

Ayurvedic Remedies For Kidney Stones

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ABSTRACT:

nephrolithiasis, often called as renal calculi or kidney stones is a very common conditions that affects people of all ages. These stones or Ashmari are described in Vedic literature. Patients are turning to natural Ayurvedic medicines as an alternative to pharmaceutical drug, which may produce long term side effects. Because urinary stones are a very old ailment, several herbal therapies have been used since ancient times. The usage of Ayurvedic herbs is the most cost effective and secure method of treatment. These Ayurvedic medicines have clinically established effects, such as dissolving or breaking down calculi and assisting in the removal of stones without undergoing surgery. Stones in the kidney can form in any section of the urinary track.

Key words: Nephrolithiasis, Renal calculi, Ayurvedic herbs, Aashmari.

I. INTRODUCTION

Inflammatory bowel disease also increases the calcium absorption which leads to the formation of stones. Intake of medicines involving diuretics, anti seizure drugs and antacids which are calcium based also increase the risk developing renal calculi.

Types of kidney stones: Kidney stones are broadly classified into 4 types

1. Calcium oxalate: These are the most common type of kidney stones which formed due to the combination of oxalate with calcium in the urine. These are hard clumps of minerals and other substances which are made up of oxalate usually found in leafy vegetable. Oxalate usually enters our body through the route of our diet which includes wheat bread, nuts and seeds, soy products, okra among others. Oxalate is broken down into oxalic acid which combines with the calcium to form calcium oxalate crystals.[2]

2. Uric acid: Excessive quantity of uric acid in the body leads to the formation of uric acid stones. [5] These types of stones are formed due to naturally

Kidney stones which are also known as nephrolithiasis or urolithiasis or renal calculi are the deposits which are made up of salts or minerals that form inside the kidneys [1]. More than half a million people each year are diagnosed with kidney stones. It is one of the most prevailing diseases in all age groups among other diseases such as hypertension, diabetes and obesity which may also lead to kidney stones. A kidney stone can be treated with surgical procedures which involves shockwave lithotripsy, nephrolithotripsy or percutaneous lithotripsy. [2]

Causes of kidney stones:

Most common causes of renal calculi include dehydration, obesity, diet rich in oxalate, phosphate and proteins, excessive intake of beverages. Few medical conditions such as hyperparathyroidism, repeated UTI and renal tubular acidosis increase the risk of kidney stones.

occurring chemical called purines. Uric acid stones are associated with a condition called gout.

3. Struvite: These occur in the upper urinary tract and are less common. Stones occur when the urine becomes alkaline in nature due to the presence of excess ammonia produced by bacteria as a waste product.

4. Cystine: These types of stones tend to run in families and are very rare. These are usually caused due to a rare disorder called cystinuria. This condition causes the natural substance Cystine to leak in to the urine which causes build up of the cystine that ultimately leads to the formation of stones.

Symptoms of kidney stones: Painful urination, sharp sudden abdominal pain, severe back pain, blood in urine, vomiting, nausea, fever and chills. [3]

Diagnosis:

1. Blood tests: High amounts of calcium in the blood may reveal the presence of renal calculi. [4]

2.Urinalysis: urine sample analysis is done to confirm the presence of stones.

In other methods of diagnosis abdominal x ray or city scan are also employed.

PATHOPHYSIOLOGY OF KIDNEY STONE FORMATION:

The growth of the stones in kidneys is initiated by the formation of crystals present in the supersaturated urine which attaches itself to the urothelium and creates a hot bed for the stone growth. The formed stone or calculi gives rise to symptoms when the urine passes towards the urinary bladder through ureters. Renal calculi mostly constitute of calcium. The others substance that contributes to the formation of the stone are crystals of uric acid another contaminating substances. [1]

ALLOPATHIC REMEDIES FOR KIDNEY STONES: Few allopathic medications for treatment of kidney stones are listed below in table no:1.1

Medications Associated with Kidney Stone Formation	
Type of medication	Examples
Antibiotics	Ampicillin, amoxicillin, ceftriaxone (Rocephin), fusans (e.g., nitrofurantoin), pyridines, quinolones, sulfonamides (e.g., sulfamethoxazole)
Carbonic anhydrase inhibitors	Acetazolamide, topiramate (Topamax)
Diuretics	Furosemide (Lasix), tramterene (Dyrenium)
Ephedra alkaloids (banned in the United States)	Herbal products used as stimulants and appetite suppressants
Laxatives, especially if abused (toxic to ammonium urate stones)	Overuse of any laxative resulting in electrolyte losses
Potassium channel blockers	Amiodarone, dalfampridine (Ampyra, multiple sclerosis therapy), sotalol (Betapace)
Reverse transcriptase inhibitors and protease inhibitors	Efavirenz (Sustiva), indinavir (Crivarin), nelfinavir (Viracept), raltegravir (Isentress)
Sulfonylureas	Therapies for type 2 diabetes mellitus
Others	Aluminum magnesium hydroxide, ascorbic acid, calcium, dexamethasone, guallesin, phenylephrine (Diantrin), vitamin D

Adapted with permission from Frassetto L, Rohlfing J. Treatment and prevention of kidney stones: an update. Am Fam Physician. 2012;84(12):1237 with additional information from references 32 through 35.

Table:1.1

Ayurvedic remedies for kidney stones:

Many scholars consider ayurveda to be the oldest healing science. Ayurveda translated in Sanskrit literally means to the “science of life”. Broadly, ayurveda emphasizes on prevention and maintenance of health. By creating balance in one’s life. The 3 basic types of energies are present in everyone and everything according to ayurveda. [7]

- 1.vata it’s considered to be the energy associated with one’s movement.
- 2.pitta is the body’s system of metabolism.
- 3.kapha means the energy which forms the body structure.

Allopathy focuses on the treatment by identifying the symptoms and uses surgeries and drugs for the elimination of pathogens but these drugs show adverse effects which may lead to weakening of the body. Whereas ayurveda employs the process of diagnosis that follows a system which is initiated

by the evaluation of symptoms of the supposed illness which caused the imbalance of energy.

Helpful ayurvedic remedies for renal calculi:

The Ayurvedic studies show many herbal concoctions that are believed to show exceptional improvements in the elimination of kidney stones or provide relief from the symptoms.

1.Moringa oleifera: Commonly called as drumsticks, moringa root extract is believed to be able to dissolve the kidney stones and suspend the prevalence of formation of new stones. It has antioxidant properties and is a rich source of vitamins A B&C. Moringa has anti urolithiatic potential which acts against urolithiasis. They help in the increasing of gall bladder function. [6]

Usage: The root of Moringa oleifera can be consumed by adding celery or asafoetida. About 500 mg of moringa can be consumed per day. [13]

2. Apple cider vinegar: Apple cider vinegar is a popular remedy for dissolving and prevention of kidney stones. It has acetic acid which softens and breaks down the kidney stones. The size reduced stones can be easily passed through the urine. It also increases stomach acid which improves digestion and prevents the formation of new stones. It is also believed to reduce the pain and inflammation associated with kidney stones. It also cleanses the kidneys. It has trace amount of potassium and increases antioxidant levels which can be useful in prevention of renal calculi.

Usage: some of the ways of using apple cider vinegar has been listed and showed in the figure no.1.4 [6]

- 1-2 tablespoons of apple cider vinegar with a glass of water everyday.
- Diluted apple cider vinegar in addition with 2 ounces of lemon juice.
- Can also be used in form of food which includes salad dressing, smoothies etc.

3.Pashanbada: Pashanbhed is a famous Indian drug derived from the plant of *Bergenia liguata*. Pashanbhed is also called as ‘stone breaker’ as it promotes the removal of kidney stones by breaking them into small fractions of solid masses.

Usage: Decoction of the pashanbhed root course powder in the dosage of 40 ml approximately can be administered twice a day. [8] Believed to reduce the size of calculi and also release UTI. The roots of pashanbhed shown in the fig. 1.5

4.Celosia argentea: It is a plant which provides the medicinal use through their roots and shoots. C.argentea is known to dissolve the stone and assists in its excretion.

Usage: The aqueous decoction of Celosia argentea can be used thrice a day for better results

5.Boerhaavia Diffusia: It is also known as punarnava which is a flowering plant. The extracts of this plant when consumed cause the quickening of dissolution process of calculi and their expulsion from the body. This remedy promotes renal health and causes reduction in the excretion of oxalate and increases the rate of elimination of waste products. [9]

Usage: The whole plant decoction of punarnava in approximately 30 grams can be taken daily post meals only. It is not supposed to be consumed along with milk.

6.Banana stem juice: It is diuretic in nature and helps in removal or cleansing of toxins from the body. [11]

Usage: the juice of banana tree stems in approximate quantity of a cup. It should be consumed thrice a week for best results.

7.Basil (Tulsi): Basil has the mineral fluid promoting quality that maintains the balance in the kidneys. It possesses diuretic properties and the presence of acetic acid promotes the breakdown of kidney stones and cleanses the kidney.

Usage:

1. Swallowing of tulasi leaves on an empty stomach in the morning.
2. Consumption of tulasi juice mixed with spoon full of honey on an empty stomach.
3. Decoction of tulasi leaves by boiling them in water. [10]

8.Lemon juice: Lemons contain natural forms of citrate, the salt in citric acid that binds to the calcium of the stone and detains the formation of stone.

Usage: Half a cup of concentrated lemon juice in water can be taken everyday as shown in the figure 2.0 [12]

PREVENTIONS:

Other than the above given remedies, the following are the simple lifestyle changes which prove to be beneficial in the long run to prevent kidney stones.

Following are the ways to prevent kidney stones [14]:

- ✓ Limit salt intake.

- ✓ Intake of approximately 5 litres of water daily.
- ✓ Avoid processed and junk foods.
- ✓ Limit high fat foods.
- ✓ Avoid acidic foods.
- ✓ Limit sugar intake.
- ✓ Increase the intake of food which is high in magnesium.
- ✓ Maintain appropriate weight.

The most common types of kidney stones:



fig no:1.1

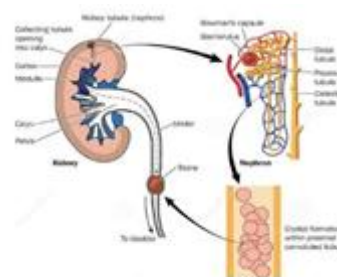


Fig no:1.2 pathophysiology of kidney stones formation



Fig no:1.3 moringa



figno:1.4

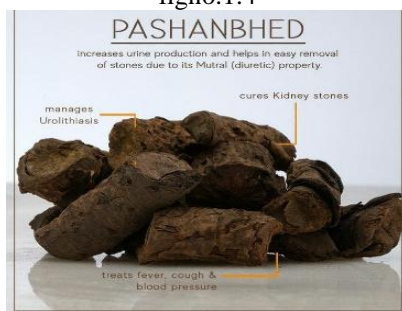


fig. 1.5 roots of pashanbhed



fig. 1.6 celosia argentea

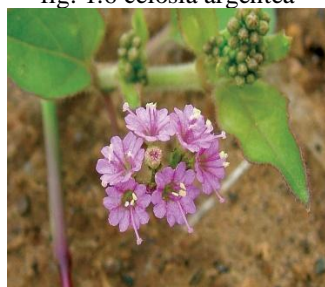


fig. 1.7 punarnava plant



fig. 1.8 banana stem juice



fig.no: 1.9 tulsi leaves



fig.no 2.0 lemon juice

II. CONCLUSION:

The effects of various ayurvedic remedies with proposed application to prevent and treat kidney stone formation have been reviewed in the present article. Ayurvedic approach is multidimensional therapy like lifestyle modification through diet; internal medicines and basti therapy are highly effective in the management of renal stone. 95% of renal stones can be broken up and expelled without surgery by ayurvedic remedies and therapy [7]. If proper counselling and guidance is provided to kidney stone patients at the right time regarding pathyapathya (dietary management) correlation with Ashmari and its management, it can be helpful in preventing further complications including recurrence of disease. These are the times, where Ayurveda has spread world wide and is at pinnacle of its popularity due to its holistic and effective approach to health and treatment. The need of the hour is to develop an effective, safe and standardized herbal preparation for the management of urothiliasis. In conclusion, more interdisciplinary research between pharmacognosists, pharmacologist and clinical



investigators is needed to develop new plant derived high quality natural products to treat and prevent the formation of kidney stones.

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