EFFICACY OF ANANDA YOGA CHURNA IN THE MANAGEMENT OF MOOTRASHMARI (UROLITHIASIS) - A CLINICAL STUDY

Tiwari Yati1*, Prasad Kamleshwar2, Singh Madhu3

1Lecturer, dept. of Shalya Tantra, J.D. Ayurvedic Medical College & Hospital, GT Road, Bhankari, Aligarh.
2Reader, Dept. of Rog & Vikriti Vigyan J.D. Ayurvedic Medical College & Hospital, GT Road, Bhankari, Aligarh.
3Ex. Assistant Professor, Dept. of Pharmacy, Aligarh College of pharmacy, Aligarh, U.P. India.

ABSTRACT
According to modern science, the formation of stone in urinary system is one of the main problems of urology. The cause and mechanism of their formation is still uncertain. On one hand surprisingly stone does not always form when such factors are present and on the other hand stones may develop when factors are apparently absent too. Treatment of calculi in modern science is only surgery and very less medicines are available for this purpose. After surgery, the probability of reoccurrence of calculi is same as previously, so it is negative aspect of this science. But in ancient medical, after treatment and removal of stone, the chances of recurrence are rarely occurs. In this research work, subjective symptoms like pain, burning micturiton, haematuria, dysurea, tenderness and fever are reduced very significantly and their recurrence does not occurs during trial of drug. Maximum patients belong to the category of renal and ureter calculi and efficacy of drug are also maximum observe on renal and as well as ureter. On the basis of size of calculi i.e. 6 mm to >10 mm, the efficacy of drug are also observed and result exhibited as 66 percent to 100 percent. So, the overall result in this research work is that, 72 % patients are cured, 20% patients are improved and only 8% patients are unchanged. Hence, the classical medicine Anand yoga churna for Mutrashmari is best the medicine because its efficacy is very significant on both subjective and objective parameters, cast effective, easy availability and also removed the negative aspect of modern medical science i.e. recurrence of calculi.

KEYWORDS: Mootrashmari, Urolithiasis, Anand Yoga Churna, Vatika, Paitik and Shlishmika.

INTRODUCTION
Thousands of years ago, scientist of ancient medical identified the disease urolithiasis and named it as Ashmari has been derived from the “Ashman" Sanskrit word which literally means a structure resembling stone. Thus in this disease, there is development of a calculus, a foreign body in the urinary system including kidney, ureter and bladder. However, urinary calculogenesis is not a simple process. Many theories have been put forth in relation to urinary stone formation like supersaturated solution, hyperparathyroidism and retinol deficiency in contemporary science. But, the pathogenesis of urolithiasis is described in ancient science is resemble with the supersaturated solution theory of modern medical science. Because, when dries up of urine (super saturation of urine) by Vayu, the Asmari (calculus) arise gradually in urinary system and gall bladder like Gorochan in cow. But another theory in Ayurveda narrated that in those who do not observe proper cleansing procedures and in those who are indiscrimate regarding their dietary habits, the Sleshma gets aggravated and mixed with urine enters the urinary bladder and there in it produce calculi.

Classification and kind of urinary calculi is based on its chemical constitution and their morphology, so four types of urinary calculi are described in contemporary science i.e. calcium calculus, uric acid calculus, cystine calculus and mixed calculus. Similarly, in Ayurvedic text, same types of calculi are described i.e. Vatika, Paitika, Shlaishmika and Shukraja. They may be correlated with calculi of modern medical science on the behalf of morphology of calculus and clinical presentation during aggravation of disease. The Vatika, Paitika and Shlaishmika ashmari may be similar to calcium oxalate, uric acid and urate, and phosphate calculi respectively. The drug Anand yoga churna is classical medicine and described in Ayurvedic text Bhaishajyaratnawali and indicated for Mootrashmari.

MATERIALS AND METHODS
Selection of patients
On the basis of inclusion and exclusion criteria On the basis of inclusion criteria, 32 patients of Urolithiasis were registered from O.P.D. & I.P.D. of Shri J.G.C.H. society’s and Ayurvedic medical college hospital, Ghataprabha, who were clinically found appropriate for clinical study.

Inclusion criteria
• All patients with clinical manifestation Patients presenting with symptoms and signs of Mootrashmari (Urolithiasis), confirmed radiologically.
• Age between 20 to 50 years.
• Patients of either sex will be selected.
• Patients with renal calculi of more than 6.0 mm will be a part of the study.

Exclusion criteria
• Age below 20 and above 50 years
• Stag horn Renal stone
Hydronephrosis
Pyelonephritis
Diabetes mellitus
Malignancy
Chronic renal failure
Severe UTI or any other infection
Calculation associated with complications.
Those of more than 8mm embedded in the ureter are excluded
Any other systemic disease like hyperparathyroidism, Gout etc. which requires systemic treatment and influence the outcome of the treatment.

Discontinuous criteria
A non cooperative patient.
Whose symptoms were aggravated?
Who developed hypersensitivity for any constituents of trial medicine?

Assessment criteria
Assessment of the effect of therapy was done on the following parameters.

Subjective parameters
Assessment for any improvement in various clinical features of urolithiasis was done once in a week for 1 month followed by once in 15 days for next 2 months or till the stone is expelled whichever is earlier on the basis of grade scoring methods.

Symptoms rating score of urolithiasis

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Severity of symptoms</th>
<th>Score</th>
<th>Scoring symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Absent</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Mild</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>3.</td>
<td>Moderate</td>
<td>2</td>
<td>++</td>
</tr>
<tr>
<td>4.</td>
<td>Severe</td>
<td>3</td>
<td>+++</td>
</tr>
</tbody>
</table>

Objective parameters
Plain X-ray abdomen
USG of abdomen and pelvis
IVP in cases where the stone could not be picked up in USG but clinically evident
Routine examination of urine

Drug delivery and duration

Ingredients of drug
1. Apamarga (Acharanthis aspera linn.)
2. Palasha (Butea monosperma)
3. Tila Panchanga (Sesamum indicum)
4. Kadali (Musa paradisiaca)
5. Amalaki (Emblica officinalis gaertn.)

Bhavana dravya - Ajja mutra
Out of total 25 registered patients only 20 patients completed their trial. Study was carried out under single group.

The Ananda yoga churna was constituted according to Churna preparation method in Rasa-Shastra pharmacy of Shri j.G.C.H. society’s and Ayurvedic medical college hospital, Ghataprabha.

Dose: Anand Yoga Churna, 250 mg morning and evening.
Anupana: Luke warm water
Course: 3 Months
Route of drug: Oral
Follow up: Patients had followed up once in a week for 1 month and followed by once in 15 days for next 2 months or till the stone is expelled whichever is earlier.

Data documentation and statistical analysis
It was a clinical study under single blind test and its all data were analyzed using appropriate statistical tests. All values of quantitative variables are expressed as percentage.

RESULT AND DISCUSSION

Table 1: Showing the efficacy of drug on subjective parameters

<table>
<thead>
<tr>
<th>Symptom</th>
<th>No. of Pts</th>
<th>Day 7</th>
<th>Day 15</th>
<th>Day 30</th>
<th>Day 60</th>
<th>Day 90</th>
<th>Efficacy in percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>18</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>88.88</td>
</tr>
<tr>
<td>Burning micturition</td>
<td>15</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Haematuria</td>
<td>06</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Dysuria</td>
<td>05</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Nausea</td>
<td>06</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Tenderness</td>
<td>04</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td>Fever</td>
<td>08</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 1 and Graph 1 are showing the excellent relief in all the symptoms in all the patients. 88.88%, 100%, 100%, 100%, 100%, and 75% relief was observed in pain, burning micturition, haematuria, dysuria, nausea, tenderness and fever respectively.

Table 2: Showing the efficacy of drug according to site of calculus

<table>
<thead>
<tr>
<th>Site of the Calculus</th>
<th>Before Treatment</th>
<th>After treatment</th>
<th>% of efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal</td>
<td>17</td>
<td>07</td>
<td>58%</td>
</tr>
<tr>
<td>Ureter</td>
<td>8</td>
<td>00</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>07</td>
<td>72%</td>
</tr>
</tbody>
</table>

Table 2 and Graph 2 are showing the result and efficacy of drug according to site of calculus it was observed that 17 stones had renal and 8 had ureteric calculus. After the treatment 10 (58%) are expelled from renal and all 8 (100%) were expelled from ureter. As a whole out of 25 stones only 7 stone were found.

Table 3: Showing the efficacy of drug according to the size of calculi

<table>
<thead>
<tr>
<th>Size of calculi</th>
<th>No. of Calculi</th>
<th>Expelled</th>
<th>Reduction in the size</th>
<th>No change</th>
<th>Efficacy in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mm</td>
<td>8</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>7 mm</td>
<td>8</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>8 mm</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>9 mm</td>
<td>3</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>66.66</td>
</tr>
<tr>
<td>&gt; 10 mm</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>00</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 and Graph 3 are showing the result and efficacy of drug according to size of calculus. It was found that lower the size of stone have higher efficacy and vice versa.

![Graph 3: Efficacy of drug according to size of calculi](image)

### Table 3: Showing the overall efficacy of drug

<table>
<thead>
<tr>
<th>Effect of therapy</th>
<th>No. of Calculi (Total =25)</th>
<th>Efficacy in percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cured</td>
<td>18</td>
<td>72%</td>
</tr>
<tr>
<td>Improved</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>Unchanged</td>
<td>2</td>
<td>8%</td>
</tr>
</tbody>
</table>

Before the treatment it was observed that 12 patients had renal and 03 had ureteric calculus and 05 patients had both. After the treatment 13 (65%) patients are free from renal calculus and 02 (66%) were free from ureteric calculus. As a hole out of 20 patient 14 patients (46.66%) were free from calculi. In multiple calculi out of 06 patients 2 patients got free from calculus and in 3 patients smaller stone expelled out and larger one are found to reduce in their sizes, and in one patient one stone is expelled out and another stone become enlarged in its size.

### CONCLUSION

Anand yoga churna with lukewarm water was extremely significantly effective in improving the symptoms of pain, haematuria, dysuria, fever, burning micturition, nausea and highly improvement in radiological finding like size of calculus. The therapy was well tolerated by all patients and no unwanted effect was reported during the trial period. Hence the drug trial is safe, easy available and cost effective and can be recommended to the patients of Mootrashmari.

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### REFERENCES


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*Address for correspondence*
Dr. Tiwari Yati
Lecturer Dept. of Shalya Tantra, J.D. Ayurvedic Medical College & Hospital, GT Road, Bhankari, Aligarh, India.
Email: yati_tiwari@yahoo.com
Contact: 08445733813