

## A Clinical Study of Effects of *Gomutra* (Cow's Urine) on Renal Failure Patient According to the Concepts of *Ayurveda*

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### Abstract

*Gomutra* (Cow's Urine) is being used in many disorders and it is explained in *Ayurveda* as a treatment for many disorders. Chronic kidney disease (CKD) is a serious condition associated with premature mortality, decreased quality of life, and increased health-care expenditures. Untreated CKD can result in end-stage renal disease and necessitate dialysis or kidney transplantation. Risk factors for CKD include cardiovascular disease, diabetes, hypertension, and obesity. In renal failure there is raised level of blood urea, creatinine and RBCs in urine. It can be compared with *Paitik Mutrakrichra* (~Dysuria due to *Pita Dosha*)/*Adhogatta Raktapita* (~blood from lower orifices)/*Paitik Prameha* (~frequency due to *Pita Dosha*)/*Rakataja Mutrakrichra* (~Dysuria with blood). A Clinical study was done on known patient of CKD on OPD basis, Gaur Brahman Ayurvedic College and Hospital, Rohtak, Haryana. There was a rise of serum urea and serum creatinine after administering *Gomutra*. It is concluded that *Gomutra* should not be used in renal failure.

### Keywords

*Adhogatta Raktapita, Ayurveda, Gomutra* (Cow's urine), *Renal Failure, Paitik Mutrakrichra*



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## INTRODUCTION

As *Ayurveda* favoritism is gaining momentum, so, is the wrong information in the name of *Ayurveda* is being popularized. It tarnishes the real scientific and time tested great texts. *Ayurveda* is a Science based on logical thinking. A lot of testing have been done by great *Acharaya* of *Ayurveda*, writing many texts explaining what should be and what should not be used for curing diseases along with healthy living. It has been explained that there is nothing on this earth which cannot be used as medicine but it should be used based on its *Rasa*, *Guna*, *Virya* and *Vipaka*, understanding a patient on the basis of *Dashavidha Pariksha* and making a perfect diagnosis by judging *Doshas*, *Dhatus* involved <sup>1</sup>. *Gomutra* is one of the treasures explained in *Ayurveda* which is having a lot of medicinal properties. It is having best qualities among all types of urines to be used for medicinal purposes described in *Bhavprakash Nighantu*. It says that, if it is not mentioned which urine should be used then, *Gomutra* being of highest qualities should be used. Although Sheep's, goat's, cow's, buffalo's, elephant's, camel's, horse's, donkey's urine given in *Ayurveda* texts can also be used for medicinal purposes <sup>2</sup>. *Acharaya Vagabhata* while explaining uses of *Mutravarga* has

said *Gomutra* is best among all *Mutras* <sup>3</sup>. Among all these urines; urine of Cow, Goat, Sheep and Buffalo female's urine should be used and male's urine of donkey, horse, camel, elephant and humans should be used <sup>4</sup>. Chronic kidney disease (CKD) is not only incurable but economically also it is a threat due to dialysis and transplantation, as therapy is expensive and life-long. In India maximum number of patients cannot afford the cost of treatment therefore, incidence of CKD has doubled in the last 15 years. In the USA, by 2010 >600 000 patients will require renal replacement therapy, costing US\$28 billion and in India's 1 billion population there are ~7.85 million CRF patients <sup>5</sup>. As the number of patients are increasing and they do not have perfect cures, they turn towards anything which can help them. *Ayurveda* holds promises in many ailments but it should be practiced with complete knowledge.

## AIMS AND OBJECTIVES

To study the efficacy of *Gomutra* in kidney failure patients with raised levels of blood Urea, Serum creatinine and RBCs in Urine.

## MATERIALS AND METHODS

Literary books of Ayurveda and internet media. A clinical study done on a known patient of CKD by giving 20ml of Gomutra concentrate for one dose. Two other patients were also tested taking Gomutra concentrate for one week and one year respectively in OPD, Gaur Brahman Ayurvedic College, Rohtak (Haryana).

## LITERATURE REVIEW

**Common qualities of Urines:** *Katu* (pungent), *Tikshana* (sharp), *Ushna* (warm), *Lavana Anurasa* (end taste salty) *Laghu* (light), *Mala Shodhak* (waste product remover) *Kapha-Vataghana* (removes them), *Krimi* (parasites), *Meda*(fats), *Vishapham* (Toxins) remover. It cures *Arsha* (piles), *Udara* (abdominal disorders), *Gulma*, *Sotha* (swelling), *Aruchi* (don't want to eat), *Pandu* (anaemia). It is *Dastavar* (purgative), *Hridya* (heart tonic), *Deepan* (appetizer) and *Pachan* (digester)<sup>6</sup>.

**Common qualities of Gomutra (Cow's Urine):** *Acharaya Sushruta* has defined it as *Katu* (Pungent), *Tikshna* (Sharp), *Ushna* (Hot) and *Kshara* (alkaline) in nature due to which it does not vitiate *Vata*. It is *Laghu* (light), *Agni Deepak* (appetizer), *Medhya* (nervine tonic), *Pita Prakopaka* (vitiates *Pita*) and *Vata-Kapha* pacifier. *Gomutra* is

used in *Shool* (Pain), *Gulma* (~mass like structure in abdomen), *Udara Roga* (abdominal disorders), *Virechak* (Purgation), *Aasthapan Basti* (Rectal route decoction drugs) and other disorders in which *Mutra* (Urine) is required for treatment<sup>7</sup>.

**Composition of cow's urine:** Research states that cow's urine contain nitrogen, sulphur, phosphate, sodium, manganese, carbolic acid, iron, silicon, chlorine, magnesium, citric, tartaric, succinic, calcium salts, Vitamins A, B, C, D and E, minerals, lactose, enzymes, creatinine, hormones, urea and gold acids. Urea, a key chemical in urine, is known to kill fungi and bacteria. This is the principle behind *Gomutra* being an effective fungicide as well as antibacterial agent<sup>8</sup>.

With the help of biochemical analysis cow's urine was found effective as antibacterial/antifungal and a high potential lipase activity too<sup>9</sup>.

*Charak Samhita*, *Sushruta Samhita*, *Ashtanga Hrudaya* (which are also known as *Brihatreyi* in *Ayurveda*), *Ashtanga Hridya* have been consulted but no reference was found which could support; *Gomutra* or other *Mutras* should be used when *Pita* is increased in body or in *Pita* dominant

ailments, diseases in which blood is seen in urine which is one of the common symptom of renal failure.

**Pathology of renal failure:** Acute renal failure develops in patients who are hospitalized. Renal failure can be categorized as pre-renal, intrinsic or post-renal. Most of the patients have pre-renal acute renal failure or acute tubular necrosis (a type of intrinsic acute renal failure that is usually caused by ischemia or toxins)<sup>10</sup>. It is mainly determined by a decrease in glomerular filtration rate; creatinine clearance the rate at which blood is filtered in the glomeruli of the kidney. This is diagnosed by decrease or absence of urine production (oliguria) or determination of waste products serum creatinine/urea in the blood. Depending on the cause, hematuria (blood loss in the urine) and proteinuria (protein loss in the urine) may be noted<sup>11</sup>.

In renal failure, there may be problems with increased fluid in the body (leading to swelling), increased acid levels, raised levels of potassium, decreased levels of calcium, increased levels of phosphate, and in later stages anemia (due to both loss in urine as well as less formation of RBCs). Bone health may also be affected. Long-term

kidney problems are associated with an increased risk of cardiovascular disease<sup>12</sup>. CKD prevalence is estimated from apparent kidney damage and kidney function and categorized into stages (five stages), with increasing stage numbers corresponding to increased severity, according to the National Kidney Foundation classification system<sup>13</sup>. Biopsy is also done to understand pathophysiology of disease. In acute renal failure, excretion of nitrogenous waste is reduced, and fluid and electrolyte balances cannot be maintained. Patients with acute renal failure are often asymptomatic, and the condition is diagnosed by observed elevations of blood urea nitrogen (BUN) and serum creatinine levels. Mostly the condition is diagnosed as an acute increase of the serum creatinine level from baseline {i.e., an increase of at least 0.5 mg per dl (44.2  $\mu$ mol per L)}<sup>14</sup>.

**Clinical Study of Gomutra:** A Clinical study was done on known patient of CKD on OPD basis, at Gaur Brahman Ayurvedic College and hospital, Brahmanwas, Rohtak, Haryana (India). Three patients were tested who had taken 20 ml of *Gomutra* concentrate empty stomach early morning after micturition and defecation. First symptomatic patient was taking this

treatment for one week and second symptomatic patient who was even undergoing dialysis was taking this treatment over the year. Third patient who was asymptomatic was given this treatment for one dose to study effects on his Serum creatinine and Blood Urea.

## RESULTS AND DISCUSSION

Two patients who were taking Gomutra for one week and over the year were tested for Serum Creatinine and Serum Urea. First patient with symptoms of swelling and dyspnea was found to show relief in his symptoms of swelling, uneasiness in breathing but his S. Creatinine was found to be increased from 2.7 to 4.9 and Blood Urea

increased up to 120mg/dl from 70mg/dl during one week use of 20 ml of Cow's Urine. Another symptomatic patient was found to be relieved of swelling, discomfort in breathing but his levels of creatinine was found to raise from 2.9mg/dl to 9mg/dl and urea level from 60mg/dl to 240mg/dl during use of *Gomutra* over the year. His dialysis rate has increased from once a week to thrice a week. When *Gomutra* concentrate was given to asymptomatic patient no symptomatic change was noticed. But in his blood test it was found blood urea level was raised from 49mg/dl to 51mg/dl and creatinine level has risen from 2.1mg/dl to 2.4mg/dl with a single dose of 20 ml of Cow's urine.

Patient	Urea(mg/dl)	Urea(mg/dl)	Creatinine(mg/dl)	Creatinine(mg/dl)
	before treatment	after Treatment	before treatment	after treatment
First-patient(one week)	70	120	2.7	4.9
Second -patient (an year)	60	240	2.9	9
Third -patient (one day)	49	51	2.1	2.4

Basically, it can be said that renal failure is a disease in which there is increase in *Pita* in the body. As per rules of *Ayurveda*, a disease's *Doshas Dhatu*s *Samprapti* (pathogenesis) is important to be known before any drug based on its *Rasa*, *Guna*, *Virya* and *Vipaka* could be utilized for its treatment. In case of kidney disorders, there

is presence of blood in urine which can be compared with *Paitik Mutrakrichra/Adhyogatta Raktapita/Paitik Prameha/Rakataja Mutrakrichra*. The reason of *Pita* increase in body is consumption of *Ushna* (Hot), *Tikshana* (Sharp), *Amla* (Sour), *Katu* (Pungent), *Lavana*(Salty) diets too much<sup>15</sup>. *Pita* in body

is produced by *Rakta Dhatu* so both of them are having same characteristics features and with same type of reasons to vitiate them<sup>16</sup>. Use of excessive *Lavana* (Salty), *Kshar* (alkaline), *Amla* (sour), *Katu* (Pungent) vitiates *Rakta Dhatu*<sup>17</sup>. So, both *Rakta* and *Pita* can be pacified with same kind of drugs which must be having opposite qualities what has vitiated them with *Kashaya* (Astringent), *Madhur* (Sweet), *Tikta* (Bitter) and *Sheeta* (Cold)<sup>18</sup>. *Gomutra* is having *Katu* (Spicy), *Lavana* (Salty), *Tikshana* (Sharp) and *Ushna* (Hot) nature which is same as vitiating cause of *Pita* or *Rakta* in body. Another thing it is also rich source urea and creatinine which is same found to be raised in kidney failure patients.

Therefore, according to the *Ayurveda* principles *Gomutra* has exactly same constituents according to *Rasa*, *Guna*, *Virya* and *Vipaka* as well as per laboratory findings which can increase urea and creatinine levels in body along with the cause which leads to rise in kidney failure. The main electrolyte disturbances in the acute setting are hyperkalemia and acidosis; as it can be seen from above composition of Cow's urine is having lot of acids which can be compared with *Pita* in body; which is

raised in kidney failure and further use of Cow's urine will increase acidosis.

## CONCLUSION

*Gomutra* is no doubt having lot of qualities in treating many diseases. It is rich in many minerals, hormones, antibiotics, anti-cancerous properties, antifungal and enzymes. But it should not be used in those patients who are having *Raktapita*, *Paitik* ailments, *Paitik Mutrakrichra*, *Paitik Prameha* and Renal Failure.

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