



Efficacy of Unani Formulations Majoon Aqrab and Sharbat Alu Balu in the Management of Nephrolithiasis

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Abstract

The present study was carried out to evaluate the efficacy of Majoon Aqrab and Sharbat Alu Balu in nephrolithiasis. It was an open non-comparative clinical study. 30 patients of both sexes in different age groups were included in this study. A thorough history was taken and clinical examination on baseline and during follow ups were done. Abdominal radio imaging (KUB) and ultrasound were also done at the baseline and at the time of completion of therapy. There was improvement in all symptoms with reduction of size of stones and also disappearance of stones were noted. Therefore it was seen that it is clinically safe in the management of nephrolithiasis.

Keywords: Unani medicine, Majoon Aqrab, Sharbat Alu Balu, Nephrolithiasis.

Introduction

Nephrolithiasis or urinary stone formation is one of the most common health problem worldwide with a prevalence rate of 15% and in India about 2.3% population suffer from this disease. It occurs in both the sexes at all the ages but commonly in the 3rd and 4th decades, renal stone is probably little more frequent in men than women, children tend to get vesicle calculi in situations where they are malnourished, if neglected it can cause obstructive uropathy, sepsis, and renal failure. The cause of stone formation depends on urinary volume, concentration of oxalate, calcium, phosphorus and uric acid in the urine. Infecting organisms such as proteus pseudomonas and klebsella produce recurrent urinary tract infection and these organisms produce urea and cause stasis of urine which precipitates stone formation, other factors also plays an important role in it like dietary and hereditary etc¹.

As per Unani concept, the cause of this disease is abnormal humors and the body excretes the abnormal humor in the form of viscid fluid which moves towards the kidneys and form crests that cause the stone formation. Recurrence of stone formation is common². The main clinical features are loin to groin colicky pain associated with nausea and vomiting and Hematuria³. The principles of management of Renal calculi in Unani medicine is mainly through diuretic and lithotriptic (crushing) drugs to make morbid and abnormal humors easily extractible from the body mainly through the excretory system².

In view of growing incidence of disease and its complications despite the newer drugs at present, there is no successful treatment available. So this study was being planned to evaluate the clinical efficacy of Majoon Aqrab and Sharbat Alu Balu in the patients of renal calculi.

Material and methods

The present study was carried out at Regional Research Institute of Unani Medicine, Hazratbal, Srinagar (J and K), India, 30 patients of renal calculus who fulfilling the inclusion criteria (Subjective parameters –flank pain, burning micturition, dysuria, tenderness at renal angle and Objective parameters - USG determines size, consistency and location of calculus) were included in this study after obtaining informed consent from them. Patients with radiological evidence of hydronephrosis (grade 3 or above) were excluded from study. Patients were given one tsf of Majoon Aqrab and 3 tsf of Sharbat Alu Balu with glass of water twice day as per protocol for three months. After taking thorough history, all the patients were subjected to investigations like urine, hematological, biochemical and radiological on baseline and every 15 days followups were done for three months. Patients were evaluated and monitored for improvement or deterioration of symptom. Patients had undergone investigation at the time of recruitment and at the end of three months. Clinical improvement with radiological evidence of reduction and absence of calculus or history of passage of stone in urine was taken as criteria for improvement. The composition of the Majoon Aqrab and Sharbat Alu Balu are shown in table-1 and 2.

Inclusive criteria: Age: 20 to 60 years. Sex: Both. Clinical evidence and /or sonological evidence of the renal calculi. Patient who are ready to sign informed consent, follow the protocol and willing to participate in clinical study voluntarily.

Exclusive criteria: Patient having renal insufficiency. Hydronephrosis. Calculus pyelonephrosis. Renal calculi with hypertension. Patient not following the informed criteria.

Table-1
Composition of Majoon Aqrab

S. No.	Ingredients
1.	<i>Zingiber officinale</i> (Zanjbil)
2.	Scorpion (Aqrab Mohraq)
3.	<i>Piper nigrum</i> (Filfil Safed)
4.	<i>Piper nigrum</i> (Filfil Siah)
5.	Castoreum (Jund Bedastar)
6.	<i>Gentiana lutea</i> (Juntiyana)
7.	<i>Physalis alkekengi</i> (Kaknaj)
8.	Sugar (Qand Safed)

Table-2
Composition of Sharbat Alu Balu

S. No.	Ingredients
1.	<i>Prunus cerasus</i> (Alu Balu)
2.	Sugar (Qand Safed)

Results and Discussion

A total of 30 patients were enrolled and followed for a period of three months. 1tsf of Majoon Aqrab and 3 tsf of Sharbat Alu Balu were given twice daily as per study protocol. Out of the 30 patients 13 (43.4%) were males, 17 (56.6%) were females and 16 (53.3%) were married, 14 (46.7%) were unmarried. The age ranged from 20 to 60 years as indicated below in figure-1 and 2.

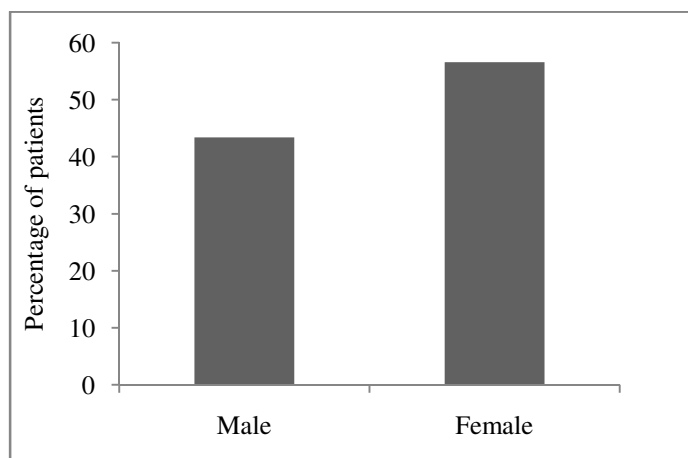


Figure-1

Sex wise distribution of 30 patients of nephrolithiasis, the maximum numbers of patients i.e. 56.6 % were females while rest of the patients i.e. 43.4 % were males

It was found that maximum number of patients i.e. 50% belonged to age group of 31 – 40 years, while 13.33% patients belonged to 21 – 30years and 41 – 50 years of age group each, and 6.66% of patients belonged to 51 – 60 and 0 % in above 60 years of age group (figure-2).

After completion of the study for three months, its effect on the clinical features was observed as presented in figure- 3. The formulation provided highly significant relief in pain (76.9%).

Effect was statistically significant in dysuria (76 %), fever (100%) and haematuria (100%).

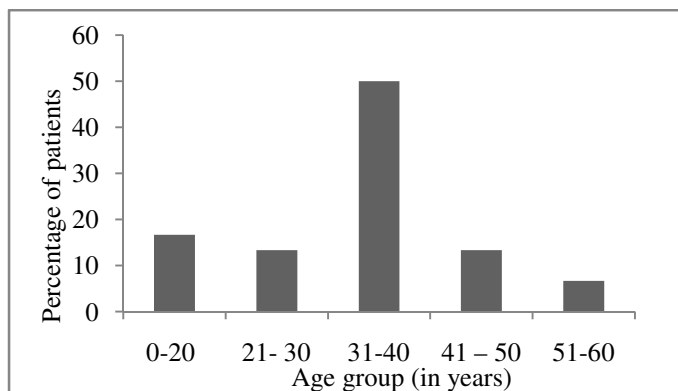


Figure-2

Age wise distribution of 30 patients of nephrolithiasis

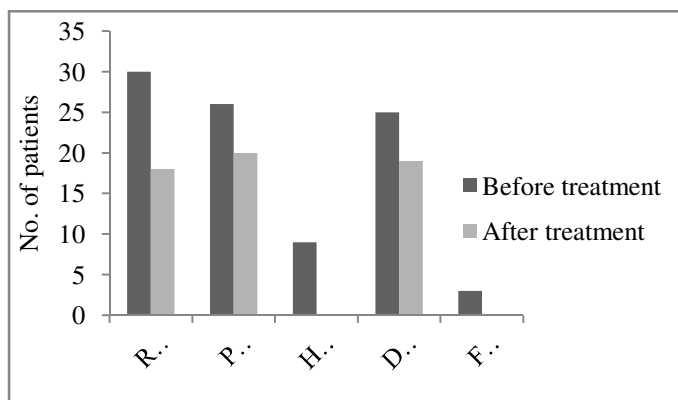


Figure-3

Effect of the formulations on the clinical features in patients of nephrolithiasis

It has been observed that 16 patients with renal stones >0.5 mm in size, 11 Expelled out, 05 decreased in size after the completion of the therapy. In patients with >0.5 mm renal stones group, it has been observed that out of 14 patients, 07 expelled out, 04 decreased in size and in remaining 03 Stone no change was observed after the completion of the therapy (table-3). Some patients were having more than one stone at different sites.

Table-3
Effect of the formulations on renal stones in patients

Size of renal stone (Diameter)	No. of patients before treatment	No. of patients after treatment
< 0.5 mm	16	EXP-11 DS-05
>0.5 mm	14	EXP-07 DS-04 NC-03

*Exp.: Expelled; DS: Decrease in size; NC: No change

Nephrolithiasis has been found unexpected in many forms throughout world and is popular in day to day practice of urological departments. So for this purpose it is needed that to overcome this problem the diagnosis and treatment for nephrolithiasis may be changed. There are number of single herbs and compound formulations which have beneficial effects in renal calculi. However to emphasize the cost effective therapy in renal calculi the Majoon Aqrab and Sharbat Alu Balu were given to renal calculi patients. Majoon Aqrab acts as diuretic, lithotropic and Sharbat Alu Balu acts as a diuretic, it regulates urine out-put and provides soothing effect. Other studies have indicated the pharmacological activities of the ingredients of Majoon Aqrab and Sharbat Alu Balu. *Zingiber officinale* has been reported to show antioxidant⁴, antiemetic⁵, anti-inflammatory⁶, antiarthritic⁷ and immunomodulatory⁸ activities. The antiurolithiatic and antioxidant potential of ethanolic extract of *Zingiber officinale* has also been evaluated in ethylene glycol-induced urolithiasis using male Wistar albino rats by Lakshmi and Divya (2014)⁹. Whole scorpion used in the form of ash. It dissolves and expels stones very fast¹⁰. Scorpion and its venom have been used as traditional and folk therapy in various pathophysiological conditions that has been mentioned in folk and traditional medicines of India, China, Africa and Cuba¹¹. *Piper nigrum* and its active constituent piperine possesses diverse pharmacological activities like antibacterial¹², anticancer¹³, antioxidant¹⁴, anti-inflammatory, antinociceptive, antiarthritic¹⁵ and immunomodulatory¹⁶. Saha and Verma (2014) demonstrated extract of *P. nigrum* fruits has a protective role in sodium oxalate induced oxidative stress in rat kidney¹⁷. Castoreum is the exudates from the castor sac of the mature castor canadensis and castorfiber. It is a yellowish secretion of the castor sac. Castor sacs are a type of a scent gland. It is used to treat many different ailments like headache, fever, hysteria, bronchial asthma. It is also used in high blood pressure anxiety¹⁸. *Gentiana lutea* exhibits antioxidant¹⁹, anti-inflammatory²⁰ and hepatoprotective²¹ activities. Investigations conducted on *Physalis alkekengi* show that the plant has wide and diverse biological activities including analgesic²², antimicrobial²³, antioxidant²⁴, antineoplastic²⁵, anti-inflammatory²⁶, antispasmodic²⁷ and antifertility²⁸ effects. *P. alkekengi* is also used in kidney and bladder stone, febrile disease, inflammation, constipation, general edema, arthritis and rheumatism²⁹. *Prunus cerasus* has been reported to show antioxidant and anti-glycation³⁰, reduction in symptoms associated with gout³¹, analgesic³² properties. Phytochemicals present in *P. cerasus* have antioxidant and anti-inflammatory activities³³.

The present study clearly shows that Majoon Aqrab and Sharbat Alu Balu a polyherbal products is safe and effective in not only reducing the size of stones but is also effective in eliminating the stones. About 60% patients treated with Majoon Aqrab and Sharbat Alu Balu passed stones within the treatment period and became symptom free.

Conclusion

The results of the study taking in consideration, it is concluded that Majoon Aqrab and Sharbat Alu Balu are effective in nephrolithiasis particularly in symptoms such as flank pain, dysuria and hematuria.

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