



## A HOLISTIC APPROACH OF RENAL CALCULUS (*HASATE KULYA*) IN UNANI MEDICINE

### Unani Medicine

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### ABSTRACT

Renal stone (Hasate Kulya), with a life time risk of 7-13%, results in significant morbidity as well as substantial economic costs, not only directly from medical treatment but also indirectly through time lost from work. India has high incidence of renal calculi especially in Gujarat, Rajasthan, Punjab and Madhya Pradesh.

Ancient literatures are enriched with *Hasate Kulya* (Renal calculus), Unani physicians described broadly the pathology, manifestations and treatment of its. According to Majoosi, renal calculi is formed due to increased *hararate ghareezi* and *madda* (matter) of these calculi derived from viscous and mucous matter, these matters may be the phlegmatic or viscous blood or pus. Razi mentioned the symptoms of calculi i.e. renal pain, incontinence of urine, dysuria and the persons passing sandy precipitate in their urine must have the calculus in his kidneys or in urinary bladder.

### KEYWORDS

Renal calculus (Hasate Kulya), Hararate Ghareezi (Internal Energy), Mufattite Hasat advia (lithotriptic drugs)

### INTRODUCTION

The existence of renal stone has been recorded since the beginning of civilization, a stone was discovered in the pelvis of an ancient Egyptian mummy, and was dated 4800 B.C. Hippocrates told about the presence of renal stones in 4<sup>th</sup> century B.C. and give a Hippocratic Oath that's "I will not cut even for the stone but leave such procedures to the practitioners of the craft."

Prevalence of the renal calculi varies according to the geographical areas & socio- economic conditions. The evidence of urinary calculi had been found in 7000 years old Egyptian mummy. Its incidence has increased considerably during the 20<sup>th</sup> century. The high incidence area in world are Scandinavian countries, Mediterranean countries, British Isles, Northern Australia, Central Europe, portions of the Malayan Peninsula, China, Pakistan and Northern India especially in Gujarat, Rajasthan, Punjab and Madhya Pradesh. Whereas the incidence of renal stone formation is lower in areas like Central and South America.

Prevalence of renal calculi varies according to the geographical area & socio-economic conditions. India has high incidence of renal calculi especially in Gujarat, Rajasthan, Punjab and Madhya Pradesh.. The renal stones increases with age and commonly present between 2<sup>nd</sup> and 3<sup>rd</sup> decade. These stones are more common in men than women with the ratio of 7 to 8:1<sup>2,3</sup>.

The medical terminology for kidney stone is nephrolithiasis or renal calculus. In Unani medicine, it is known as *Hasate Kulya* and Asmari in Ayurveda. Renal stone is a crystalline mass or a concretions or a solid accumulations of material that formed by precipitation of various urinary solutes in the tubal system of the kidney. It can vary in size from as small as grains of sand to large as golf ball.

Renal stone cause problems when they block the flow of urine through or out of kidney. It is typically leave the body by passage in the urine stream, and many stones are formed and passed without causing symptoms<sup>3,13</sup>

### Morphology

	Type of stone	Calcium oxalate stone	Calcium phosphate stone	Struvite (Mixed) stone	Uric acid stone	Cystine stone
1	Composition	Calcium oxalate	Calcium phosphate	Magnesium-ammonium-calcium phosphate	Pure uric acid, Ammonium urate, sodium urate, calcium oxalate	Cystine (Amino acid)
2	Colour	Black due to blood deposition	Dirty white	Yellow-white/grey	Yellow or reddish	White/pink/yellow
3	Surface	Speculate	Smooth	Smooth	Smooth	Smooth
4	Consistency	Very hard	Friable	Soft and friable	Hard	Soft
5	Cut section	Concentric lamination	Laminated	Friable	Friable	Homogenous

### Etiology

"The cause of renal stone is due to constriction in renal calyces or over production of heat than normal and more viscidly chyme changes into *ghaleez*"

According to Majoosi the cause of formation of renal stone is *Hararate Gharizia Nari*. Morbid matter is *ghaleez and lesdar Khilt*, either *balgham* or *khoon*. Therefore excessive *hararat* causes the dryness of *ratoobat* and enhance the *ghilzat*, which ultimately leads stone formation.

According to Sheikh bu Ali Sina the causes of stone formation in kidney are similar to urinary bladder that is *ghaleez madda* and stagnation of *madda*. *Ghaleez madda* (morbid matter) is produced by *Ghaleez Aghzia* e.g. concentrated milk, paneer, big birds (dhanek etc) and meat (old camel, old bull, old goat), *ghaleez* meat, roasted meat and fish meat which has the properties of *ghaleez* and sangeen, roti (feteeri, leshdar, maida), kheer, shewayyan, and those food and fruits which are not easily digested as like raw apple, raw shaftalo, seed of utaraj, seed of guava and also polluted water. All these substances produce thick and viscous matter in the body, when the *quwate hazima* is weak so its leads to formation of *ghaleez khilt* and reeh. This reeh gets accumulation in the urinary tract. This *madda* (matter) remain in the kidney for long time; mainly because of weakness of kidney or weakness of its power of expulsion which frequently develop consequent upon *sue mizaj kulya* or warme *har kulya* or *qurabe kulya*. Under the influence of *hararat* this *ghaleez madda* converted into gravel and gets expelled or stays back in the kidney and gets changes into stones.

### Types of calculi<sup>1,2,3,5,6,11,13,15</sup>

There are 4 main types of renal stone: 1. Calcium stone: It is of two types namely Calcium oxalate stone and Calcium phosphate stone, 2. Struvite (Mixed) stone, 3. Uric acid stone, 4. Cystine stone.

The most common type of kidney stone is composed of calcium oxalate crystals, occurring in about 75 to 80% of cases and 15-20% struvite, 5-10% uric acid and 1-2% of all stones are formed from cystine stone

6	Number	Usually solitary	Solitary	Solitary	Multiple	Multiple
7	Shape:	Irregular	Staghorn	Irregular and Staghorn	Multifaceted	Staghorn
8	X-ray shadows	Present	Present	Present	Absent but may cast if enough calcium oxalate is associated	Present
9	pH required for formation	Acid	Alkaline	Alkaline	Acid	Acid



Fig.N. 1. Calcium Oxalate Stone Fig.N. 2. Calcium Phosphate stone Fig.N. 3. Struvite stone

#### Clinical features<sup>2,4,7,8,9,12,14,16,17,18,19</sup>

**Pain:** Pain in renal angle is the most common symptom. It may be sharp or dull, constant or intermittent colicky and may be shooting down to the front of the thigh or testicle or vulva on that side. It may be increase in case of constipation. Pain in the lower back, heaviness in the lower back, burning micturition, decreases frequency of micturition, dysuria, nausea, vomiting, haematuria, pyuria and dysuria may be present.

During attack of pain lateral abdominal muscles are rigid and tenderness in renal angle. Palpable lumps are found during hydronephrosis.

#### Risk factors of Renal Calculus<sup>1,2,3,11,13</sup>

Excessive *har* (heat) drugs should be avoided because excessive *hararat* (hotness) causes the dryness of *ratoobat* and enhance the *Ghilzat*, Which ultimately leads stone formation.<sup>7</sup>

Hippocrates (Buqrat) has mentioned the poor prognosis in case of old age.<sup>14</sup>

**Age:** 20 to 30 years.

**Gender:** Men more than women (8:1).

**Geographic factors:** Area of high humidity and elevated temperature.

**Diet:** Rich diet of animal protein, oxalate, vitamin C, sodium chloride and refined carbohydrate.

Low fluid intake and low fiber diet.

#### Usoole Ilaj (Principles of Treatment)<sup>8,10,14,21</sup>

Unani physicians adopted a well organized line of treatment in the management of *Hasate Kulya*. The line of treatment is as follows:

- Remove the *Asbabe Maddi* (causative material)
- Use of *Mufattite Hasat advia* (lithotriptic drugs)
- Use of *Mudire Bol advia* (diuretics drugs)

Accumulation of morbid matter can be removed by *mushil*, further it can be avoided by restriction of diets (*ghaleez aghzia*), which are responsible for the formation of *hasat* e.g. concentrated milk, paneer and meat (old camel, old bull, old goat), roasted meat and fish meat which has the properties of *ghaleez* and sangeen, roti (feteeri, leshtar, maida) etc.

Calculus is treated with *har advia* which dissolve/melt the stone. These drugs have the property of increasing frequency and break the stone and make the kidney hard to soft.<sup>7</sup>

*Mufattite Hasat Advia* (Lithotriptic Drugs) are used for the breaking

of the *hasat* (stone) e.g.<sup>22, 23, 24, 31, 32, 33, 34, 35</sup> Hajrul Yahud, Sang Saremahi, Habbul Quilt (Kulthi), Namak Turb, Aaloo Balu, Tukhm Hallon, Tukham Karafas, Shorah Qalmi, Jawakhar, Aqrab Sokhta, Patherphori, Gul Daudi, Saater Farsi, Silajeet, Inderjo etc.

*Murakab Advia* (Compound Drugs) e.g.<sup>25, 26, 27, 28, 29, 30</sup> Sufoof Hajrul Yahud, Qurs Kaknaj, Kushta Sang Saremahi, Kushta Hajrul Yahud, Dawae Sang, Majoon Aqrab, Majoon Sang Saremahi, Majoon Hajrul Yahud, Sharbate Aloo Balu, Sharbate Bazoori etc.

*Mudire bol* (diuretics) are used for the evacuation of *madda* e.g. Hajrul Yahud, Sang Saremahi, Habbul Quilt, Namak Turb, Muli, Aaloo Balu, Tukhm Kasni, Tukhm Kharpara, Kaknaj, Tukham Karafas etc.

#### Prevention<sup>1,14,20</sup>

This chyme is produced due to excessive *ghaleez* (*viscous*) food intake particularly proteins, paneer, kareeh, sweet, hareis, fried meat, milk, polluted water and *ghaleez nabeez*. It occurs more on excessive hard work because it change *raqeeq* to *ghaleez*.<sup>8</sup>

People with a history of stone formation or those who have had a stone earlier can probably decrease their chance of stone formation by the following measures:

- By adequate intake of fluid, ensuring over 2 liters of urine daily.
- By treating the urinary infection.
- By decreases the dietary calcium, oxalate, uric acid, cystine as like:

#### CONCLUSION

It is concluded that the Renal Calculus (Hasate Kulya) is one of the most painful and commonest urological disorder. A vast range of it's ancient records i.e. etiology and mechanism of the disease with Usoole Ilaj (Principles of Treatment) found in Unani system of Medicine.

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