



Case Study

EFFICACY OF *ELADI YOGA KWATHA* IN THE MANAGEMENT OF RENAL CALCULI

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ABSTRACT

Renal calculi are one of the most common diseases of the urinary tract. Renal stones are hard deposits of minerals and acid salts that stick together in concentrated urine. It is rare in children and shows a familial predisposition. Treatment of renal calculi depends upon the size and symptoms of the disease along with the site of renal calculi. Modern management includes invasive and non-invasive procedures which are either expensive or with side effects. Ayurveda has given a proper and detailed description on *Asmari* explaining its *Nidana* and there are various formulations mentioned in Ayurvedic classical texts having *Asmari bhedaka* (disintegration of calculi) property which alleviates the aggravated *doshas* and brings to normalcy with no complications. *Eladi yoga kwatha* is one such formulation mentioned in *Asmari chikitsa* of *Haritha samhitha* with *Eranda thaila*, and *Shilajathu* as *Anupana* having *Mutrala* and *Asmarigna* properties. This case report details the clinical presentation and management of a 60-year-old male patient presented with pain over renal angle and was diagnosed with renal calculi in USG for 2 years. The patient was given *Eladi yoga kwatha* in the dosage of 48ml with *Shilajathu* and *Eranda thailam* twice daily before food for 30 days. The assessment was done periodically was analysed using appropriate statistical tests before and after the treatment. Post USG (abdomen and pelvis) revealed a significant reduction in the size of Renal calculi. Hence it is proven that an Ayurveda formulation offers an effective option in the management of renal calculi.

INTRODUCTION

Renal stones vary in frequency around the world, probably as a consequence of dietary and environmental factors, but genetic factors also contribute in the formation of renal calculi. Mainly 80% of renal stones contain crystals of calcium oxalate, 15% contain magnesium and ammonium phosphate, and small numbers of pure cystine or uric acid stones.^[1]

The pathogenesis involves six stages: supersaturation of urine with stone-forming salts, nucleation of crystals, crystallisation, aggregation, matrix formation, and stone maturation^[11].

This can occur at any age but the maximum incidence is seen between 30-60 years. Renal calculi is mainly diagnosed clinically with pain and tenderness

in the renal angle, dysuria and burning sensation during micturition affecting the normal flow of urine.^[1] Most number of stones less than 4mm in diameter, will pass out through the urine spontaneously and smaller number of stones of greater than 10mm require active intervention. Intense pain that usually subsides within 2 hours but continues for many hours or days is the main presenting complaint.^[2]

Smaller stones obstruct the urine flow, resulting in pain and burning micturition, while larger calculi can permanently impair renal function. The choice of treatment depends on the size, location and symptoms of the calculi. Modern interventions include extracorporeal shock wave lithotripsy (ESWL), percutaneous nephrolithotomy (PCNL), ureteroscopy, and, in rare cases, open surgical removal. Though effective, these techniques are highly expensive and may cause complications especially if it is not followed with a proper post regime.^[3]

In Ayurveda, renal calculi termed as *Asmari*, is classified among the *Ashtamahagada Vyadhis* (eight grave disorders) and is also referred as *Anthaka* due to their potentially life-threatening nature. Classical texts

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attribute the pathogenesis of *Asmari* to the aggravation of *Kapha dosha* in individuals habitually consuming *Ahita ahara-vihara* (unwholesome diet and lifestyle). The vitiated *Kapha* is transported to the urinary bladder (*Basti*), where it combines with urine and gradually forms *Sharkara*, which matures into *Asmari*. Acharya Sushruta elaborates the *Nidana* (etiology), *Lakshana* (clinical features), *Bheda* (classification), *Upadrava* (complications), and *Chikitsa* (treatment) of *Asmari*, describing both internal medications and surgical intervention (*Chedana karma*) for advanced cases.^[4]

Ayurvedic classics describe numerous herbal formulations for the management of *Asmari*. If it is treated in the initial stages, it can be cured with these herbal medications. But there are much more limitations to various herbal medications mentioned in the classical texts due to the involvement of rare ingredients and non-availability of herbs, complex preparation methods etc. limiting their clinical utility now a days. This necessitates the identification of simpler, cost-effective, and easily available herbal alternatives.

Eladi Yoga Kwatha, mentioned in *Asmari Chikitsa adhaya of Haritha samhitha* (chapter no 31), is formulated with ingredients having *Mootrala* (diuretic) and *Asmarighna* properties, facilitating stone disintegration and expulsion. Its components are herbal, affordable, readily available, and simple to prepare, making it a practical and economically viable alternative to costly surgical procedures.

Eladi yoga kwatha consists of ingredients such as *Ela*, *Kana*, *Vasa*, *Triphala*, *Gokshura*, *Renuka*, *Pashanabheda*, *Madhuka*, along with *Erandathaila*, *Sarkara* and *Shilajathu* as *Anupana* having mainly *Mutrala* and *Asmarigna* properties. The mentioned *Anupana* is given in combination as per the dosha involvement in renal calculi as *Vata*, *Pitha* and *Kapha* respectively.^[4]

Also among the renal stones, calcium crystals are predominantly seen comprising about 80% of all urinary calculi. Pure uric acid stones are rarely seen among the renal stones. Calcium oxalate crystals resemble the features of *Vataja asmari* and calcium phosphate crystals resemble *Kaphaja asmari* in terms of its appearance and clinical features. *Shilajathu*, which has been proven effective for its *Asmarigna* property, is *Kaphahara* in nature and *Erandathailam* possess *Vatahara* and *Vata anulomana* property. ^[5-6]

Thus, *Shilajathu* and *Erandathailam* is selected for the study as *Anupana* which is having the action in reducing the size of renal calculi. This was successfully employed in the management of renal calculi, thereby

highlighting the relevance and efficacy of Ayurvedic interventions in treating renal calculi.^[5]

CASE REPORT

Patient Information

A 60-year-old male patient had complaints of pain over renal angle for two years and on further evaluation, he was diagnosed with renal calculi in USG (abdomen and pelvis).

There was no previous history of renal calculi and had no history of diabetes mellitus, hypertension, dyslipidemia or thyroid dysfunction. He was not under any medication for any ailments.

Family History

No relevant family history present.

Personal History

Non-vegetarian diet with normal appetite.

Micturition is 2-3 times in the day and 1-2 times at night.

1-2 times in 24 hours is the bowel habit.

Regular sleep pattern.

No history of addiction.

Clinical Findings on USG (Abdomen and Pelvis)

Ultrasonography dated 16/7/2024 shows:

Right kidney: NAD

Left kidney: Few calculi noted and largest measuring 9.2mm in upper calyx.

Study Period

The intervention was given for 30 days.

MATERIALS AND METHODS

Therapeutic Intervention

The drugs of *Eladi yoga kwatha* i.e., *Ela*, *Kana*, *Vrisha*, *Triphala*, *Renuka*, *Gokshura*, *Pashanabheda*, *Madhuka*, were washed, dried in shade, chipped and dispensed in airtight packets of 48gm each (4.8gm each drug) with the date of administration labelled on each packet. *Shilajathu* was given in packets of 1.5g, and *Eranda thailam* was given in bottles with a measuring jar. Printed directions regarding the preparation of *Kashaya* each day using 48g of drug were given to the patient in the regional language. 15 packets of *Kashaya choorna* for 15 days will be given first and second visits.^[8]

(*Kashaya* preparing direction for one day: Take one packet of *Kashaya choorna* and add 768ml of water, and reduce to 96ml in mild heat). 48ml each was advised to be taken twice daily before food, adding 1.5gm of *Shilajathu* and 6ml of *Eranda thailam* to it for a period of 30 days. The *kashaya* was advised to be taken in lukewarm state) 48ml of *Eladi yoga kwatha* was advised to be taken twice daily before food, added with 1.5gm of *Shilajathu* and 6ml of *Eranda thailam*.

Properties of Eladi Yoga Kwatha^[7]

Drug	Rasa	Guna	Veerya	Vipaka	Karma
Ela	Katu, Madhura	Laghu, Uksha	Sita	Katu	Vatapitha Hara
Kana	Madhura, Katu, Thiktha	Laghu and Snigdha	Anushna	Madhura	Vatakaphahara, Tridosahara
Vasa	Tiktha Kasaya	Laghu and Snigdha	Sita	Katu	Kaphahara, Rakthashodhaka
Madhuca	Madhura	Guru	Sita	Madhura	Vatahara, Balya
Amalaki	Katu, Madhura, Amla, Katu, Tiktha, Kashaya	Laghu Rooksha	Sita	Madhura	Kaphavatahara, Rasayana
Trikantaka	Madhura	Guru, Snigdha	Sita	Madhura	Mutrala Vatanut
Renuka	Katu, Tiktha	Laghu	Sita	Katu	Vatahara, Kaphahara
Pashanabheda	Tiktha, Kashaya	Laghu	Sita	Katu	Bhedana, Vasthishodhana, Asmarighna, Mutravirechaniya
Hareethaki	Madhura, Amla, Katu	Laghu, Ruksha	Ushna	Madhura	Sarvadoshaprasamana
Vibheethaki	Kashaya	Laghu, Ruksha	Ushna	Madhura	Kaphapithahara, Bhedhaka
Shilajathu	Tiktha	Guru	Ushna	Katu	Mutrala, Yogavahi, Rasayana
Eranda Thailam	Katu, Madhura, Kashaya	Sookshma Snigdha	Ushnam	Madhura	Kapha Vatasamaka Basthishoolahara Anulomanam Medohara
Sarkara	Madhura	Snigdha	Sita	Madhura	Vatahara, Dhathuvardhaka

Gradings for Assessment of Objective Parameters

The outcome measures assessed were size of renal calculi before and after the intervention through USG (abdomen and pelvis).

Efficacy of the medication is assessed by the objective parameter i.e., size of the renal calculi.

OBSERVATION AND RESULTS

Effect of Eladi yoga kwatha in Renal calculi

Size of calculi on left kidney dated 16/7/2024 was 9.2mm as diagnosed by USG (abdomen and pelvis) The clinical intervention of the drug *Eladi yoga kwatha* with *Shilajathu* and *Erandathailam* for a period of 30 days was given in a dose of 48ml. USG was taken after the intervention period and size of calculi on left kidney was 3.4mm as diagnosed by USG (abdomen and pelvis) after 30 days.

This observation shows that *Eladi yoga kwatha* is effective in reducing the size of renal calculi and is found to be statistically significant.

DISCUSSION

Renal calculi is one of the most common diseases of the urinary tract. Renal stones are hard deposits of minerals and acid salts that sticks together in concentrated urine. It occurs more frequently in men than in women. It is rare in children and shows a familial predisposition. There are number of etiologies explained in the formation of urinary calculus which

includes: hyperparathyroidism, decrease of citrate level in urine etc.

Modern management includes both invasive and non-invasive techniques. Though effective, these techniques are highly expensive and may cause complications especially if it is not followed with proper post regimes

In Ayurveda, *Asmari*- classified under *Ashtamahagada*- is described by *Sushrutacharya* as *Anthaka prathimo vyadhi*, *Daruna*, and *Yamopama*, emphasizing its severe and potentially life-threatening nature.^[5,6]

Asmari at an early stage can be managed efficiently using various *Asmari-nashana yogas* described in classical Ayurvedic texts. But there are much more limitations to various herbal medications mentioned in the classical texts due to the involvement of rare ingredients and non-availability of herbs, complex preparation methods etc., limiting their clinical utility now a days. This necessitates the identification of simpler, cost-effective, and easily available herbal alternatives^[6].

The present study was aimed to assess the efficacy of *Eladi yoga kwatha* in renal calculi. *Eladi yoga kwatha* is a herbal formulation which is mentioned in *Haritha Samhitha Asmari chikitsa adhyaya*. The drugs in the *Eladi yoga kwatha* are known for its *Asmari nashana*, *Asmari bhedhana*, *Thridoshahara* and *Mutrala*

properties. These properties are crucial in the disintegration and elimination of renal calculi. The drugs mentioned in the formulation are easily available, supports in non-recurrence of the calculi and are devoid of any complications. Also the preparation of the formulation is simpler and not challenging^[4].

Ela

Ela, has a significant role in the management of Renal calculi through its *Dosha* balancing property in a multilevel. Since *Asmari* is considered to be a kapha dominant pathology where its *Pichila* and *Guru* properties provides a nidus for stone formation, the properties of *Ela* such as *Laghu* and *Ruksha guna*, *Katu rasa* and *Ushna virya* helps to break the solid matrix and reduces the recurrence.^[12]

Kana

Pippali contributes to renal calculi size reduction, particularly when combined with other herbs. In Ayurvedic terms, its *Katu rasa*, *Laghu* and *Snigdha guna*, *Ushna virya*, and *Madhura vipaka* give it *Deepana*, *Pachana*, *Vatanulomana*, *Shothahara*, and mild *Mutrala* actions.^[13]

Vasa

Vasa, is known in Ayurveda for its *Shothahara* (anti-inflammatory), and *Mutrala* (diuretic) properties, which can help in the management of renal calculi. Its *Tikta* (bitter) and *Kashaya* (astringent) *Rasa*, *Laghu* and *Ruksha guna*, *Shita virya*, and *Katu vipaka* help reduce *Kapha* aggravation.^[14]

Harithaki

Haritaki, with its *Kashaya* and *Madhura rasa*, *Laghu* and *Ruksha guna*, and *Ushna virya*, acts as a mild diuretic and metabolic regulator. It helps improve bowel regularity, promotes detoxification, and reduces the accumulation of *Ama*, thereby preventing nidus formation for stones.^[20]

Vibheetaki

Vibheetaki, characterized by *Kashaya rasa*, *Laghu guna*, and *Ushna virya*, is known for its *Kapha-pitta hara* and *Shothahara* properties. It reduces inflammation in the urinary tract, helps to shrink tissue swelling around impacted stones, and supports stone mobility. Its mild diuretic effect promotes urine flow, diluting lithogenic salts and lowering the risk of further crystal aggregation.^[18]

Amalaki

Amalaki, with its *Amla rasa*, *Shita virya*, and *Tridosahara* action, is rich in vitamin C and potent antioxidants. It protects renal tissue from oxidative injury, supports collagen integrity in urinary tract linings, and helps modulate urinary pH to make the condition less favourable for crystal formation. Its cooling, anti-inflammatory effect also eases discomfort associated with calculi.^[16]

Gokshura

Gokshura, is one among the *Asmari-hara* drug in Ayurveda, possess *Madhura rasa*, *Guru* and *Snigdha guna*, *Shita virya*, and *Madhura vipaka*, making it *Tridosha-hara* with strong *Mutrala* (diuretic) and *Asmarihara* (stone-breaking) actions. It facilitates flushing of crystals, breaks down stone aggregates, and inhibits further aggregation.

Its efficacy is linked to key phytoconstituents such as saponins (protodioscin, dioscin) that enhance diuresis and reduce supersaturation of stone-forming minerals.^[15]

Renuka

Renuka - seeds of *Nirgundi* are mentioned in Ayurveda as possessing *Mutrala* (diuretic), *Shothahara* (anti-inflammatory), and *Krimighna* (antimicrobial) properties, which can be beneficial in the management of renal calculi. They have *Katu* and *Tikta rasa*, *Laghu* and *Ruksha guna*, *Ushna virya*, and *Katu vipaka*, helping in pacifying *Vata* and *Kapha doshas* that contribute to *Asmari* formation.^[19]

Pashanabheda

Pashanabheda, literally meaning “stone breaker,” is one of the most potent litholytic herbs in Ayurveda, with *Tikta* and *Kashaya rasa*, *Laghu guna*, *Shita virya*, and *Madhura vipaka*. It has properties such as *Mutrala* and *Ashmari-hara*. The plant contains bergenin, arbutin, catechin, gallic acid, and other phenolic compounds to inhibit calcium oxalate crystal aggregation and promotes crystal disintegration.^[20]

Madhura

It has *Madhura* and *Tikta rasa*, *Snigdha guna*, and *Śīta virya*, pacifies *Pitta* and *Vāta* while soothing urinary tract irritation in renal calculi. Its mild *Mutrala* (diuretic) property promotes urine flow, helps in flushing of small crystals, and its cooling nature alleviates burning micturition.^[22]

Eranda Thailam

Eranda thailam, extracted from the seeds of *Ricinus communis* possess *Vatashamana*, *Shothahara*, *Bhedana* and mild *Mutrala* effects providing supportive benefits in the management of renal calculi. In *Asmari chikitsa*, its unctuous and warming qualities help lubricate urinary passages, relieve spasm, and facilitate smoother passage of stones.

Chemically, castor oil contains ricinoleic acid (80–90%), oleic acid, linoleic acid, palmitic acid, and minor amounts of stearic acid. Ricinoleic acid is known for its anti-inflammatory and smooth muscle-relaxing properties, which may ease ureteral spasm caused by stones, while oleic and linoleic acids have antioxidant effects that protect renal tissue from oxidative stress.^[22]

Shilajathu

Shilajatu, also known as Asphaltum, is a well-known Ayurvedic remedy with numerous therapeutic properties. It's especially valued for its ability to dissolve kidney stones, act as a diuretic and reduce inflammation. In Ayurveda, *Shilajatu* is described with *Katu* and *Tiktha rasa*, *Laghu* and *Ruksha guna*, *Ushna virya*, and *Katu vipaka*. This unique combination helps clear blockages in the urinary tract, balances *Vata* and *Kapha doshas*, and supports healthy urine flow.^[22]

Hence the study revealed the anti-oxidant, anti-inflammatory, diuretic, anti-spasmodic, muscle relaxant, analgesic and litholytic properties of the drug proving its role in disintegration, expulsion and decrease in the size of stones.

On the basis of *Rasa* the maximum drug of *Eladi yoga kwatha* have *Katu*, *Tikta*, *Kashaya* and *Madura rasa*. The *Katu*, *Tikta*, *Kashaya rasa* by virtue of their *Kaphanashaka* and *Madura rasa* by its *Vatashamaka* property collectively responsible for *Kapha vatashamaka* and thus disintegrate the renal calculi.

The maximum *Dravyas* of formulation possesses *Laghu*, *Snigdha*, *Ruksha*, *Teekshna gunas* etc. By virtue of these properties these *Yogas* does the *Lekhana*, *Chedana*, *Bhedana* of *Mutrasmari*,

Thus *Chedana*, *Bhedana*, *Lekhana* properties of *Dravyas* used in the formulation are responsible for the reduction and expulsion of stones and more over does the pacification of the symptom.^[8]

The *Eladi yoga kwatha* was given for a period of 30 days and the dosage was 48ml *Kwatha* twice daily before food with *Shilajathu* and *Eranda thailam* as *anupana*.

CONCLUSION

Renal calculi refer to the formation of solid crystalline deposits within the urinary tract. The management of renal calculi involves both conservative and surgical approaches, depending on the size, location, and composition of the stones. Modern treatment carries certain complications and also is highly expensive which varies with the chosen modality. Modern management can sometimes fail to achieve complete stone clearance, leading to persistent or recurrent stones, and in chronic obstruction cases, it may contribute to renal function decline.

The current case study reveals the effect of *Eladi yoga kwatha* in reducing the size of the renal stone. After 30 days of intake of medicine, the USG report showed evidence of reduction in size renal calculi of size 9.2mm to 3.4mm in the left kidney which showed its effectiveness in disintegration and expulsion of the renal stone.

Eladi yoga kwatha is an authentic formulation having mainly *Mutrala* and *Asmarigna* properties. The

ingredients possess *Vata* and *Kapha samaka* properties thus aiding in reducing the size of renal calculi.

Shilajathu, which has been proven effective for its *Asmarigna* property, is *Kaphahara* in nature and *Eranda thailam* possess *Vatahara* and *Vata anulomana* property.

Definitely this is an easily available, with convenient method of preparation, and cost-effective yoga, with no complications can be advised for the management of renal calculi.

Hence the intervention showed significant reduction in the size of renal calculi, and proved that *Eladi yoga kwatha* is beneficial in the management of Renal calculi.

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