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YAVAKSARA WITH MADHU ANUPANA IN LOWER URINARY TRACT INFECTION: A CASE REPORT

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ABSTRACT

Urinary tract infection is the commonest of all infections and are leading causes of morbidity and health care expenditure in persons of all ages. The prevalence of UTI was estimated to be around 150 million per year. E coli is the most common organism causing UTI. The Common clinical manifestations are dysuria, burning micturition, increased frequency and urgency to micturate, nocturia, suprapubic pain and low-grade fever. In Ayurveda it can be correlated with *mutrakrichra*. *Paneeya kṣāra* is one among the important formulation that is mentioned in the management of *mutrakrichra*. As per textual reference *Yavakṣāra* have action in relieving symptoms of *mutrakrichra*. A 34-year-old female with OP No. 20220000308 consulted Shalyatantra OPD of hospital with symptoms of dysuria, suprapubic pain, burning sensation, urgency and frequency of urination. After urinalysis, the condition was diagnosed as lower UTI. The patient was administered 500 mg of yavaksara with madhu anupana twice daily for a period of 15 days and analyzed the condition. Along with reduction in pus cells and bacteria, great symptomatic relief was obtained. Utilizing the inherent properties of ksara, it can be employed with efficacy in the treatment of urinary tract infections.

Keywords: Urinary Tract Infection, *Yava Paneeya kṣāra*

INTRODUCTION

Urinary tract infection is the Symptomatic presence of microorganisms within the urinary tract. Even though it can occur in any part of the urinary system, the commonly affected areas are lower urinary tract which involves bladder and urethra[1].This is the commonest of all infections and are leading causes of morbidity and health care expenditure in persons of all ages. The prevalence of UTI was estimated to be around 150 million per year.[2] The most common bacterium found to cause UTI is Escherichia coli (E. coli). E.coli has approximately 80% of frequency for causing UTI [3].The Common clinical manifestations are dysuria, burning micturition, increased frequency and urgency to micturate, nocturia, suprapubic pain and low-grade fever. Standard conventional managements of UTI include the use of antibiotics, antispasmodics and alkalisers.[4] These medications help to kill the bacteria that causes the infection. Recent research has demonstrated that the emergence of resistant uropathogens has had a tremendous effect on empiric therapy.[5] In Ayurveda lower urinary tract infections can be correlated with *mutrakrichra* . All the classical texts have explained its salient feature as "*Dukhena mutra pravritti*". Any type of '*Dukha*' (Discomfort) during micturition is included under *Mutrakrichra*.[6] While analysing the management we can see that *pāneeya kṣāra* is one among the important formulation that is mentioned in the management of *mutrakrichra*. Internal administration of *Yavakṣāra* for *mutrakrichra* has been mentioned in Baishajya Ratnāvali[7], Rasatarangini[8], and Chakradutta.[9]

Case report

A 34-year-old female patient approached Shalyatantra OPD with OP No. 20220000308, presented with complaints of dysuria, suprapubic pain, burning sensation while passing urine and increased frequency of urination. According to the patient, symptoms started 2 days back where she noticed turbid urine also. Patient had a previous history of UTI 1 month back which got resolved by antibiotics. She had no history of renal calculi or any other systemic diseases.

On physical examination of urinary system, no abnormality was detected. There were no abnormalities observed during the inspection. On doing urinalysis, it showed 20-25 pus cells/ hpf along with bacterial presence and the patient was diagnosed with Urinary Tract Infection (ICD 10 N39).

Dasha vidha Pareeksha

Dushya: Dosha- Kapha, Vata, Pitta
Dushya – Rasa, Rakta
Desha: Deha desha: Basti
Bhumi desha: Jangalam
Bala: Madhyama
Kala: Kshanadi- Greeshma
Vyadhyavastha- Navam
Anala: Madhyama
Prakruthi: Vatakapha
Vaya: Madhyama
Satwa: Madhyama
Satmya: Sarvarasa
Aharavastha: Madhyama

Methodology / Treatment given:

Patient was provided with 30 packets of yavaksara, each containing 500 mg. She was advised to take the medicine with madhu anupana twice daily after food in the morning and evening, for a period of 15 days. Follow up was done 2 weeks after the completion of treatment. The assessment of result was done before and after treatment as per subjective and objective criteria adopted.

Drug preparation[10]

Yava (whole plant) was collected and dried in sunlight. Well-dried herbs were burnt to ash in a large iron container with a lid. After cooling, the ash was weighed and combined with 4 parts of water. Following thorough stirring, the mixture was left undisturbed overnight. The next morning, the supernatant water was cautiously decanted and filtered through a triple-folded cloth. Subsequently, it was boiled in a large open iron vessel, with constant and slow stirring, until reaching a powdered form. The obtained kṣāra was weighed and stored in an airtight glass container. It was later covered with butter paper, with each containing 500 mg of kṣāra.

Observations

The patient's condition was regularly monitored and assessed for changes in UTI symptoms and urinalysis results.

i. Dysuria: The patient initially experienced regular bearable dysuria, which gradually lessened to mild and sporadic discomfort by the 7th day. By the 15th day, the symptom was completely alleviated.

ii. Suprapubic pain

Suprapubic pain was mild and occasional initially and got relieved by 7th day itself.

iii. Burning sensation

Initially, there was a consistent and tolerable burning sensation, which diminished by the 7th day and was completely relieved by the 15th day.

iv. Frequency

At the start, the patient had the need to urinate approximately half the time, occurring at intervals of less than 2 hours. This frequency decreased to less than half the time within the first few days, and by the end of the treatment, it was entirely alleviated.

Table 1: Grading of the subjective parameters:

Subjective parameters	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Dysuria	No pain	Mild, occasional	Regular, Bearable	Regular, Unbearable	-	-
Suprapubic pain	No pain	Mild, occasional	Regular, Bearable	Regular, Unbearable	-	-
Burning sensation	Nil	Mild, occasional	Regular, Bearable	Regular, Unbearable	-	-
Urgency	Not at all	Less than 1 in 5 times	Less than half the time	About half the time	More than half the time	Almost always
Frequency	Not at all	Less than 1 in 5 times	Less than half the time	About half the time	More than half the time	Almost always

Table 2: Assessment of result as per subjective parameters:

Subjective parameters	Before treatment	After treatment	After following up
Dysuria	Grade 2	Grade 0	Grade 0
Suprapubic pain	Grade 1	Grade 0	Grade 0
Burning sensation	Grade 2	Grade 0	Grade 0
Urgency	Grade 0	Grade 0	Grade 0
Frequency	Grade 2	Grade 0	Grade 0

Table 3: Assessment of result as per objective parameters

Urine routine examination	Before treatment	After treatment	After following up
Pus cells	20-25/hpf	2-5/hpf	0-2/hpf
Epithelial cells	5-8/hpf	2-4/hpf	Nil
RBC	Nil	Nil	Nil
Bacteria	Present	Absent	Absent
Casts	Nil	Nil	Nil
Crystals	Nil	Nil	Nil

RESULTS

The aforementioned observations clearly indicate that the patient experienced relief from symptoms following the administration of yavaksara with madhu anupana. Symptoms such as dysuria, suprapubic pain, burning sensation, urgency, and frequency demonstrated a decrease both during the treatment and subsequent follow-up period. Furthermore, there was a gradual decline in the quantity of pus cells and the presence of bacteria throughout the treatment phase, indicating the drug's anti-inflammatory and krimighna (anti-microbial) properties.

DISCUSSION

Dysuria is caused by inflammatory substances that are produced in response to infection, leading to excessive pain during urinary system infections. Urine acidity itself is also widely believed to contribute to the sensation of dysuria. Similar is the case of suprapubic pain. The urgency and frequency of urination increase in lower urinary tract infections (UTIs) due to the inflammatory response caused by the infection in the bladder and urethra. During a UTI, the urine becomes more acidic due to the presence of bacteria and their by-products. The acidic nature of the urine can contribute to the burning sensation during urination, especially if the inflamed tissues are exposed to the more acidic urine. The pH of infected tissues is usually lower than that of normal non-infected tissue surrounding it. Lower pH elicits greater pain because various pain receptors and afferent C-fibres in the bladder wall are stimulated by hydrogen ions, which are more highly concentrated at greater acidity. Kṣāra is an alkaline substance produced from herbal ashes. When dealing with UTI management, it becomes crucial to uphold both urine pH and managing bacterial virulence. Bicarbonates in ksara plays a vital role in maintaining urine pH and mitigating the irritation of the bladder mucosa induced by the infection. Consequently, it aids in alleviating symptoms. Similarly, potassium carbonate in yavaksara operates as both a diuretic and an alkalizing agent.[11] Kṣāra is the most important among sastra and anushastra according to Acarya Susruta. Kṣāra is having kṣārana and kshanana property.[12] By kṣārana it indicates pacification of vitiated doshas. Kṣārana also means sodhana i.e., kṣāra possess sodhana property. Kṣāra is predominatly katu, ushna and tikshna. By these attributes kṣāra works. Kṣāra possess pacana property and helps in alleviating ajeerna caused by the nidanas of mutrakrichra and it also possess amahara karma. By ushna tikshna gunas of kṣāra along with kleda soshana property, the vitiated kleda can be brought to its normalcy. By this mutra come to its nirama stage; forming urine, which is anavila, apichila and visada. Kṣāra possess bahya and abhyantara krimi nasaka guna, by which the bacterial presence was changed after treatment. The drug yava has been used as a diuretic for several years. Its antimicrobial, analgesic and anti-inflammatory properties are proven by several studies. Studies also show that yava is a potent source of antioxidants. The use of honey as an anupana in the management of Mutrakrichra is a common practice.[13] It enhances the absorption of the medicinal properties of yavakṣāra, making it more effective.

CONCLUSION

After undergoing a 15-day treatment regimen, the patient exhibited substantial relief in her symptoms, alongside the absence of bacteria and pus cells in her urine. Consequently, the utilization of yavaksara with madhu anupana emerges as having a noteworthy role in the management of lower urinary tract infections.

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REFERENCES

1. Russell RCG. Bailey & loves a short practice of surgery, 24e. 24th ed. Williams N, O'Connell PR, editors. London, England: Hodder Arnold; 2004.p1355-1357
2. Sewify M, Nair S, Warsame S, Murad M, Alhubail A, Behbehani K, Al-Refaei F, Tiss A. Prevalence of urinary tract infection and antimicrobial susceptibility among diabetic patients with controlled and uncon-

trolled glycemia in Kuwait. Journal of diabetes research. 2016 Oct;2016.
3. K V Krishna Das Textbook of Medicine 5th edition 2008 Published Jaypee Brothers Medical Publishers (P) Ltd. Section 16 Chapter- 172 Page No 1135
4. Kulkarni P, Kuruvilla A, Roy R. Role of supportive drugs in the management of urinary tract infections in hospital settings-A prospective observational study. National Journal of Physiology, Pharmacy and Pharmacology. 2019;9(4):299-302.
5. Gupta K, Scholes D, Stamm WE. Increasing prevalence of antimicrobial resistance among uropathogens causing acute uncomplicated cystitis in women. Jama. 1999 Feb 24;281(8):736-8.
6. Madhavakara, Madhava nidana, Vijayarakshita Madhukosha Sanskrita commentary by Brahmanand Tripathi, Varanasi, Chapter 30/2, Chaukhambha Surbharti Prakashana; 2012: p.621.
7. Vaidya Shri Ambika Datta Shastri, Dr. Kanjiv Lochan, Govinda Das, Bhaishajya Ratnavali. Volume 2.Chapter 34: p.457
8. Sadananda Sarma Rasa Tarangini English Translation by Dr Ravindra Angadi 2015 edition Published by Chaukhamba Surbharati Prakashan Taranga 14 p.228
9. Vaidya Ravidatta Shastri, Chakrapani Datta, Chakradatta. Padartha Bodhini hindi vyakta, Chapter 31.p. 144
10. Pandit Kasinatha Sastri. Sri Sadanantha Sarmana virachita Rasatarangini. Reprint ed. New Delhi. Motilal Banarasidas;2012.Page no:306
11. Sönmez MG, Göğer YE, Ecer G, Atıcı A, Özkent MS, Öztürk A. Effects of urine alkalinization with sodium bicarbonate orally on lower urinary tract symptoms in female patients: a pilot study. Int Urogynecol J. 2018;29(7):1029-1033. DOI: 10.1007/s00192-017-3492-3.
12. Susruta, Susruta Samhita, Vol 1, English commentary, Dalhana's commentary, Prof. Vasant Patil, N.M. Rajeshwari, Sutrasthana. 11/5, Chaukhambha Publications, New Delhi,2018, p.130.
13. Guruvu NR, Gayathri KV, Lalitha DL, Kutikuppala LS, Vegi PK. Synergistic effect of honey in combination with silver nanoparticles on isolated pathogens from urinary tract infection. Egyptian Pharmaceutical Journal. 2023 Jan 1;22(1):123.

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