Case Report

Study on the Effect of Naturopathic Diet Plan in the Management of Nephrolithiasis

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ABSTRACT

Nephrolithiasis is a common urological disorder characterized by the formation of calculi in the kidneys or urinary tract. Its increasing prevalence is associated with lifestyle and dietary factors, inadequate fluid intake, and metabolic abnormalities. Kidney stones can cause flank pain and urinary symptoms and may require medical or surgical intervention depending on their size, location, and clinical presentation. Adequate hydration and dietary modification are important components of kidney stone prevention and may influence urinary volume, citrate excretion, and stone-forming potential. Naturopathic dietary interventions have gained interest as complementary approaches to health management; however, evidence supporting their effectiveness in renal stone clearance remains limited. This case report describes the outcome of a supervised naturopathic dietary intervention administered over nine days to a patient with nephrolithiasis. After the intervention, ultrasonography showed no detectable renal calculus, and the patient's flank pain and urinary symptoms improved. No adverse effects were reported. These observations suggest a possible association between supervised naturopathic dietary management and clinical improvement. However, a single case cannot establish treatment efficacy or causation. Further controlled studies with larger populations and longer follow-up are needed to determine the effectiveness and safety of this approach.

Key words: Kidney Calculi, Diet Therapy, Naturopathy, Urolithiasis.

Nephrolithiasis is the most frequent pathological illness affecting the kidney and urinary system; it is also referred to as kidney stone disease. It is a major global healthcare burden, with lifetime prevalence estimates ranging from 7% to 13% in North America and 1% to 5% in Asia. The prevalence of this condition has significantly increased over the past 50 years, crossing age, sex, and cultural lines [1]. Modern lifestyle factors that encourage urine supersaturation and crystal formation, such as dietary practices, obesity, and metabolic syndrome, are strongly associated with this increasing prevalence [2]. Nephrolithiasis can present clinically in a wide range of ways, from the presence of stones without any symptoms to severe, acute symptoms. Renal colic, which is characterized by abrupt, severe flank pain that frequently spreads to the groin due to an acute obstruction of the urinary tract, is the classic sign [3]. Prolonged blockage can cause chronic kidney disease and irreversible renal parenchymal damage if left untreated [4].

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Acute intervention, medicinal expulsive therapy, and surgery are all part of the conventional management of nephrolithiasis. Pain management and hydration are the main goals of first care. Medical expulsive therapy (MET) with alpha-1-blockers is used for smaller ureteral stones, usually less than 10 mm, to relax ureteral smooth muscle and promote spontaneous stone transit [3]. Citric acid, which is found in lemon juice, is believed to stop calcium oxalate stones from forming. Citrate, which can bind to calcium and lessen its capacity to mix with oxalate to form insoluble crystals, is increased in urine by citric acid [5]. Including fruits and vegetables in one's regular diet is a scientifically proven method of preventing kidney stones. The mechanisms include enhanced citrate excretion, urinary alkalinization, and the antioxidant properties of polyphenols, all of which work together to lessen the supersaturation of salts that cause stones [6]. A female patient with urolithiasis, treated with various naturopathic diet plan therapy is discussed in this case report.

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CASE PRESENTATION

A 22-year-old female participant was diagnosed with left renal calculus (nephrolithiasis) and was enrolled in the study after fulfilling the eligibility criteria and providing informed consent. She had left-sided flank pain for 5 days, a burning sensation during urination and increased urinary frequency for 3 days, along with occasional nausea for 2 days. There was no history of high-grade fever, chills, vomiting, or gross hematuria. She reported inadequate water intake of approximately 1–1.5 litres/day, frequent intake of salty and packaged foods, and comparatively low consumption of fruits and vegetables. Abdominal examination revealed mild tenderness over the flank region. There was no significant history of renal stone surgery, chronic kidney disease, diabetes mellitus, or hypertension, and no medications before and during the interventions. On general examination, she was conscious and oriented. Table 1 shows the vital data of the patient. Preoperative ultrasonography (USG) findings: USG of the abdomen and pelvis revealed a 3 mm calculus in the left kidney with minimal left hydroureteronephrosis, possibly secondary to a mid-to-distal ureteric calculus. The urinary bladder was distended. The liver, pancreas, spleen, and kidneys were otherwise reported to have normal echotexture, with no free fluid in the abdomen or pelvis.

Table 1. Pre- intervention vital data of the patient

Sl. No	Parameters	Recorded values
1.	Blood pressure	118/76 mmHg
2.	Pulse rate	78/min
3.	Respiratory rate	16/min
4.	Temperature	98.4°F
5.	Body Mass Index (BMI)	24.8 kg/m²

Intervention

The participant was provided with the prescribed naturopathic dietary intervention for 9 days, including adequate hydration, appropriate dietary modification, reduction of excess salt and processed foods, and lifestyle advice including rest. The intervention consisted of a carefully planned 9-day naturopathic dietary protocol that included boiled diet, raw diet, fruit fasting, and the administration of various therapeutic juices such as lemon juice–eggshell preparation, ash gourd juice, watermelon juice, cucumber juice, tomato juice, coconut water, barley water, and plantain stem juice. These natural dietary components were selected because of their potential to increase hydration, improve urinary alkalinity, enhance urinary citrate excretion, reduce urinary supersaturation, and facilitate the natural passage of renal calculi. The diet plan for the intervention period is given in Tables 2 and 3. Following completion of the intervention, the participant was reassessed for pain intensity, urinary symptoms, hydration status, stone passage/status, and quality of life, and the findings were recorded for comparison with the baseline assessment.

Table 2. Diet plan for days 1, 2, 3, 7, 8 and 9.

Time	Day 1 and 9	Day 2 and 8	Day 3 and 7
7.30 am	Lemon honey juice	Soaked fenugreek water	Ash Gourd juice
9.00 am	Ragi porridge and Buttermilk	Raw vegetable salad	Papaya
11.30 am	Curd rice and Buttermilk	Buttermilk	Watermelon
2.00 pm	Boiled moong dal/ green gram	Sprouts	Guava
4.00 pm	Cucumber slices	Cucumber slices	Muskmelon
7.30 pm	Peanut boiled	Guava	Apple

Table 3. Juice diet given for days 4, 5 and 6

Time	Day 4	Day 5	Day 6
6 am	Lemon juice eggshell-infused tonic (180 ml)	Plantain pith juice (250 ml)	Barley water (250 ml)
7:30 am	Ash gourd Juice with Honey (250 ml)	Ash gourd Juice with Honey (250 ml)	Ash gourd Juice with Honey (250 ml)
10:30 pm	Tomato Juice with Honey (250 ml)	Tomato Juice with Honey (250 ml)	Tomato Juice with Honey (250 ml)
1:30 pm	Watermelon Juice (250 ml)	Watermelon Juice (250 ml)	Watermelon Juice (250 ml)
4:30 pm	Cucumber Juice with Honey (250ml)	Cucumber Juice with Honey (250ml)	Cucumber Juice with Honey (250ml)
7:30 pm	Coconut Water (250ml)	Coconut Water (250ml)	Coconut Water (250ml)

Results

During the intervention period, clinically, the patient experienced complete relief from symptoms including flank pain, urinary discomfort, and burning micturition. No adverse effects were reported throughout the intervention period. The patient's response during the time of intervention is given in Table 4. After completing the naturopathic dietary intervention, repeat USG of the abdomen and pelvis showed normal-sized kidneys with normal echotexture. No renal or ureteric calculi were identified. The urinary bladder was moderately distended and appeared normal. The patient also reported significant improvement in associated symptoms, including relief from flank pain and urinary discomfort. No adverse events or complications were observed during the intervention period. A two-month follow-up evaluation showed no recurrence of symptoms.

Table 4. Patient response during the intervention period.

Days	Intervention Given	Patient Response
Day 1	Boiled diet	Burning while micturition persisted. Tolerated boiled diet well with adequate fluid intake.
Day 2	Raw diet	Slight reduction in urinary burning. Increased urine output observed.
Day 3	Fruit fasting	Reported improved hydration and urinary flow.
Day 4	Juice fasting	Significant increase in urine output. Burning micturition decreased. No worsening of symptoms noted.
Day 5	Juice fasting	Further reduction in urinary discomfort. Patient reported feeling lighter and more comfortable.
Day 6	Juice fasting	Urination became easier with minimal burning sensation. Hydration status maintained.
Day 7	Fruit fasting	Mild residual urinary discomfort only. Patient reported overall symptomatic improvement.
Day 8	Raw diet	Urinary symptoms almost resolved. Normal urine output maintained.
Day 9	Boiled diet	Patient was comfortable with no burning micturition. Significant clinical improvement observed with adequate hydration and dietary compliance.

DISCUSSION:

The present case report was conducted to evaluate the therapeutic effectiveness of a supervised naturopathic dietary intervention in the management of nephrolithiasis.

Citric acid, which is found in lemon juice, is believed to stop calcium oxalate stones from forming. Citrate, which can bind to calcium and lessen its capacity to mix with oxalate to form insoluble crystals, is increased in urine by citric acid [5]. The medicinal effect is further improved by adding eggshell powder (calcium carbonate) to lemon juice. Calcium citrate formed as a result combines with dietary oxalate in the gastrointestinal system, is more soluble and bioavailable than calcium carbonate, and may help lower the absorption of oxalate in the urine. Thus, less oxalate is excreted in the urine, which lowers calcium oxalate supersaturation.

Calcium citrate may further prevent crystal formation and aid in urinary alkalinization. Previous findings indicate that lemon juice–eggshell mixtures may benefit individuals with urinary stone illness, while further controlled clinical trials are required to determine its effectiveness [7]. Watermelon juice, cucumber juice, ash gourd juice, plantain stem juice, barley water, and coconut water in the diet significantly improve urine production and maintain optimum hydration. It's possible that increased diuresis reduces urine stasis and makes it easier for renal calculi to move and be eliminated [8-11]. This case suggests that a supervised naturopathic dietary program may be a safe and non-invasive complementary approach for nephrolithiasis.

This case report is limited by its single-patient design, restricting the generalizability of the findings. Stone composition and urinary biochemical risk factors were not assessed, and the short follow-up period did not allow evaluation of long-term recurrence. Further studies with larger sample sizes, longer follow-up, and comprehensive biochemical assessments are needed to validate the effectiveness of this naturopathic dietary intervention.

CONCLUSION:

This case study showed that naturopathic diet therapy may serve as a supportive complementary approach in the management of nephrolithiasis. Further large-scale clinical studies with long-term follow-up are needed to confirm its effectiveness and role in calculi prevention.

REFERENCES:

1. Bargagli M, Scoglio M, Howles SA, Fuster DG. Kidney stone disease: risk factors, pathophysiology and management. Nature Reviews Nephrology. 2025;21(11):794-808.
2. Sáenz-Medina J, San Román J, Rodríguez-Monsalve M, Durán M, Carballido J, Prieto D, et al. Hospitalization Burden of Patients with Kidney Stones and Metabolic Comorbidities in Spain during the Period 2017–2020. Metabolites [Internet]. 2023;13(4):574.
3. Rahhal N, Ismail A, Alame W. Factors and Cut-Off Predicting Stone Passage under Medical Expulsive Therapy (MET). Open J Urol. 2024;14(8):423–434. doi:10.4236/oju.2024.148045.
4. Hawkins-van Der Cingel G. Ten tips on the work-up and management of CKD patients with nephrolithiasis. Clinical Kidney Journal. 2026;19(1):sfaf353.
5. Pearle, Margaret. Citrate Therapy for Calcium and Uric Acid Stones. 2012; 10.1007/978-1-4471-4387-1_89.
6. Hefer M, Huskic IM, Petrovic A, Raguz-Lucic N, Kizivat T, Gjoni D, et al. A mechanistic insight into beneficial effects of polyphenols in the prevention and treatment of nephrolithiasis: evidence from recent in vitro studies. Crystals. 2023;13(7):1070.
7. Sabar AG. Lithotripsy of Urinary Tract Stones by Using Eggshell. Ibn AL-Haitham Journal For Pure and Applied Science. 2016;24(1).
8. Krishna T, Shetty P, Shetty GB. Effect of ash gourd juice on anthropometric and biochemical variables among healthy volunteers: a cohort study. Int J Adv Res. 2024;12(1):568-577. doi:10.21474/IJAR01/18156.

9. Patel RM, Jiang P, Asplin J, Granja I, Capretz T, Osann K, et al. Coconut water: An unexpected source of urinary citrate. BioMed research international. 2018;2018(1):3061742.
10. Aldarwish HA, Bokhari A, Alshammari MM, Alshammari AS, Alharbi AG, Alsabhan SS, et al. Prevention and management of urolithiasis with Parsley and Barley among the Hail population, Saudi Arabia: is it fact or not?. Cureus. 2024;16(10).
11. Natarajan V, Vishwanath BA, Paranjothy KLK, Chandan S, Shivaraj K. Antinephrolithiatic effect of plantain juice from *Musa paradisiaca* stem on ethylene glycol-induced renal calculus in experimental Wistar rats. J Pharmacol Toxicol. 2023;18:98-103. doi:10.3923/jpt.2023.98.103.

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