



MEDICINAL PLANTS USED IN THE TREATMENT OF KIDNEY, URINARY AND GALLSTONE (RENAL STONE AND HERBAL TREATMENT): A REVIEW

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ABSTRACT

A kidney stone is a hard/solid mass made of crystalline mineral material (usually calcium oxalate). Within the kidney or urinary tract. Usually originate within the kidney or urinary tract. The medical term for kidney stones is Nephrolithiasis, urolithiasis, or urinary stones. The leading cause of kidney stones is a lack of water in the body. Stones are more commonly found in individuals who drink less than the recommended eight to ten glasses of water a day. When there is not enough water to dilute the uric acid, a component of urine, the urine becomes more acidic. An excessively acidic environment in urine can lead to the formation of kidney stones. In this review article, we included causes, symptoms, risk factors of kidney stone and some medicinal plants and their products used as antiurolithiatic activity or herbal treatment etc. so it will be helpful for the patient of nephrolithiasis, urolithiasis, or urinary stones disease.

Introduction

Kidney, urinary, and gallstones are hard deposits of minerals and salts that form in the kidneys, urinary tract, and gallbladder, respectively. The prevalence of these stones is increasing globally, with an estimated 10% of the population affected [1]. Conventional treatments include pain management, hydration, and surgical intervention. However, herbal remedies have been used for centuries to treat these stones, and their popularity is increasing.

Causes and Symptoms

The causes of kidney, urinary, and gallstones include genetic predisposition, diet, dehydration, and certain medical conditions. Symptoms include severe pain, nausea, vomiting, and frequent urination.

Conventional Treatments

Conventional treatments include pain management, hydration, and surgical intervention. However, these treatments have limitations and side effects, highlighting the need for alternative approaches.

Herbal Remedies

Herbal remedies have been used for centuries to treat kidney, urinary, and gallstones. Many herbs have diuretic, anti-inflammatory, and antioxidant properties that can help reduce stone size and symptoms.



Medicinal Plants Used in the Treatment of Kidney, Urinary and Gallstone

Punarnava (Boerhavia diffusa):

Punarnava is a natural diuretic that helps flush out stones [2]. Its roots contain alkaloids, flavonoids, and saponins, which contribute to its diuretic and anti-inflammatory properties.

Varuna (Crataeva nurvala):

Varuna's bark has anti-inflammatory properties, reducing stone size [3]. Its bark contains lupeol, a triterpenoid that inhibits calcium oxalate crystallization.

Gulab (Rosa centifolia):

Rose petals have been used to treat kidney stones and urinary issues [4]. They contain flavonoids, phenolic acids, and anthocyanins, which have antioxidant and anti-inflammatory effects.

Kavach (Mucuna pruriens):

Kavach seeds have anti-inflammatory and antioxidant properties [5]. They contain L-DOPA, a precursor to dopamine, which may help reduce oxidative stress.

Triphala:

A mix of three fruits (Amalaki, Bibhitaki, and Haritaki) that helps with digestion and kidney health [6]. Triphala has antioxidant, anti-inflammatory, and diuretic properties.

Gokhru (Tribulus terrestris):

Gokhru is a natural diuretic that helps flush out stones [16]. Its fruits contain saponins, flavonoids, and alkaloids,

which contribute to its diuretic and anti-inflammatory properties.

Herbal Treatments

Kidney stone tea: Mix equal parts of Punarnava, Varuna, and Gulab petals. Steep in hot water and drink 2-3 times a day [7].

Citra Plus capsules: Contain extracts of Punarnava, Varuna, and other herbs that help dissolve stones [8].

Neeri Kshaya: A herbal formulation that helps flush out stones and reduces pain [9].

Shilajeet (Asphaltum):

Shilajeet is a natural antioxidant that helps reduce oxidative stress and inflammation [17]. It contains fulvic acid, humic acid, and other minerals that contribute to its therapeutic effects.

Chandraprabha:

Chandraprabha is a herbal formulation that helps reduce stone size and symptoms [18]. It contains extracts of Gokhru, Punarnava, and other herbs that have diuretic and anti-inflammatory properties.

Kidney stone capsules: Contain extracts of Gokhru, Shilajeet, and other herbs that help dissolve stones [19].

Mechanisms of Action

Inhibition of stone formation: Some herbs, such as Triphala and Gokhru, inhibit the formation of calcium oxalate stones

Reduction of oxidative stress: Herbs like Shilajeet and Chandraprabha reduce oxidative stress, which contributes to stone formation

Diuretic effect: Punarnava and other plants increase urine production, helping to flush out stones [10].

Anti-inflammatory effect: Varuna and Kavach reduce inflammation, reducing stone size [11].

Antioxidant effect: Triphala and other plants reduce oxidative stress, preventing stone formation [12].

Clinical Evidence

Punarnava: A clinical trial showed that Punarnava extract reduced stone size and symptoms [13].

Varuna: A study found that Varuna bark extract reduced stone size and improved symptoms [14].

Gulab: A study showed that rose petal extract reduced calcium oxalate stone formation in rats [15].

Gokhru: A clinical trial showed that Gokhru extract reduced stone size and symptoms [23].

Shilajeet: A study found that Shilajeet reduced oxidative stress and inflammation in patients with kidney stones [24].

Discussion

The use of medicinal plants and herbal treatments for kidney, urinary, and gallstones is a promising approach. Many herbs have diuretic,

anti-inflammatory, and antioxidant properties that can help reduce stone size and symptoms. However, more research is needed to confirm their efficacy and safety.

Conclusion

The use of medicinal plants and herbal treatments for kidney, urinary, and gallstones is a promising approach. Many herbs have diuretic, anti-inflammatory, and antioxidant properties that can help reduce stone size and symptoms. However, more research is needed to confirm their efficacy and safety. Medicinal plants and herbal treatments offer a potential alternative to conventional treatments for kidney, urinary, and gallstones. Further research is needed to explore their therapeutic potential and to develop effective herbal formulations.

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