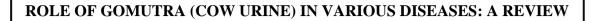
# **World Journal of Pharmaceutical and Life Sciences** WJPLS

www.wjpls.org

SJIF Impact Factor: 5.088



Julika\*<sup>1</sup>, Sharma Usha<sup>2</sup> and Sharma Khemchand<sup>3</sup>

<sup>1</sup>MD. Scholar, P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana Uttarakhand Ayurved University, Rishikul Campus. <sup>2</sup>Associate Professor, P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana Uttarakhand Ayurved University, Rishikul Campus.

<sup>3</sup>Professor and H.O.D., P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus.

#### \*Corresponding Author: Dr. Julika

MD. Scholar, P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana Uttarakhand Ayurved University, Rishikul Campus.

Article Received on 02/04/2019

Article Revised on 23/04/2019

Article Accepted on 14/05/2019

# ABSTRACT

Literatures are available stating the importance of *Gomutra* for all purposes in our daily life which is used since ancient times for curing many ailments of human beings. *Gomutra* (Sanskrit: *gomūtra*;."cow urine") refers to the usage of cow urine for therapeutic purposes in traditional Indian medicine also used as an important component of the mixture called *Panchagavya*. *Gomutra* is used for treatment of colic, abdominal tumors, enlargement of abdomen and flatulence. For therapies such as decoction, purgation, enema, skin diseases, kidney diseases, heart diseases, stones, diabetes, liver problem, jaundice and its shows immunostimulant, bioenhancer, anticonvulsant, anticancerous, wound healing, antioxidant and antimicrobial properties.

**KEYWORDS:** Gomutra, immunostimulant, Panchagavya.

# INTRODUCTION

*Gomutra* is being used as an effective medicine. It is also an important component of the mixture called *Panchagavya*. *Ayurveda* has also emphasized the importance of *Gomutra* in the management of various disorders in all treatises. In *Sushruta Samhita*, the description of *Gomutra* (Cow urine) has been given as effective substance of animal origin with innumerable.

Therapeutic importance. Recent researches prove that *gomutra* therapy is capable of curing several ailments, including cancer and capable of curing blood pressure, blockage in arteries, arthritis blockage in arteries, arthritis, diabetes, heart attack, cancer, thyroid, asthma, psoriasis, eczema, prostate, fits, AIDS, piles, migraine, ulcer, acidity, constipation, gynecological problems and several other diseases.<sup>[1]</sup>

*Gomutra* has been described as water of life or "*Amrita*" (beverages of immortality), the nectar of the God. In *Charaka Samhita*, *Sushruta Samhita* and *Vangbhatt* described eight types of animal urines that can be used in medicine. Urine of cow is used in therapeutics. All these *mutras* (eight types of urine from different animals) are sharp, hot, pungent, bitter with salty as a secondary taste, light and primitive of evacuation. They relieve *Kaphaja* and *Vataja* disorders. Research states *gomutra* to contain nitrogen, sulphur, phosphate, sodium, manganese,

carbolic acid, iron, silicon, chlorine, magnesium, citric, succinic, calcium salts, vitamins A,B, C,D and E, minerals, lactose, enzymes, creatinine, hormones, urea and gold acids. Urea, a key element in urine is known to kill fungi and bacteria.<sup>[2]</sup>

# MATERIAL AND MATHODS

# **Composition of** *Gomutra*<sup>[3]</sup>

The cow urine mainly contains water (95%), urea & Mineral salts (2.5%), Hormones and Enzymes (2.5%). The main constituents shows therapeutic response are nitrogen, sulphur, ammonia, copper, phosphate, sodium, potassium, manganese, carbolic acid, calcium, salt, vitamin (A,B,C,D,E), Lactose, Enzyme, Hippuric acid etc.

# **Properties of** *Gomutra*<sup>[4]</sup>

**Synonym** Sanskrit - *Gojal, Godrava, Surabhijal* Hindi - *Gomutra* Marathi - *Gomutra, Gomteerth* English - Cow-Urine

# Rasapanchak<sup>[5]</sup>

Rasa - Katu, Madhur Virya - Ushna Vipak - Katu Guna - Tikshna, Ushna, Laghu Karma - Medhya, Deepan, Sara Doshaghnata - Kapha-Vata-Shamak

# Uses of cow urine in purification and detoxification $process^{[6]}$

- 1. Purification of Guggulu (Commiphora mukul)
- 2. Detoxification of aconite
- 3. Detoxification of dhatura (Dhatura metel)
- 4. Detoxification and purification of silver
- 5. Purification of *loha* (*Iron*)
- 6. Purification of *Swarna* (*Gold*)
- 7. Purification of *Tamra* (*Copper*)
- 8. Purification of *Naga* (*Lead*)
- 9. Purification of bhallataka (Semicarpus anacardium)
- 10. Purification of Abhraka (mica)
- 11. Purification of *Kharpar* (*Calamine*)
- 12. Purification of Rajavarta (Lapis lazuli)

13. Detoxification and purification of *Kuchala* (*Strychnos nuxvomica*)

# Therapeutic Properties of Gomutra<sup>[7]</sup>

- 1. Gomutra has Lekhan and Sara property. It is Agnideepan and Medhya. It is useful in many diseases viz. Krimi, Kushtha, Udara, Gulma. It is also used for Virechan and Asthapan basti. It maintains the Tridosha (vata, pitta, kapha) level protects body against various diseases with growing immunity.
- 2. *Gomutra* contains all the nutrients which are required for proper health maintenance.
- 3. In *Ayurveda gomutra* is called as *Medhya* and *hridya* means it protects heart and brain from damaged caused by mental tension.
- 4. It eliminates drug residue from the body and prevents the poisonous effect of the drug residue.
- 5. *Gomutra* contains copper thus it plays a role in providing a healthy body.
- 6. It provides mode of goodness thus helps to make the mind active and stress free.
- 7. It has major poisonous destroyer activity thus it prevents the disease due to poisonous intake and help to remove and purify the chemical toxin.
- 8. In *Ayurveda*, *Gomutra* is claimed to be helpful in the treatment of leprosy, abdominal colic pain, bloating, and cancer.<sup>[8]</sup>

### Antimicrobial and Anthelmintic Activity<sup>[9]</sup>

The Gomutra could be used for the treatment of the disease caused by Pathogenic bacteria, Opportunistic fungi and parasitic helminthes. It was reported from various analyses that cow urine concentrate shows more inhibition of gram positive bacteria in comparison of gram negative bacteria. Cow urine shows marked anthelmintic activity by causing paralysis and death of worms in a dose dependent manner. It was concluded that cow urine increases antibiotic activity against various pathogens due to its bio enhancing property. *Khadiradi kashaya* along with *Gomutra* used in this study proves very good utility in the management of

*Purishaj krimi*; it has very appreciable result in main symptoms of *Purishaj krimi*.

# Prevention of antibiotic resistance<sup>[10]</sup>

*Gomutra* prevents antibiotic resistance which is one of the biggest problems plaguing the medical field. Pesky bacteria have become remarkably adept at resisting antibiotic drugs, due to the rampant use of these medicines by people. By purifying and activating cow urine using light, researchers have found cow urine to be effective against certain drug resistant bacterial strains.

#### Anticonvulsant action

*Gomutra* concoction is the traditional herbal preparation of choice in the management of Childhood convulsive disorders, regardless of the cause in the Yoruba speaking people of Nigeria.<sup>[11]</sup>

#### Good for liver

*Gomutra* corrects functioning of liver. So, liver makes healthy pure blood. It gives disease resistance power to the body. 1-2 ounces of daily doses of warm cow urine is used in the treatment of cirrhosis of liver.<sup>[12]</sup>

#### **Good antiseptic**

It is observed by researches that cow urine is having antiseptic properties in wound healing and that the healing times is somewhat less in comparison to wound on which antiseptic cream was applied.<sup>[13]</sup>

#### **Protection against parasites**

Cow urine can protect against parasites inside the body. Intestinal parasites can cause a host various health problems like dysentery, abdominal pain and loss of nutrients in the body. A study shows that these disease causing parasites can be effectively dealt with generous dose of cow urine.<sup>[14]</sup>

#### Protects heart and brain

Mental tension hurts nervous system. It is called *medhya* and *hradya*, which means it, gives strength to brain and heart. Thus *gomutra* protects heart and brain from damages caused by mental tension and protects these organs from disorders and diseases. By acting against the voice of soul (immoral & sinful action), the heart and mind become narrow minded. Due to this the functioning of body is effected and causes diseases. Cow urine provides mood of goodness. Thus helps us to perform correct activities by mind. Thus protects from diseases.<sup>[15]</sup>

#### **Poison destroyer**

Excessive use of any medicine leaves some residue in our body. This residue causes diseases.

Cow urine destroys the poisonous effects of residues and makes body disease free. It being Miraculous poison destroyer destroys the disease caused by poison (Toxin). Extremely dangerous chemicals are purified by cow urine. Cow urine provides immunity power by increasing resistance power against diseases in human body.

## Anticancer properties

*Gomutra* has great antioxidant properties which help in neutralizing oxidative stress and scavenging free radicals. These properties point towards potential anticancer powers of cow urine. This is not to say that it can cure cancer but act as a deterrent for the risk of cancer.<sup>[16]</sup>

# For kidney diseases

*Gomutra* cures kidney ailments. It can be used for stones. A glass of fresh cow urine should be taken as a first thing in the morning for 21days. Uric acid present in cow urine dissolve the stones to a manageable size.<sup>[17]</sup>

# Antidiabetic effect

*Gomtra* and its concentrate that is left after distillation were subjected to investigations for verifying and establishing antidiabetic activity. The antidiabetic activity of cow urine and standard glibenclamide drug was studied in alloxan- induced diabetic rats. Their blood glucose level was determined using Glucose Oxidase– Peroxidase (GOD-POD) method. The results were compared with the results obtained in standard glibenclamide treated rats. The cow urine distillate produced a significant reduction of elevated blood glucose, serum cholesterol and serum triglyceride levels when compared with the diabetic control. It also justifies the use of available marketed formulations containing cow urine in treating diabetic patients.<sup>[18]</sup>

# For Skin diseases

Cow urine is helpful to get relief from most of the skin diseases like Psoriasis, itching, eczema, sun burns, acne, dermatitis, skin allergies and scabies.<sup>[19]</sup>

# Wound healing activity of *gomutra* in DM induced rats

Study demonstrated that *gomutra ark* significantly increases wound healing in diabetic wound patient. Thus, it helps in accelerating wound healing in diabetic patients because of its property of enhancing granulation tissue formation.<sup>[20]</sup>

### Anti-urolithiatic effect of cow urine

*Gomutra* ark showed significant effect against renal calculi and restoration of compromised renal function. This type of action of CU might be due to it reduce excretion of calcium oxalate.

And inhibit process of crystallization. Further experimental studies are needed to know its mechanism of action.

### Mechanism of action of cow urine

Cow urine have different fractions like antimicrobial activity due to the presence of certain components like volatile and nonvolatile ones.<sup>[21]</sup> Presence of creatinine, urea, swarnkshara (aurum hydroxide), phenols, carbolic

acid, calcium, and manganese has strongly explained the germicidal and antimicrobial properties of cow urine. Presence of amino acids and urinary peptides may enhance the bactericidal effect by increasing the bacterial cell surface hydrophobicity. It enhances the phagocytic activity of macrophages. Fresh cow urine contain higher amounts of phenols than cow urine distillate (CUD) makes it more effective against microbes. After photoactivation, few biogenic volatile inorganic and organic compounds such as CO2, NH3, CH4, methanol, propanol and acetone, and some metabolic secondary nitrogenous products are also formed.<sup>[22]</sup> Photo-activated cow urine (PhCU) is highly acidic than fresh cow urine this may be responsible for increase in bactericidal action. Inorganic substances in cow urine such as phosphorus, chloride and dimethylamine may also play an important role. It prevents the development of antibacterial resistance by blocking the R-factor; a part of plasmid genome of bacteria cow urine contains phenolic acids (gallic, caffeic, ferulic, o-coumaric, cinnamic, and salicylic antifungalcharacteristics.<sup>[23]</sup> have acids) which Antioxidant property of uric acid and allantoin present in cow urine correlates with its anticancer effect. it reduces apoptosis in lymphocytes and helps them to survive better This action may be due to the free radical scavenging activity of the urine components, and these components may prevent the process of aging. It efficiently repairs the damaged DNA. Daily consumption of cow urine improves immunity due to the presence of swarnkshar and fastens the wound healing process, which is due to allantoin cow urine enhances the immunocompetence by facilitating the synthesis of interleukin-1 and -2, augments B - and T- lymphocyte blastogenesis, and IgA, IgM and IgG antibody titers<sup>[24]</sup> Early morning first voided cow urine is more sterile and have more macro and micronutrients along with other enzyme/urea content could be more effective.

# Dose of Gomutra<sup>[21]</sup>

The general dose of the *gomutra* is 25ml at a time. When it is taken two times in a day the dose is 50ml. It is not harmful and provides protection against several diseases and improves immune power if taken on regular basis.

# Some important formulation in which Gomutra is used<sup>[22]</sup>

- 1. Ashwinikumar rasa
- 2. Arshakuthar rasa
- 3. Sanjivani Vati
- 4. Mandura vatak
- 5. Punarnava mandura
- 6. Panchamrita loha mandura
- 7. Tryoshanadi mandura
- 8. Agnimukha mandura
- 9. Panchagavya Ghrita
- 10. Kasisadi Taila

### CONCLUSION

Gomutra is the one of the best natural medicine which helps to improve health care system. The activities

within the urine sample make it highly effective therapeutic agent used in curing many.

Diseases. The ancient scriptures of *Ayurveda* consider *gomutra* to be the elixir of life. It is the most effective natural remedy and the safest method of treatment bestowed upon us by nature. It Is based formulations would definitely prove to be a potential medicine which in turn would reduce the pressure on the existing use of chemicals and antibiotics. While this sounds a little unconventional for many, it could be a major step in disease management.

## REFERENCES

- Dharma K, Rathor Rajesh, Chauhan RS, Tomar Simmi. (Panchgavya (cowpathy): An Overview). Int J of Cow Sci., 2005a; 1(1): 1-15.
- 2. Paladugu Sujitha wonders of cow urine its benefits-a review *ejbps.*, 2017; 4(12): 320-323.
- Kuldeep Dhama, Sandip Chakraborty and Ruchi Tiwari.; Panchgavya therapy (Cowpathy) in safeguarding health of animals and humans – A review. *Res. Opin. Anim. Vet. Sci.*, 2013; 3(6): 170-178.
- Yadavaji Trikamaji, Acharya prologue by Prof. R. H. Singh, Charak Samhita Sutrasthan, Reprinted edition, publication verse no 01/07, Chaukhamba Surabharati Prakashan, 2011.
- 5. Kaviraj Ambikadutta Shastri. Susruta Samhita (Ayurveda Tattva Sandipika Hindi commentary), Varanasi: Chaukhambha Sanskrit Sansthan, 2005; 1.
- 6. Ayurved sarsamgraha, shri Baidyanath Ayurved Bhavan private ltd, Nagpur, 2004.
- Dr. Sandeep Ruplal Jadhao. A review on Gomutra: Benefaction to human beings for healing by nature. Int J of Allied Med Sci and Clin Res., 2017; 5(4): 933-935.
- N. K. Jain; V. B. Gupta; Rajesh Garg; N. Silawat. "Efficacy of cow urine therapy on various cancer patients in Mandsaur District, India – A survey". International Journal of Green Pharmacy, 2010; 4(1): 29–35.
- Prashith Kekuda T.R, Nishanth B.C, Praveen Kumar S.V, Kamal D, Sandeep M, and Megharaj H.K.; Cow Urine Concentrate : A potent agent with Antimicrobial and Anthelmintic activity. *Journal of Pharmacy Research*, 2010; 3(5): 1025-1027.
- 10. Biddle S, Teale P, Robinson A, Bowman J, Houghton E.(Gas chromatography–mass spectrometry/mass spectrometry analysis to determine natural.
- 11. Chauhan RS, Singh BP, Singhal LK. (Immunomodulation with Kamdhenu Ark in mice). J of Immunology and Immunopathology, 2001; 3(2): 74-77.
- 12. Dharma K, Rathor Rajesh, Chauhan RS, Tomar Simmi. (Panchgavya (cowpathy): An Overview). Int J of Cow Sci., 2005a; 1(1): 1-15.

- Maheshwari AK, Gupta AK, Das AK. (Effect of Cow Urine on Wounds). The Ind Cow, 2004; 1: 19-24.
- 14. Nishanth BC, Kamal D, Sandeep M, Megharaj HK. (Cow urine concentrate: a potent agent with antimicrobial and anthelmintic activity). J of Pharm Res., 2010; 3(5): 1025-27.
- 15. Paladugu Sujitha wonders of cow urine its benefits-a review *ejbps*, 2017; 4(12): 320-323.
- Singh AK, Singh PK, Singhal LK, Agrawal OK. (Pathogenic Effect of Free Radicals and their prevention through cowpathy-The Indian Cow). The Sci and Eco J., 2009; 6(21): 4-8.
- 17. Dharma K, Rathor Rajesh, Chauhan RS, Tomar Simmi. (Panchgavya (cowpathy): An Overview). Int J of Cow Sci., 2005a; 1(1): 1-15.
- Gururaja M.P, Joshi AB, Himanshu Joshi D, Sathyanarayana, Subrahmanyam EVS, Chandrashekhar KS. (Antidiabetic potential of cow urine in streptomycininduced diabetic rats). Asi J of Trad Med., 2011; 6(1): 66-9.
- 19. Bramhanand Tripathi, Chaukhambha Surbharati Prakashan. Charak Samhita. Volume I., Varanasi; John Wiley and Sons, 2013; 93-7.
- Hiren N. Hirapara, Vishal M. Ghori, Ashish P. Anovadiya, Chandrabhanu R. Tripathi. Evaluation of wound healing activity of cow urine ark in diabetic Wistar albino rats, Journal of intercultural Ethnopharmacology, 2016; 5(4): 434-438.
- 21. Jarald E, Edwin S, Tiwari V, Garg R, Toppo E. Antioxidant and antimicrobial activities of cow urine. Glob J Pharmacol, 2008; 2: 20-2.
- 22. Upadhyay RK, Dwivedi P, Ahmad S. Antimicrobial activity of photoactivated cow urine against certain pathogenic bacterial strains. Afr J Biotechnol, 2010; 9: 518-22.
- 23. Singh UP, Maurya S, Singh A, Nath G, Singh M. Antimicrobial efficacy, disease inhibition and phenolic acidinducing potential of chloroform fraction of cow urine. Arch Phytopathol Plant Protect, 2012; 45: 1546-57.
- Kumar S. Analysis of cow's urine for detection of lipase activity and anti-microbial properties. J Pharm BiolSci, 2013; 7: 1-8.
- 25. Ashish Kumar Pareek et al. Cow Urine: A Proper Treatment with Significant Action IJPT, 2015; 6(4): 7941-7950.
- 26. Ayurved sarsamgraha, shri Baidyanath Ayurved Bhavan private ltd, Nagpur, 2004.