



WWW.IJAPC.COM

IJAPC

e ISSN 2350 0204

VOLUME 12 ISSUE 1 2020

GREENTREE GROUP PUBLISHERS (GGP)



Seeds of the Plant *Ensete superbum* (Roxb.) Cheesman as a Potential Remedy in *Mutrashmari*: A Case Study

Sriwidya Bharati^{1*} and Swapna Bhat²

^{1,2}Department of PG studies in Dravyaguna, Karnataka Ayurveda Medical College, Mangalore, KA, India

ABSTRACT

With the present day trend of consumption of spicy, fast food and having a sedentary lifestyle, there has been increase in the incidences of urinary tract disorders, namely Urinary Calculi. The process of formation of urinary calculus is termed as urolithiasis. This condition can be correlated to *mutrashmari* which has been well identified and explained in detail by *acharyas* in Ayurveda. The folklore practitioners of Kerala and Tamilnadu region make use of seeds of the plant *Ensete superbum* to facilitate the expulsion of urinary calculi. *Ensete superbum* is a species of banana which can be found in Western Ghats and is commonly called as rock banana, cliff banana or wild plantain. In this case study, effect of *Ensete superbum* seeds in the management of *mutrashmari* has been clinically elicited. A 48 year old male patient approached to the OPD of Karnataka Ayurveda Medical Hospital, Mangalore; presenting with signs and symptoms of *mutrashmari*. Diagnosis was confirmed by ultrasonography test. Patient was asked to consume the powder obtained from 3 crushed seeds of *Ensete superbum* along with milk, in morning empty stomach and in the evening for the duration of 10 days. The patient felt significant improvement in symptoms within 10 days and also noticed the expulsion of calculi with the urine passage. The seeds of the plant - *Ensete superbum* prove to be a potent drug for *Ashmari bhedana* & *nirharana* activity.

KEYWORDS

Mutrashmari, *Urinary Calculi*, *Ensete superbum*, *Giri kadali*, *Kallu baale*



Greentree Group Publishers

Received 13/12/19 Accepted 04/01/19 Published 10/01/2020



INTRODUCTION

The term urolithiasis is used to depict the process of formation of urinary calculi. Urinary calculus or stone can be defined as an abnormal concretion in the urinary tract, usually composed of mineral salts¹. *Acharya Charaka* has compared the occurrence of *ashmari* to gall stone arising in cow's bile². According to *Acharya Sushruta*, in persons indulging in *apathya ahara-vihaara*, and do not undergoing *shodhana* in order to normalize the vitiated *dosha*, there can be formation of *ashmari* in *mutravaha srotas* due to aggravated *kapha dosha* as *samavaya karana*³. Based on the involvement of *dosha*, it is classified into four types – Vataja, Pittaja, Kaphaja and Shukraja. When the stone gets broken into smaller particles due to *vata dosha* and moves down the urinary tract, it is called as *Sharkara*⁴.

India has vast treasure of folklore knowledge. The seeds of the plant *Ensete superbum* belonging to the family Musaceae, has been utilized by the folklore practitioners of Kerala and Tamilnadu in case of urinary calculi⁵. It is endemic to the Western Ghats, Aravalli Ranges and North-Eastern hills of India. Raja Nighantu mentions about *kadali vishesha* where *kashta kadali* and *giri kadali* are given synonyms indicating that it grows in hilly

forest region and has multiple stone like seeds⁶. Hence it can be correlated to the plant *Ensete superbum*. The seeds are black in colour and has a white powdery endosperm⁷, as shown in Figure 2.



Figure 2 *Ensete superbum* seeds

The vernacular names of the plant *Ensete superbum* are:

- English: Wild banana, Cliff banana, Rock banana.
- Hindi: Rankela
- Kannada: Kallu bale
- Malayalam: Kalluvazha
- Tamil: Kalluvazhai

Aims and Objectives of the study: To elicit mutashmari bhedana & nirharana activity of seeds of a folklore plant - *Ensete superbum* (Roxb.) Cheesman.

MATERIALS AND METHODS

Collection of the drug: The seeds of the plant *Ensete superbum* were collected from the Medicinal Garden of Pilikula Nisargadhama, Vamanjoor, Mangalore, Karnataka State.

Case Report: A male patient aged 48 years visited OPD of Karnataka Ayurveda Medical Hospital, Mangalore on 14th June 2019 with complaints of spasmodic pain on



right side of abdomen, radiating pain from loin to groin region since 1 month & pain during micturition since 2 weeks.

History of present illness: The patient was apparently normal before one month. Then he started to have intermittent episodes of severe pain of sudden onset, in right side abdomen and back region which was of radiating type from loin to groin region. He noticed that the pain aggravated during walking and when he travelled by bike. He also developed nausea and pain during micturition since 2 weeks. With these complaints he approached to the OPD of Karnataka Ayurveda Medical Hospital on 14th June 2019, seeking ayurvedic treatment for the same.

History of past illness: There is no history of hypertension, diabetes mellitus or any other systemic illness.

Treatment History: Patient had taken few painkiller tablets for the above complaints, but it did not give permanent relief from the symptoms and hence sought Ayurvedic treatment.

Socio Economic History: Patient belonged to upper middle class family.

Occupational History: Patient works at construction sites and is exposed to sunlight from morning to evening.

Family History: There is no history of similar illness in any of the family members.

Personal History:

Diet: Mixed. More intake of spicy food

Appetite: Reduced

Micturition: 3-4 times per day. Pain during micturition since 1 week

Bowel: Once a day

Sleep: Sound

Habits: No habit of smoking or alcohol intake

General Examination:

Consciousness: Patient is conscious

Built: Well built

Nourishment: Well nourished

Vitals:

Pulse Rate: 77/min

Respiratory Rate: 18/min

B.P: 130/90 mm of Hg

Temp: 98.5° F

Systemic Examination: No abnormality was detected on examination of Respiratory System, Cardiovascular System, Central Nervous System and Motor System. In Per Abdominal Examination, patient had slight tenderness in the region of right iliac region.

Diagnostic Test:

- Routine hematological and urine examination reports were within normal limits.

- Report of USG Abdomen done on 14th June 2019 revealed the presence of a calculus measuring 5mm in the inter polar calyx of the right kidney. Mild



hydronephrosis is noted on the right side. A calculus measuring 7mm is noted in the right vesico ureteric junction. Few calculi (2-3) are noted in the left kidney measuring about 4-5mm in size. No hydronephrosis in the left side.

Treatment Given: Three seeds of *Ensete superbum* to be crushed and the white coloured powder obtained is to be consumed along with half a glass of milk as *anupana* twice a day, in morning empty stomach and in the evening, for duration of 10 days. Patient was advised to consume adequate amount of water and reduce intake of spicy food.

RESULTS

The symptoms were graded as shown in Table 1.

Table 1 Grading Criteria

Symptoms	Grade 0	Grade 1	Grade 2	Grade 3
Pain	No	Mild	Moderate	Severe
Abdomen	Pain	Pain	Pain	Pain
Pain during micturition	No	Mild	Moderate	Severe
	Pain	Pain	Pain	Pain

Table 3 USG Report before and after the treatment

USG Report	Before Treatment	After Treatment
Kidney-Ureter-Bladder Right Side	A calculus measuring 5mm in the inter polar calyx. Mild hydronephrosis. A calculus measuring 7mm is noted in the right vesico-ureteric junction.	No calculi or hydronephrosis.
Kidney-Ureter-Bladder Left Side	Few calculi (2-3) measuring about 4-5mm in size. No hydronephrosis.	A calculus measuring 3mm is noted in the mid pole.

DISCUSSION

The drug is found to be effective in disintegrating the stone and dislodge it

Patient reported subside in symptoms, within 3 days of treatment, as shown in table 2.

Table 2 Assessment of Symptoms

Symptoms	Day 1	Day 3	Day 10	Day 30
Pain	Grade	Grade	Grade	Grade
Abdomen	3	1	0	0
Pain during micturition	Grade	Grade	Grade	Grade
	2	1	0	0

On the 3rd day, patient noticed spontaneous expulsion of a stone particle with passage of urine, and it measured about 5mm, as shown in Figure 1.



Figure 1 Stone particle expelled

It was brownish yellow in colour and had irregular surface. Patient experienced moderate pain and also noticed slight amount of gross hematuria during expulsion of stone particle. USG Abdomen was repeated after 1 month and the report is shown in Table 3.

leading to passage with urine. It is easily available, cost effective, palatable and has no side effects. The patient had developed



pittaja ashmari due to *pitta vardhaka ahara* and *vihaara*. The *beeja churna* of *Ensete superbum* prove to have *pitta shamaka* property.

CONCLUSION

There has to be constant effort to explore the therapeutic utility of the folklore drugs since it may prove to be a huge benefit to the mankind. The seeds of *Ensete superbum* proves to be a potent drug having *ashmari bhedana* and *ashmari nirharana* action. Further clinical evaluation is to be carried out in more number of patients to emphasize its efficacy.



REFERENCES

1. Dorland, W.A.N.1. (2012). Dorland's illustrated medical dictionary (32nd ed.). Philadelphia, PA: Saunders/Elsevier, 271.
2. Agnivesha. (2010). Caraka Samhita, revised by Caraka and Dridabala with the Ayurveda Dipika Commentary of Chakrapanidutta, edited by Yadavji Trikamji Acharya, Varanasi: Chaukambha Krishnadas Academy, 599.
3. Sushruta. (2014). Sushruta Samhita, with Nibandhasangraha Commentary of Dalhanacharya, edited by Yadavji Trikamji Acharya, Varanasi: Chaukambha Surbharati Prakashan, 277.
4. Sushruta. (2014). Sushruta Samhita, with Nibandhasangraha Commentary of Dalhanacharya, edited by Yadavji Trikamji Acharya, Varanasi: Chaukambha Surbharati Prakashan, 279.
5. Vasundharan SK, Jaishanker RN, Annamalai A, & Sooraj NP. (2015). Ethnobotany and distribution status of Ensete superbum(roxb.) Cheesman in India: A geo-spatial review. J Ayu Herb Med, 1(2), 54-58.
6. Pandit Narahari. (2010). Raja Nighantu, edited with Dravyagunaprakashika Hindi Commentary by Tripathi Indradeva, Varanasi: Chaukhamba Krishnadas Academy, 347-348.
7. Saroj KV, Jaishanker R, Annamalai A, & Sunil KKN. (2013). Investigation into the pharmacognostical and phytochemical features of seeds of Ensete superbum (Roxb.) Cheesman: An unexplored medicinal plant of India. Pharmacognosy Journal, 5, 163-169.