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Gokshura Kashaya Bladder Wash in the management of Mutrakruchra with special reference to Urinary Tract Infection : A Case Study

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ABSTRACT

Urinary tract infection is a common disorder accounting for 1-3% of consultation in general medical practice. Urinary tract infection is a term used to describe Acute urethritis and Cystitis caused by microorganism. In Ayurveda, the disease *Mutrakruchra* is mentioned in almost all classical texts with different signs, symptoms and treatment modalities, reflecting its prevalence in ancient period, which can be correlated to urinary tract infection. *Acharya Sushruta* has explained the treatment of *Mutrakruchra* in detail by mentioning various internal medications, *Anuvasana* and *Uttara Basti*. Numerous studies are done in the management of *Mutrakruchra* with the internal medication. Here a preliminary attempt to study the effect of bladder wash with *Gokshura Kashaya* in the management of the same was taken for the study.

Key words: Bladder Wash, Cystitis, Gokshurakashaya, Mutrakruchra, Urinary Tract Infection.

INTRODUCTION

The term *Mutrakruchra* originates from two words - *Mutra* and *Kruchra* and is self-explanatory. The word *Mutra* is derived from 'Prasava' means to ooze. The word 'Kruchra' is derived from 'Kashte' means causing trouble or painful. Difficulty or painful micturition is called as *Mutrakruchra*. "*Dukhena Mutra Pravritti*" is the classical feature described in our classics, which is referred as any discomfort during micturition or specifically "The painful voiding of urine. Urinary tract infection is a term used to describe Acute urethritis and

Cystitis caused by microorganism. It is a common disorder accounting for 1-3 % of consultation in general medical practice.^[1]

Typical features of cystitis and urethritis includes^[2]

- Abrupt onset of frequency of micturition and urgency
- Dysuria
- Suprapubic pain during and after voiding
- Strangury (~intense desire to pass urine after micturition, due to spasm of the inflamed bladder wall)
- Urine may appear cloudy and have unpleasant odour
- Microscopic or visible haematuria.

Long-term or frequent use of antibiotics may be harmful and moreover, with rapidly emerging resistance to antibiotics it is becoming increasingly difficult to treat the infection. Use of systemic antibiotics also places patients at risk for drug toxicities and adverse reaction.^[3] With this aspect need of an alternate therapy is essential.

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In Ayurveda, Acharyas have mention *Uttara Basti* as one among the *Chikithsa* of *Mutrakruetra*.^[4] Even though in the classics there is no direct explanation of bladder wash, a modified method of *Uttara Basti* for the bladder wash was taken for this study.

The choice of the drug *Gokshura* was done on the basis of its properties like *Basti Shodhaka*, *Krimighna*, *Shotahara*, *Mutravirechaniya* etc.^[5] Acharya Charaka has mentioned *Gokshura* as an *Agrya Dravya* for *Mutrakruetra*.^[6] And also, Few studies have shown *Gokshura* to have Anti-inflammatory and Anti-Bacterial properties.^[7] Numerous studies are done in the management of *Mutrakruetra* with the internal medications but the lesser bioavailability of the drug through oral administration would lead to long term usage of these medicines, prolonging the agony of the affected.^[8] Unlike contemporary science, In *Ayurveda* there are no published studies on the effect of Bladder wash in Urinary tract infection hence this study is undertaken to introduce much safer and diligent *Ayurvedic* care plan in the subjects with urinary tract infection.

AIM AND OBJECTIVE

To evaluate the role of *Gokshura Kashaya* Bladder Wash in the management of *Mutrakruetra* with special reference to Urinary Tract Infection

MATERIALS AND METHODS

Table 1: Properties of *Gokshura*^[9]

Drug	<i>Gokshura</i>
Botanical name	<i>Tribulus terrestris</i> Linn.
Family	<i>Zygophyllaceae</i>
Synonyms	<i>Ikshugandhika</i> , <i>Svadamstra</i> , <i>Trikantaka</i> , <i>Swadukantaka</i> , <i>Palankasha</i>
Vernacular names	English - Cow hage Kannada - Sannanaggillu Hindi - Gokhuru Telugu - Palleru Tamil - Neringil

Rasa	<i>Madhura</i>
Guna	<i>Guru, snigdha</i>
Veerya	<i>Sheeta</i>
Vipaka	<i>Madhura</i>
Prabhava	<i>Vata-Pitta Hara, Vrshya, Mootrala, Rasayana.</i> <i>Acc to BP: Sheetala, Bastishodhana, Prameha Swasa Kasa hara.</i>
Part used	<i>Panchanga (fruit is taken for the study)</i>

CASE STUDY

It is a case study of an 85 years old Male patient who presented with the chief complains of burning and painful micturition repeatedly since 3years. He was being treated with oral antibiotics and catheterized multiple times. The patient has developed resistance to most of the antibiotics. Study was done after obtaining an informed consent from the patient. He was treated with the prepared *Gokshura Kashaya* in the form of Bladder wash.

Intervention

Gokshura Kashaya was prepared with all aseptic measures, as per the classical reference of *Kashaya Kalpana*, one part of *Kwatha Choorna* was boiled in eight parts of water and reduced to 1/4th quantity.^[10] The prepared *Kashaya* was allowed to cool down to body temperature and double filtered using kora-cloth.

Figure 1: The method of *Gokshura Kashaya* preparation.



With all aseptic measures catheterization was done, 200ml of the prepared *Gokshura Kashaya* was pushed into the bladder using Asepto syringe, catheter was clamped for 20mins, later was unclamped and the fluid was allowed to drain into the Urobag. Bladder wash was done with the *Gokshura Kashaya* once daily for 7 days and observations were done on 5th and 7th day of the treatment.

Figure 2: The method of Gokshura Kashaya bladder wash.



Table 2: Subjective symptoms assessed before and after the bladder wash was as mentioned in the table.

Symptoms	0	1-3	4-6	7-10
	No Pain	Mild pain	Moderate pain	Severe pain
Pain Assessment (Before treatment)	-	-	+	-
After treatment	-	+	-	-
Symptoms	Grade 0 No burning	Grade 1 Mild burning	Grade 3 Moderate burning	Grade 4 Severe burning
Burning Sensation (Before treatment)	-	-	-	+

After Treatment	+	-	-	-
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Table 3: Objective symptoms assessed before and after the bladder wash was as mentioned in the table.

Urine Test	Before treatment	5 th day of treatment (15/3/22)	7 th day of treatment (17/3/22)
Physical Examination			
Volume	20ml	20ml	20ml
Colour	Pale yellow	Pale yellow	Pale yellow
Action	Acidic	Acidic	Acidic
Appearance	Hazy	Turbid	S-Turbid
Chemical Examination			
Albumin	Present (+)	Present (+)	Traces
Sugar	NIL	NIL	NIL
Microscopic Examination			
Pus cells	Plenty	35-40	15-20
EPI cells	1-2	4-6	4-6
RBC'S	6-8	6-8	3-5
Cast/ crystals	Not Seen	Not Seen	Not Seen
Amorphous Urates	Not Seen	Not Seen	Not Seen
Amorphous Phosphate	Not Seen	Not Seen	Not Seen
Others	Bacteria seen	Bacteria seen	Bacteria seen

RESULTS

Complete reduction of Symptoms along with reduced Pus cells count was achieved within 7 days of Bladder wash.

DISCUSSION

Gokshura Kashaya having alkaloids, flavonoids, tannins and phenolic compounds possess antibacterial property and also *Acharya Charaka* has included *Gokshura* in *Krimighna Dashemani* and in the treatment of *Mutrakruhra*, with this we may infer that *Gokshura Kashaya* used in the bladder wash may inhibit the bacterial growth by acting directly on the surface of bladder wall and flushing out the bacteria. In the present case *Gokshura Kashaya* bladder wash seems to have shown promising results in the successful management of urinary tract infection with ease and devoid of any complications. Thus, *Gokshura Kashaya* bladder wash helps in reducing the symptoms and thereby reducing the infection. *Gokshura* having *Madhura rasa* and *Sheeta Veerya* also helps in relieving *Pitta Dusti* which plays a major role in manifesting infection with burning sensation. Further clinical study is needed to evaluate the effectiveness in larger sample.

CONCLUSION

Significant relief on symptoms of *Mutrakruhra* including burning sensation, painful micturition, pus cells etc was being observed in the course of treatment. There was better recovery and sustained therapeutic effect in this patient with the *Gokshura Kashaya* bladder wash. Thus, paving a way for the treatment with ease in case of resistant and recurrent urinary tract infections.

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