

# A Stable Herbomineral Ayurvedic Treatment for Nephrolithiasis

<sup>1</sup>Kumarakuru, N.Suganeshwari<sup>2</sup>

<sup>1</sup>PG Student, <sup>2</sup>Assistant Professor,  
Department of Biomedical Engineering,  
V.I.T. University, India

**Abstract** — The Nephrolithiasis is defined as the calculi, which is formed in the kidneys. These calculi may be renal calculi or ureteral calculi. Generally, the calculus contains the calcium formed as a stone in the kidney or the urinary junction. Due to calculi formation, the heavy pain will create, and the urinary junction will dilate and stretch. Most of the treatment for the urinary calculus will cause side effects and more expensive, the Herbomineral Ayurvedic medicine will provide a better result for the urinary calculus without any side effects. The Ayurvedic formulation of the Herbomineral consists of herbal substances to cure the diseases without any side effects.

**Keywords**— Herbomineral Ayurvedic, Ayurveda, formulation, calculi, ethylene glycol, Nephrolithiasis

## I. INTRODUCTION

Generally, the kidney stone is a calculus that is formed in the kidney or urinary junction. The medical term for kidney stones is Nephrolithiasis. Due to the kidney stone, the heavy pain will create to the person who affected by calculus. Generally, calculus forms a calcium stone in the kidney or urine junction due to low urine levels in the kidney or other substances that create the stone. Most of the young people are affected by calculi. If the stone is formed in any urinary tract is referred to as urolithiasis. Mostly the kidney stones attack the men's than women's. If the uric acid level is high in the blood, it will create the urinary calculus. The kidney stone is formed as a calcium stone and some other chemicals such as magnesium, uric acid, and ammonium phosphate. The climate conditions of the residential area are a more critical factor in the formation of kidney stones. This paper's rest portion is discussed about the kidney stone symptoms and treatment, Ayurveda, Herbomineral Ayurvedic treatment.

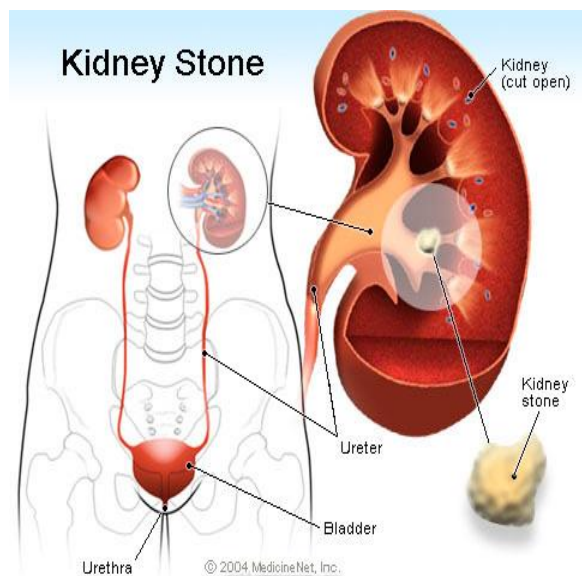
## II. CAUSES, SYMPTOMS, PREVENTION, AND TREATMENT OF NEPHROLITHIASIS

Nephrolithiasis is the medical term for kidney stones. There are several causes for the formation of kidney stones. The causes for the creation of kidney stone are low urine content in the kidney; some of the chemical compounds which are higher in the blood such as uric acid, magnesium, calcium, etc. and due to the climate condition of your residential area will cause your body temperature and also creates the kidney stone.

### A. Important causes of Kidney stone

- The higher level of uric acid in the blood content will form the uric acid stone.
- If the calcium content is more in the urine will form the calcium stone in the kidney, which is called hypercalciuria.
- Diabetics and higher blood pressure also lead to creating kidney stones.
- The people who have inflammatory diseases also lead to affect the kidney to create the stone.
- Some of the medications also will affect the person to form the kidney stone. The tablets which contain the calcium and the medicines used for curing H.I.V. aids also create the kidney stone.
- A high intake of salts and animal protein will cause kidney stones.





**Fig.1 Kidney Stone**

**B. Symptoms of kidney stone**

Some kidney stone does not create the symptoms; the person gets sudden pain in his/her low back, side, and abdominal area. Kidney stone causes the blood in the urine and creates severe pain. The small-sized kidney stones always do not cause pain. If this stone becomes larger, the pain must be severe. Other signs of kidney stone are as follows

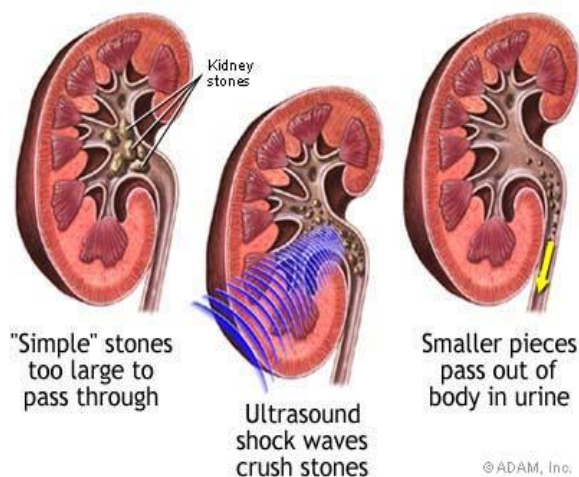
- The person will experience nausea and vomiting
- The pain in the abdomen become severe you can't sit
- Blood in your urine
- Having disturbance in urination
- Pain will form during urination

**C. Treatment for Nephrolithiasis**

The treatment for kidney stones depends on the size and type of stone formed in the kidney. If the stone's size is small up to 5.5mm, it can be diluted by medications. The intake of water must be increased to dilate the stone. If the water intake increases, the urine level also increases, and the stone will pass through the urine. Your doctor would prescribe the medicines to prevent the stone formation and provide a treatment to break the stone. The medication may contain allopurinol, diuretics, antibiotics, sodium citrate, sodium bicarbonate, phosphate solution, and water pills.

If the stone size is too large, around 8mm to xcm, the stone would be removed by the following treatments.

- Surgery is needed because the stone is too larger.
- The ultrasound shock wave is used for crushing the stone.
- Lithotripsy is used to remove the inch level stones.
- Ureterscopy may be used for the kidney stone, which is in the urinary junction.
- If other methods don't work, the surgical method is used.
- Percutaneous nephrolithotomy



**Fig. 2 Nephrolithiasis removing method**

**III. AYURVEDIC TREATMENTS**

Ayurveda is a Classical treatment methodology, otherwise called as Ayurvedic treatment. It depends on soul, mind, and physicals. There is no evidence for the Ayurvedic treatment provides better results to the diseases. But the use of Ayurvedic medicine will be more effective than other medicine because it would not create side effects. There is currently 62 Ayurvedic hospital available in the public system, and around 80% of the world population depends on the herbal drugs. The herbal based medicines are more popular around the world because of easy availability and low cost. The herbal medicines are the combination of plant substances with chemical materials. This paper's main objective is to create knowledge about the Herbomineral Ayurvedic medicines for kidney stone prevention and treatments.

#### IV. TREATMENT FOR NEPHROLITHIASIS BASED ON HERBOMINERAL AYURVEDIC MEDICINE

Herbomineral medicines are the combination of different drugs grinded and make it a small dosage pill, powders, and paste. The Herbomineral treatments are the better option for kidney stone remedies. Pashanbheda plants are commonly used to cure kidney stone. It dissolve the kidney stone gradually. The Pashanbheda is recommended for the abdominal pain and to break the kidney stone gradually. To experiment with this Herbomineral medicine, we choose a group of animals that are kept in the laboratory environment up to 48 hours before the experiment. Animals are allowed to access the food and water without any constraints throughout the experiment; sex is considered as an important criteria for kidney stone. For kidney stone-induced animals, a single dosage of medicine is feed. The body conditions of all animals are monitored continuously. This monitoring is continued up to 30days to get a result of the experiment with each animal. For the experiment, the animals are induced to get calculi and further feed dosage to respond to the Herbomineral medicines. By adding some toxic chemical into the water induce the kidney stone. The uric acid, high calcium, ethylene glycol are added with the water.



Fig. 3

#### V. CONCLUSION

In this paper, the Herbomineral medicines are suggested and experimented with the Nephrolithiasis. Generally, the Ayurvedic medicines are effective for more number of diseases. The popularity of Ayurvedic medicine is based on the easy availability and low cost. Ayurvedic medicine does not create side effects. The experimental results of the Herbomineral medicines are better for the Nephrolithiasis affected animals. Till now the Ayurvedic medicines are not famous in some of the countries. But the developing

countries are now changing their medication habits to Ayurvedic. Herbomineral medicines are more effective to dilute the kidney stone even it is a large size.

#### REFERENCES

- [1] Silay, MS and Miroglu C. "The risk of urolithiasis recurrence may be reduced with anti-nanobacterial therapy". Med. Hypotheses. 2007; 68(6): 1348-50.
- [2] Mitra SK, Gopumodhavan S, Venkataranganna MV, and Sundaran R. "Effect of Cystone, and Herbal Formulation on Glycolic Acid-Induced Urolithiasis in Rats". Phytother Res. 1998; 12: 372-4.
- [3] Bashir S and Gilani A. "Antiuro lithic effect of *Bergenia ligulata* rhizome: An explanation of the underlying mechanism". J Ethnopharmacol. 2009; 112(1): 106-16.
- [4] Atmani F. "Medical management of urolithiasis, what opportunity for phytotherapy?" Frontiers in Bioscience 2003; 8: 507-14.
- [5] Misra A and Kumar Ashwani. "Studies on Ayurvedic drugs for the cure of urinary tract stones". Journal of Indian Botanical Society 2000; 79 (Supplement): 47-8.
- [6] Bahu CP and Seshadri RT: "In *Advances in Research in Indian Medicine*" (B.H.U.) 1970: 77-78.
- [7] Chuneekar KC: "In *Vanasuhadi Anushandhan Durshika*". 5th edition (Chaukhamba vidyabhawan Varanasi) 1969: 13.
- [8] Bhandari CR and Basu BD: In *Vanasuhadi Chandrodaya*, 2nd edition. Gyan Mandir, Bhanupura publisher Indor ; 1948 : 48.
- [9] Kirtikar KR and Basu BD: "Herbal plants in urolithiasis." In *Indian Medicinal Plants*. 2nd edition. Lalit Mohan Basu publisher Allahabad; 1933 : 56.
- [10] Rayhan ZH, Ogavwa Y, Hokama S, Morozumi M and Hatano T. Urolithiasis in Okinawa, Japan: "A relatively high prevalence of uric acid stones". Int. J. Urol 2003; 10 (8): 411-415.
- [11] Meschi T, Schianchi T, Ridolo E, Adorni G, Allegri F, Guerra A, Novarini A, and Borghi L. "Body weight, diet and water intake in preventing stone disease". Urol Int 2004; 72 n(Suppl 1):29-33.
- [12] Collele J, Kochis E, Galli B, and Munver R. Urolithiasis / Nephrolithiasis: What's it all about? Urologic Nursing 2005; 25(6): 427- 48.