraculous Benefits and Multidimensional uses of Cow Urine (Gomutra): A Review

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Abstract

Since ancient times, cow urine has been used to cure many ailments in humans. Use of cow urine in varied forms and at various occasions, is an important part of Indian tradition. It is an essential part of panchgavya, which is formulated from five cow's products i.e., urine, milk, ghee, curd, and dung. The cowpathy-based treatment is called panchagavya chikitsa. Classical treatises of Ayurveda, i.e., Charaka Samhita, Sushruta Samhita, and Astanga Sangraha, has described ashta mutra (eight types of urine) along with their properties, indications, and formulations. Various works of Ayurvedic literature have mentioned its importance and uses for the treatment of kandu, kushtha, udarrog, colic, abdominal tumour, enlargement of the abdomen, and flatulence, as well as therapies such as decoction purgation, etc. Many studies have also been done, which show its use for the treatment of kidney diseases, skin diseases, heart diseases, stones, liver problems, diabetes, jaundice, haemorrhoids, athletes' feet, cysts, etc., and show its bioenhancer, anticonvulsant, anti-cancer, immunostimulant, wound healing, antioxidant, and antimicrobial properties. It is also useful in agriculture for the preparation of vermicompost and biopesticides. It is an excellent bioenhancer, and recently, cow urine distillate has been granted U.S. patents. Cow urine is scientifically proven to act as an immunomodulator along with its bacteriostatic action. However, research is required to prove its benefits and qualities. Public awareness is required to promote the importance and wide applications of cow urine to improve people's health and lifestyle with notion of make available economical and secure solution of various health issues.

Keywords: Ayurveda, Gomutra, Immuno-stimulant, Anticancer Property, Panchagavya.

Introduction

Gomutra has a special significance in Indian tradition. It has a substantial place in Ayurveda and has been described in Charak Samhita, Sushruta Samhita, and Astanga Sangraha. It is contemplated to be the most effective substance of animal origin with innumerable therapeutic values. In India, drinking cow urine has been practiced for thousands of years as a part of tradition^{1,2}. Gomutra has been articulated to have a spiritual cleansing effect as well. It has been described as “Amrita” or water of life (elixir of immortality), the nectar of God. It is an essential part of Panchgavya which obtain from coalescence of the cow (urine, milk, ghee, curd, and dung). Indian cow breeds are unique and distinct species, popularly known as “kamdhenu” (One who can complete all wishes of mankind) and “gaumata (cow is called a mother)³.

All these urines (eight types of urine from different animals) are sharp, hot, bitter, pungent, with salty as a secondary taste, light and promotive of evacuation. They ameliorate Vataja and Kaphaja disorders, viz meda (excessive adiposity), krimi (worms), gulma (gaseous swelling of the abdomen), visha (poisoning), arsha (piles), skin diseases including shopha (swelling), leprosy, agnimandya (loss of appetite), pallor, heart disease. They are dipaniya (kindle digestive fire) and pachaniya (promote digestion) in function⁴.

Gomutra has inherent antibacterial properties. It kills the bacteria and mitigate the inflammation so, it can be taken as a medicine by those who are suffering from throat infection, and tonsillitis. Owing to its built-in antibiotic properties, it clears skin problems like acne, pimples etc. it cleans skin by virtue of its antiseptic and disinfectant properties. Cleansing of skin from inside out, is also transpires due to purifying components. Sulphur compound of gomutra cleanse the skin and give relief from acne⁵.

Medicinal Properties of Cow urine (Gomutra) have been granted by the US, as Patents (No. 6,896,907 and 6,410,059). Bioenhancer, antifungal, antibiotic, and anticancer agent properties are particularly mentioned in those patents. Cow urine (Gomutra) increases the potency of “taxol” (paclitaxel) against MCF-7, a human breast cancer cell line, in in vitro assays (US Patent No. 6,410,059)⁶.

Properties of Cow urine

The properties of cow urine are mentioned below in Table 1

Table 1. Properties of Cow urine

Charak Samhita Sutra Sthan 1/102.	Cow urine has madhur rasa (sweet taste), which somewhat alleviates Doshas ⁷
Sushrut Samhita Sutra Sthan 45/220-221.	Cow urine has katu rasa (pungent taste), tikshna (penetrating), laghu (easily digestible), and ushanavirya (hot in potency), agnidipaka (kindles digestive fire), medhya (improves intellect). Because of kshar guna (alkaline property) it does not increase Vata. It increases Pitta, decreases Kapha and Vata ⁸ .
Astang Samgraha Sutra Sthan 6/141-143.	Cow urine is katu(pungent) in rasa(taste) and lavana(salty) anurasa (secondary taste). rukshaguna, ushnavirya, it increases pitta. It is best among all other animal urine ⁹ .

Chemical Composition of Cow Urine ¹⁰

- Water - 95%
- Urea- 2.5%
- Salt, Hormones, and Enzymes - 2.5%

Healthy cow urine

- Volume: 17-45 ml/Kg/day
- Specific gravity: Ranging from 1.025- 1.045. Its pH ranges between 7.4 to 8.4 with seasonal variations. Urea nitrogen and Total nitrogen vary between 23-28 ml/kg/day and 40-45 ml/kg/day respectively. Other important constituents are given in the table below Table 2.

Table 2. Chemical constituents of healthy cow urine

Allantoin	20-60ml/kg/day
Ammonia nitrogen	1-1.7ml/kg/day
Calcium	0.1-1.4ml/kg/day
Chloride	0.1-1.1mmol/kg/day
Creatinine	15-20mg/kg/day
Magnesium	3.7mg/kg/day
Potassium	0.08-0.15mmol/kg/day
Sodium	0.2-1.1mmol/kg/day
Sulphate	3-5mg/kg/day
Uric acid	1-4mg/kg/day
Leucocyte	< 15-micron lt

Uses of Cow Urine

According to Ayurvedic literature: list of uses of cow urine in various ailments is enumerated below in table 3

Table 3.Uses of cow urine

Charak Samhita Sutra Sthan 1/102	Destroys kusta (leprosy), krimi (worms), mitigates kandu (itching) and if taken internally, is beneficial in udararoga (enlargement of the abdomen) caused by tridosha ¹¹
Sushrut Samhita Sutra Sthan 46/220- 221	In the treatment of shoola (colic), gulma (abdominal tumour), udararoga (enlargement of the abdomen) and anah (flatulence), Cow urine is useful for therapies such as virechana karma (purgation), asthapanvasti (decoction enema) etc. In diseases that are mentioned as curable by urines, there only cow urine should be used ¹² .
Astang Samgraha Sutra Sthan 6/141-143	Useful for the treatment of anah (flatulence), shoola (colic), shopha, krimiroga (worm), udararoga (enlargement of the abdomen), shoola (colic), panduroga (anaemia), kaphavikar, gulma (abdominal tumour), aruchi(dyspepsia), vishvikar(diseases caused by toxins), shvitaroga (leukoderma), kushtaroga (leprosy) and arshroga (hemorrhoid). It is used for alepa(paste), virechana (purgation), ashthapana vasti (decoction enema), swedana (sweating). It is agnideepak, paachak and malabhedak ¹³ .

Uses of cow urine in shodhan (purification)

It is also useful for shodhan of various rasa-aushadhi like kansa (bronze), abhrak (mica), jasta (zinc), tutiya (copper sulphate), tamra (copper), naga (lead), rajavarta (lapis lazuli), roupya (silver), swarna (gold), kant lauha, etc.¹⁴ and poisonous drugs like vatsanabha, dhaturbija etc.¹⁵.

Agricultural use

For the production of Vermicompost: Distillation waste (plant herbage after distillation) and gomutra has been used for the production of vermicompost ¹⁶.

Biopesticides: Gomutra after the addition of neem leaves is a wonderful biopesticide. Such biopesticides are safe to use, do not accumulate in the food chain and as such do not have the harmful effects of chemical pesticides ².

Experimentation

Experiment to prove it clears acne and other skin-related problems ⁵:

Take 1 transparent glass of water

And mix betadine in it

After that, you can see the color of the glass turn in black and that

Mix 10-15ml of cow urine in it after 2 minutes

Change in the colour from black to white again and

Inference- it can also purify our blood and can kill the toxin present in the blood.

Some important formulations in which cow urine is used ¹⁷.

- Panchamrutlohamandur.
- Punarnavamandur.
- Tryushanadimandur
- Arshakuthar rasa
- Ashwinikumar rasa.
- Mandurvatak.
- Sanjivani vati.
- Panchagavyaghrita.
- Kasisadi taila
- Agnimukhmandur.

The latest research on Cow Urine (Gomutra)

The most dangerous disease cancer caused to humans can be treated by following treatment modalities like surgery, chemotherapy, immunotherapy, radiotherapy, and immunotherapy along with new treatment modalities like recent molecular approaches, but the success exemption rate is not very high and its well-known side effects caused to the patients to be treated. Alternative medicinal therapies have been proclaimed to be helpful in the prevention and control of cancer. Gomutra therapy, as a alternative therapy, has also been claimed that it possesses anti-cancer properties and for that, the US granted a patent in the field of cancer treatment by its virtues of bio-enhancing activity of anti-cancer drugs. Gomutra therapy has tremendous potential in the field of medicine and has not been exploited to the possible extreme. Whatever may be the final result of treatment but scientific validation of those claims is required It's now time to make public awareness about the important uses of gomutra therapy ¹⁸.

According to the study, the determinative role of gomutra distillate is observed, helping the immunodeficient subjects to obtain a higher level of cell-mediated and humoral immune protection ensuing better protection against several infections ¹⁹. Gomutra ark is obtained from the distillation process of cow urine. Medicinal results from gomutra ark (cow urine distillate) and cow urine are about similar. It was found that the chemical and medicinal properties of cow urine are preserved in the Gomutra ark. There is a very negligible amount of ammonia in Gomutra ark, and it is easily palatable and acceptable for patients. A study

found that cow urine distillate, which is Gomutra arka, has antioxidant potential. Gomutra ark also exhibits antioxidant and immunomodulatory effects²⁰.

Immuno-stimulant

The use of herbs and minerals (like *chavanprash* and *panchgavya*) for improving the overall resistance of the body against common infections and pathogens has been a guiding principle of Ayurveda. Ancient Ayurvedic treatises illustrate that consuming gomutra daily increases resistance to diseases which is corroborated by certain experiment wherein the humoral and cell-mediated immune responses in mice is shown enhanced²¹.

Bioenhancer

Bio enhancers are substances that do not possess drug activity of their own but promote and augment the bioavailability, bioactivity, or uptake of drugs in combination therapy²².

Anticancer Properties

Cow urine has antioxidant properties and is a free radical scavenger thus, it neutralizes oxidative stress. Cow urine helps in repairing the damaged DNA and, therefore, is effective in anti-cancer therapy²³.

According to the study, chemopreventive potential of Cow urine was observed, which was conducted on 70 Swiss albino mice for 16 weeks. Papillomas were induced by 7, 12 dimethyl benzantracene and later promoted by repeated application of croton oil. In mice treated with cow urine, the incidence of tumor (papilloma) yield, and its burden was statistically less than the untreated group. 30 effects of cow urine on several types of cancers was studied by Jain and his coworkers. The decrease in the severity of various clinical symptoms (pain, inflammation, burning sensation, difficulty in swallowing, and irritation) was decreased from day 1 to day 8 with Cow urine therapy. Percent of patients with severe symptoms decreased from 82.16 to 7.9 on day 8, patients with moderate symptoms increased from 15.8 to 55.3 and with mild symptoms, patients increased from 1.58 to 36.34. The severity of symptoms decreased further with continued cow urine therapy²⁴.

Antimicrobial and Antioxidant properties

Gomutra and its distillate tested for antimicrobial and antioxidant activities which, show that comparatively fresh gomutra was found to be better than its distillate²⁵.

Haemorrhoid

Clinical evaluation of gomutra extract has been done in haemorrhoid patients. The results show that oral supplementation of cow urine in haemorrhoids patients has prevented the time-consuming, painful, and expensive complications of haemorrhoids.

Table 4. Excerpt of cow urine in classical Ayurvedic text and its use ^{26,27}

Sr No	Uses of cow urine in various formulations / other descriptions
1	Taila panchaka used in gulma
2	Karvir (<i>Nerium indicum</i>) + gomutra in kushta (leprosy)
3	Daruharidra (<i>Berberis aristata</i>) + gomutra Rasanjan + gomutra use in kushta (leprosy)
4	Kakodumbar + bakuchibija + chitrakmula use in kshvitra (vitiligo)
5	Panchagavyaghrita use in apasmara (Psychiatric disorder)
6	Gomutra + haritaki churna use in kaphaj shotha (swelling)
7	Gomutra use for bath in apasmara (Psychiatric disorder)
8	Milk + Gomutra drink in vataj shotha
9	Siddha milk + gomutra for virechan (purgation) in pittodar
10	Chitrakghrita use in udara (ascites)
11	Patoladichurna + gomutra in udara (ascites)
12	Narayan churna + gomutra in udara (ascites)
13	Milk + gomutra use in udara (ascites)
14	Guda + haritaki + gomutra in arsha (piles)
15	Mahish (buffalo) ghrita + Gomutra + Daruharidra use in pandu (anaemia)
16	Gomutra+ milk for virechan in pandu
17	Gomutra + haritaki use in kaphaj pandu
18	Pashanbhedadi ghrita use in ashmari (renal stone)
19	Pippalyadichurna (powdered) + gomutra use in hrudrog (heart disease)
20	Gomutra + haritaki + honey use in Internal Piles
21	Haridra (<i>Curcuma longa</i>) + gomutra use in kushta (leprosy)
22	Gomutra use in pratisaran karma in scar mark
23	Gomutra use in lekhana basti
24	Eranda taila (oil of <i>Ricinus communis</i>) + gomutra use in udara (ascites)

Conclusion

Gomutra is one of the alternative methods that can benefit in the improvement in our healthcare system. Because of the incessant increasing population, people of undeveloped and developing countries are facing the problems of shortage of basic need like fuel, good health, shelter, and nutrition etc. Good health of public is asset of any country for the growth and development. Only the utmost level of health care system can achieve this goal, which requires a lot of investment in health care system. Setting a robust system for health care is far-fetched for the undeveloped and developing countries due to financial reasons. Per capita income of peoples of these countries is also very low consequently, expensive medication offered by conventional medical system even for the common ailments, is out of their reach. This issue can be solved by adopting alternative health care system. Gomutra has capability

to clear all toxins present in our body and help in upholding good health. By consuming gomutra daily, one can sustain his health at optimum. Gomutra can also clear all harmful bacteria and viruses in our body, so it could be economical instrument to combat with common viral and bacterial contagions. The advantages of Panchgavya formulation of Ayurveda should not only be disseminated in common families but also in scientific fraternity for evidence based scientific research so that a cost-effective alternative could be provided to poor peoples for common, chronic and ghastly diseases. Although, it is in use in certain section of Indian society but through integrated approach and research using modern science and technologies, this formulation of Indian traditional health care system should be promoted not only to preserve ages old knowledge but to offer affordable medication.

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