



## Case Study

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### MANAGEMENT OF KALLADAIPPU NOI (UROLITHIASIS) THROUGH SIDDHA MEDICINE: A CASE STUDY

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#### ABSTRACT

In the Siddha System of medicine, Kalladaipu (Renal stones) comes under Neerinai arukal noigal, which means diseases that reduce urinary output. Kalladaipu presents with symptoms like burning micturition, renal and low back pain, urinary obstruction, and the presence of sand-like crystals in the urine, and it is compared with the urolithiasis, which refers to the formation of stones in the kidney, ureter, urinary bladder, or urethra. In Siddha medicine, kalladaipu is generally treated with lithotriptic and diuretic formulations. In this case study, a 69-year-old female patient with 6 mm renal calculus was treated with Neermulli kudineer and Nandukal parpam for four weeks, resulting in the renal calculi's complete expulsion. This case study underscores cost-effective Siddha treatment in expelling renal stones, showcasing synergistic actions leading to the disintegration and elimination of urinary stones providing valuable insights for clinicians in Siddha medicine.

**Keywords:** Kalladaipu, Renal stones, Siddha Medicine, Urolithiasis.

#### INTRODUCTION

Urolithiasis is the formation of stones in the urinary system, which is in the kidney, ureter, urinary bladder or the urethra. 'Urolithiasis = ouron (urine) and lithos (stone). Urolithiasis is one of the major diseases of the urinary tract and is a major source of morbidity.<sup>1</sup> Kidney stones are common, with a prevalence of about 12% worldwide. Their prevalence in India also reflects worldwide prevalence at approximately 12%<sup>2</sup>. The symptoms of kidney stones are related to their location, whether in the kidney, ureter or urinary bladder. Initially, stone formation does not cause any symptoms. Later, signs and symptoms include renal colic, obstructive uropathy, urinary tract infection, blockage of urine flow and hydronephrosis. These conditions may result in nausea and vomiting<sup>3</sup>.

In the Siddha system of medicine, kalladaipu (renal stones) comes under Neerinai Arukal Noigal, which means disease that reduces urinary output. Kalladaipu is equated to urolithiasis. The urinary obstruction, burning micturition, renal pain, low back pain, and tiny sand-like crystals in urine<sup>5</sup> characterize kalladaipu. According to Saint Yugi, it is caused by the intake of impure stagnant water, consuming food altered with sand and small stones, contaminated foods, and increased carbohydrate foods and foods, which increase Vata humor and by controlling semen<sup>4</sup>. Currently, available treatment options for urolithiasis include medical therapy, extracorporeal shock wave lithotripsy, percutaneous-nephrolithotomy and ureteroscopy. Nevertheless, these techniques are not risk-free and quite expensive.

Siddha Medicine describes certain drugs with lithotriptic and diuretic action that successfully treat urolithiasis. There are numerous medicines available for urolithiasis, as mentioned in Siddha literature. This case study highlights Neermulli kudineer and Nandukal Parpam as effective Siddha medicines in treating urolithiasis.

#### CASE HISTORY

A 69-year-old female patient was consulted in Chendur Siddha Clinic, Valasaravakkam, and Chennai, Tamilnadu, India. She came with complaints of intermittent attacks of pain in her lower back with burning micturition for two months. The patient developed the complaints gradually. The patient has a history of Diabetes and Hypertension, and she was under allopathic medication. Her diet history indicated that her food intake was irregular. Her vitals were within normal limits. On examination, tenderness was elicited at the left renal angle, and there was no organomegaly. The patient underwent Computerized Tomography of the kidney, ureter, and bladder on January 5, 2023; the results were tabulated in Table 3. In the Siddha system of medicine, the investigation is made by Envagaitervu (Eightfold system of clinical assessment) based on that naa (tongue examination) - normal, niram (color of the body) - normal, mozhi (speech) - normal, vizhi (eye examination) - normal, malam (motion examination) - normal, moothiram (urine examination) - decreased urine output, nadi (pulse) - Vata-Pitta nadi. with reference to clinical symptoms and investigation, the patient was diagnosed with kalladaipu (urolithiasis).

#### Treatment

The patient was treated with a combination of herb mineral Siddha medicine for four weeks. Symptoms start to reduce within two weeks. The patient was successfully treated and got rid of renal stones. The medications administered to the patient are given in Table 1.

Prescribed medicines and their pharmacological action are mentioned in Table 2.

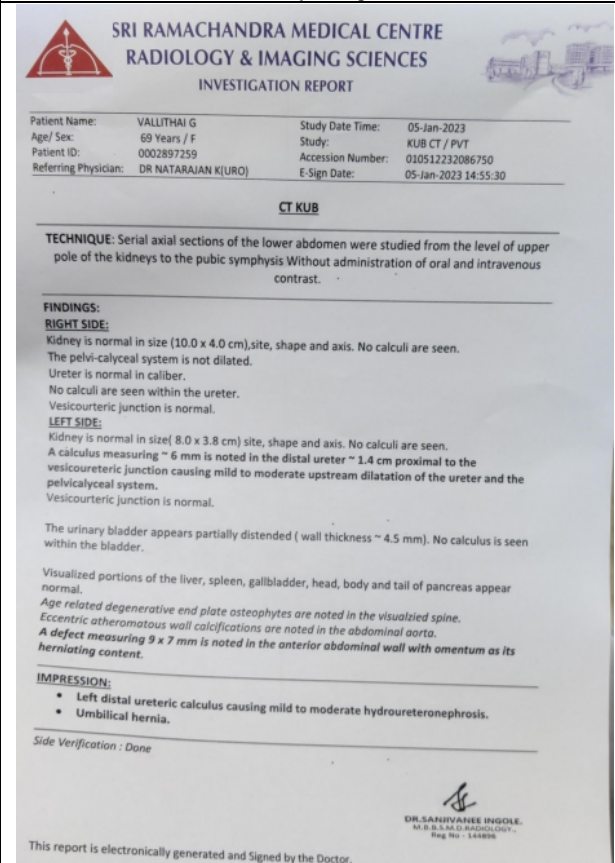
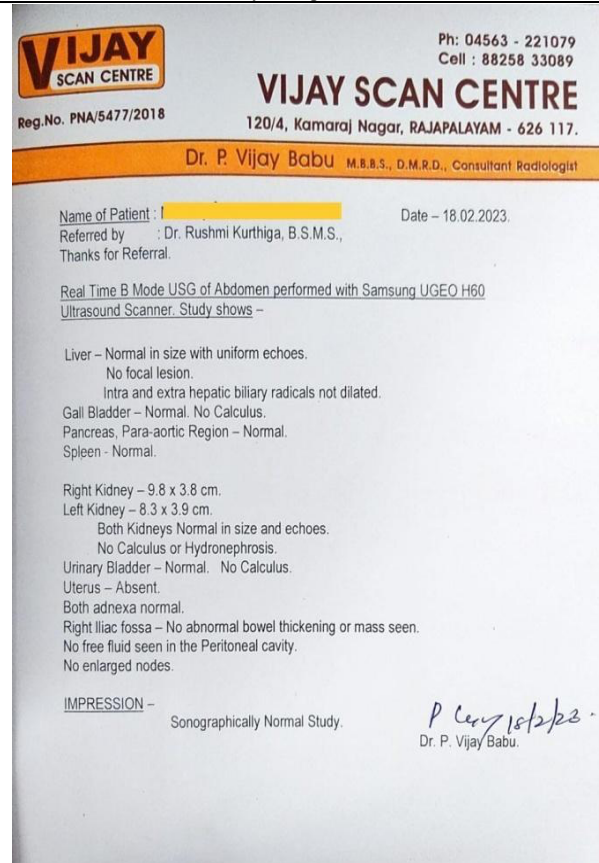
Table 1: Medicine suggested

Name of the Medicine	Dose/Timings	Route	Adjuvant	Duration
Neermulli Kudineer	60 ml/ BD	Oral	-	4 weeks
Nandukkal Parpam	100 mg / BD	Oral	Neermulli Kudineer	4 weeks

Table 2: Medicines and their pharmacological action

Medicines	Pharmacological Action
Neermulli Kudineer	It has anti Urolithiatic activity <sup>6</sup> . It reduces microalbuminuria in Essential Hypertension <sup>7</sup> . Nephroprotective activity <sup>8</sup> , diuretic, hepatoprotective, hematinic, anti-inflammatory, lithotriptic, analgesic, antioxidant, antimicrobial, immunomodulatory, anti-hyperglycemic and lipid-lowering activities. <sup>9</sup>
Nandukkal Parpam	It has diuretic and lithotropic action. <sup>10</sup>

Table 3: Patient results for before and after treatment

Before Treatment	After Treatment
<p>05/01/2023 – CT KUB</p> <p>Left distal ureteral calculus measuring 6 mm in size with mild to moderate Hydronephrosis.</p> 	<p>18/02/2023 - USG Abdomen</p> <p>Both kidneys are normal in size, with No calculus or Hydronephrosis.</p> 

The above drug described in the Siddha system was administered to the patient. During the first follow-up, it was noticed that all the clinical features were moderately reduced, and in the second follow-up, all the clinical features were absent, and she was advised to repeat ultrasonography of the abdomen and pelvis on February 18, 2023, and the results were tabulated in Table 3.

**RESULTS AND DISCUSSION**

Insulin resistance in Diabetes mellitus patients and hypertensive subjects has a greater risk of renal stone formation. The synergistic action of the above drug helps disintegrate and eliminate urinary stones from the ureter as they are kattrugalakki (lithotropic) and neerperuki (diuretic). The result of the clinical study confirms the urolithiatic activity of the given medicine. The reports revealed the total degradation of the renal calculus. It was also observed that the cost of one Neermulli Kudineer and

Nandukkal Parpam one container was INR 185, successfully dissolving Renal calculus without any side effects. Compared with other treatment methods, these Siddha medicines are cost-effective.

**CONCLUSION**

It is concluded that from the observation made in this study, Siddha medicine could be a cost-effective treatment option for combating urolithiasis. However, a larger sample size or a case series is mandatory to substantiate the claim further. The synergistic action of the above drug helps disintegrate and eliminate Urinary stones from the ureter. As they are kattruyagalakki (lithotriptic), Siddha medicine was administered to the patient. During the first follow-up, it was noticed that all the clinical features were moderately reduced, and in the second follow-up, all the clinical features were absent.

**Consent and ethical statement:** The study is carried out as per the International Confers of Harmonization - Good Clinical Practices Guidelines (ICH-GCP) or as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

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