



Analysis of various Prescription Practice Among Siddha Physicians in the Treatment of Azhal Neer Churukku (Urinary Tract Infection) in and Around Chennai - A Cross Sectional Study

Murugalakshmi R.^{1*} and Anbu N.²

¹PG Scholar, Department of Pothu Maruthuvam,
Government Siddha Medical College, Arumbakkam, Chennai (Tamil Nadu), India.

²Professor and Head, Department of Pothu Maruthuvam,
Government Siddha Medical College, Arumbakkam, Chennai (Tamil Nadu), India.

(Corresponding author: Murugalakshmi R. *)

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ABSTRACT: Azhal neer churukku (UTI) is a widespread health issue that affects both men and women. The microbial pathogens responsible for this infection can invade the tissues of the urinary tract, causing discomfort and complications. The rise of drug-resistant microbes in UTI cases has become a significant concern that needs to be addressed promptly. In light of this challenge, it is crucial to explore alternative treatment options from traditional Indian medicine. Siddha, an ancient healing practice, not only treats UTI but also promotes overall well-being and longevity. The aim of our study is to examine the therapeutic methods and medications used by Siddha physicians in treating UTI. Our findings reveal that many physicians recommend specific medicines such as Amirthathisanjeevi Chooranam, Silasathu Parpam, Neermulli Kudineer, and Seenthil Sarkarai for UTI treatment. Additionally, external application of Thiripala Chooranam decoction is suggested, with minimal reported adverse effects during the course of treatment. In conclusion, our study provides valuable insights for aspiring physicians and researchers in selecting appropriate medicines and treatment approaches for UTI. It underscores the importance of integrating traditional healing practices into modern healthcare for better patient outcomes.

Keywords: Azhal neer churukku, UTI, Physicians, Siddha, Therapeutic methods, Traditional.

INTRODUCTION

A urinary tract infection (UTI) is an infection caused by pathogenic organisms (for example, bacteria, fungi, or parasites) in any of the structures that comprise the urinary tract (Komala and Kumar 2013). Urinary tract infection usually develops in the lower urinary tract (urethra and bladder) and if not properly treated they ascend to the upper urinary tract (ureters and kidneys) and cause severe damage to the kidneys. While up to 90% of the patients with UTIs complain of urinary tract symptoms (increased frequency of micturition, painful micturition and burning micturition), one third or more of the patients with these symptoms do not have bacteriuria (Muthulakshmi and Gopalakrishnan 2017). Symptoms and signs of UTI vary somewhat depending on sex, age, and the area of the urinary tract that is infected; some unique symptoms develop depending on the infecting agent (Komala and Kumar 2013).

The prevalence of UTI in women is about 3% at the age of 20, increasing by about 1% in each subsequent decade. In males, UTI is uncommon, except in the first year of life and in men over 60, when it may complicate bladder outflow obstruction. Approximately 1% of children under the age of 1 year, 1% of schoolgirls, 0.03% of schoolboys and men, 3% of non-pregnant

adult women and 5% of pregnant women have asymptomatic bacteriuria. It is increasingly common in those aged over 65 (Ralston *et al.*, 2022).

It is more prevalent among females with an incidence rate 50-fold higher among the 20–50 years age group. There are various clinical manifestations of UTI such as cystitis, pyelonephritis, asymptomatic bacteriuria, chronic and recurrent UTIs; of which cystitis is the most frequent presentation affecting the urinary bladder. The bacteria may further ascend in the urinary tract causing infection of the kidney; if timely management is not done. Majority cases of uncomplicated UTI are community-acquired in origin and caused by uropathogenic *E. coli* (UPEC) and *Klebsiella* spp., constituting approximately 75–95% of the total cases. The other less prevalent organisms are *Proteus* spp., *Enterobacter* spp., *Pseudomonas* spp., *Enterococcus faecalis*, *Staphylococcus saprophyticus* and *Staphylococcus aureus* (Mohapatra *et al.*, 2022).

Globally rising trend of UTI burden between 1990 and 2019 (Zeng *et al.*, 2022). UTIs are common, leading to between seven and 10 million doctor visits per year. Although some infections go unnoticed, UTIs can cause problems that range from dysuria (pain and/or burning when urinating) to organ damage and even death. The kidneys are the active organs that produce about 1.5

quarts of urine per day. They help keep electrolytes and fluids (for example, potassium, sodium and water) in balance, assist in the removal of waste products (urea), and produce a hormone that aids in the formation of red blood cells. If kidneys are injured or destroyed by infection, these vital functions can be damaged or lost. There can be many complications of urinary tract infections, including dehydration, sepsis, kidney failure, and death. If treated early and adequately, the prognosis is good for most patients with UTI (Komala and Kumar 2013). Siddha system of medicine majorly relies on ancient traditional preparations for treating several infectious and non-communicable diseases. As per the Vedic literature it has been proved that this method of treatment has emerged from southern region of India and progressed though out the world. Contribution of herbs towards siddha formulation is considerably innumerable as it's playing a very vital role in healing, rejuvenation (Sivaraman *et al.*, 2019). Hence the main aim of the present observation study is to analyze the pattern of therapeutic approach and medication utilized by the siddha physicians at clinical level for the Treatment of Azhal Neer Churukku.

MATERIALS AND METHODS

Study Design. This cross-sectional study was conducted in Siddha Clinics and Hospitals in and around Chennai.

Ethical Clearance. The study was carried out after obtaining approval from the Institutional Ethical Committee, GSMC, Chennai.

Sample size and selection. A compilation of 50 Siddha healers (comprising of registered Siddha physicians and traditional practitioners) were carefully chosen in the vicinity of Chennai based on their accessibility and proximity to the area.

Data Collection. The research project began after obtaining approval from the Institutional Ethics Committee (IEC). Following scheduled appointments and obtaining consent, the physicians were briefed about the study before conducting questionnaire-based interviews and recording their responses. The questionnaire was created based on pretested structured questionnaire objectives, with input from senior lecturers and feedback from postgraduate scholars. After making necessary modifications based on suggestions, the questionnaire received approval from the IEC at GSMC in Chennai. Physicians were also informed about the study and the purpose of the questionnaires. Data was handled with utmost confidentiality and anonymity.

Duration of the study. The study was conducted for a period of 3 months.

Statistical Analysis. Data were analysed by having the personal details closed. The data were classified and analysed under following heads: Method of diagnosis, Pre-treatment procedures, Drugs of choice, External therapy, Duration of the Treatment.

RESULTS

Table 1: Method of Diagnosis.

Method of Diagnosis	No. of Physicians	Percentage
Both (siddha and modern)	26	52%
Only modern	22	44%
Only siddha	02	04%

Inference. From Table 1 shows According to the study 26 (52%) physicians were following both modern and siddha method of diagnosis, 22 (44%) physicians were following only modern method of diagnosis, only 2 (4%) physicians were using siddha method of diagnosis for the treatment of Azhal Neer Churukku (UTI).

Table 2: Pre -Treatment Procedure.

Pre -Treatment Procedure (Purgation)	No. of Physicians	Percentage
Agasthiyar kulambu	08	16%
Murukkan vithu mathirai	04	08%
Not given	38	76%

Inference. From Table 2 shows According to the study 12 (24%) physicians were providing pretreatment procedure for Azhal Neer Churukku (UTI). 8(16%) physicians had given Agasthiyar Kulambu, 4 (8%) physicians had given Murukkan vithu Mathirai, 38(76%) physicians had not given purgation for the treatment of Azhal Neer Churukku (UTI).

Table 3: Drug of choice- chooranam.

Chooranam	No. of Physicians	Percentage
Amirdhathi sanjeevi chooranam	18	36%
Elathi chooranam	11	22%
Parangi pattai chooranam	08	16%
Seenthil chooranam	06	12%
Thirikadugu chooranam	02	04%
Chandhra kandha chooranam	01	02%
Kaavikkal chooranam	02	04%
Sakala noi chooranam	02	04%

Inference. From Table 3 shows 18(36%) physicians had given Amirdhathisanjeevi chooranam, 11(22%) physicians had given Elathi chooranam, 8(16%) physicians had given Parangi pattai chooranam, 6(12%) physicians had given Seenthil chooranam, 2(4%) physicians had given Thirikadugu chooranam, 1(2%) physician had given Chandra kandha chooranam, 2(4%) physicians had given Kaavikkal chooranam, 2(4%) physicians had given Sakalanai chooranam to the patients Azhal Neer Churukku (UTI).

Table 4: Drug of Choice- Parpam.

Parpam	No. of Physicians	Percentage
Silasathu parpam	20	40%
Vengara parpam	08	16%
Kukil parpam	08	16%
Nandukkal parpam	08	16%
Sangu parpam	01	02%
Palagarai parpam	02	04%
Padigara parpam	03	06%

Inference. From Table 4 shows According to the study, out of 50 physicians 20(40%) physicians prescribed Silasathu parpam, 08 (16%) physicians prescribed Vengara parpam, 08(16%) physicians prescribed Kukil parpam, 08 (16%) physicians prescribed Nandukkal parpam, 01 (02%) physicians prescribed Sangu parpam, 02 (04%) physicians prescribed Palagarai parpam, 03(06%) physicians prescribed Padigara parpam, to the patients with Azhal Neer Churukku (UTI).

Table 5: Drug of Choice-Kudineer.

Kudineer	No. of Physicians	Percentage
Neer mulli kudineer	16	32%
Nerunjil kudi neer	18	36%
Nilavembu kudineer	04	08%
Mandurathi adai kudineer	01	02%
Siru peelai kudineer	05	10%
Dhirachathi kudineer	04	08%
Mookiratai kudineer	01	02%
Mega kasayam	01	02%

Inference. From Table 5 shows According to the study out of 50 samples 16 (32%) physicians had given Neermulli kudineer, 18 (36%) physicians had given Nerunjil kudineer, 04 (08%) physicians had given Nilavembu kudineer, 01 (02%) physicians had given Mandurathi adai kudineer, 05 (10%) physicians had given Siru peelai kudineer, 04 (08%) physicians had given Dhirachathi kudineer, 01 (02%) physicians had given Mookiratai kudineer, 01 (02%) physicians had given Mega kasayam to the patients in Azhal Neer Churukku (UTI).

Table 6: Drug of choice-mathirai.

Mathirai	No. of Physicians	Percentage
Neeri tablet	16	32%
Bangshil tablet	02	04%
Calcury tablet	03	06%
Kultap tablet	02	04%
Septilin tablet	02	04%
Cystone tablet	06	12%
Bhavana kadukkai mathirai	03	06%
Thiripala mathirai	05	10%

Inference. From Table 6 shows According to the study, out of 50 samples 16 (32%) physicians had given Neeri tablet, 02 (04%) physicians had given Bangshil tablet, 03 (06%) physicians had given Calcury tablet, 02 (04%) physicians had given Kultap tablet, 02 (04%) physicians had given Septilin tablet, 06 (12%) physicians had given Cystone tablet, 03 (06%) physicians had given Bhavana kadukkai mathirai, 05 (10%) physicians had given Thiripala mathirai to the patients in Azhal Neer Churukku (UTI).

Inference. From Table 7 shows According to the study out of 50 samples, 15 (30%) physicians had given Seenthil sarkarai, 04 (08%) physicians had given Venpoosani legiyam, 05 (10%) physicians had given Thaneervitan nei, 06 (12%) physicians had given

Vidiyuppu chunnam, 04 (08%) physicians had given Kumari nei, 04 (08%) physicians had given Vediannabedhi chendhooram, 02 (04%) physicians had given Rasagandhimelugu, 01 (02%) physicians had given Idivalladhimelugu, 04 (08%) physicians had given Sanstone syrup, 05 (10%) physicians had given Madhulai manapagu to the patients in the treatment of Azhal Neer Churukku(UTI).

Table 7: Drug of choice-other medicines.

Other Medicines	No. of Physicians	Percentage
Seenthil sarkarai	15	30%
Venpoosani legiyam	4	8%
Thaneervitan nei	5	10%
Vidiyuppu chunnam	6	12%
Kumari nei	4	8%
Vediannabedhi chendhooram	4	8%
Rasagandhimelugu	2	4%
Idivalladhimelugu	1	2%
Sanstone syrup	4	8%
Madhulai manapagu	5	10%

Table 8: External Therapy.

External Therapy	No. of Physicians	Percentage
External wash	20	40%
Varma	3	6%
Oil bath	12	24%
Not given	15	30%

Inference. From Table 8 shows According to the study, as for as external therapies are concerned, Tripala chooranam was given for External wash by 20(40%) physicians, Oil bath was prescribed by 12(24%) physicians and Varma therapy was given by 3(6%) physicians and 15(30%) physicians had not given purgation for the treatment of Azhal Neer Churukku (UTI).

Table 9: Duration of the Treatment.

Duration of the Treatment	No. of Physicians	Percentage
5 – 15 Days	27	54%
15 – 30 Days	20	40%
30 – 48 Days	02	04%
Above 48 Days	01	02%

Inference. From Table 9 shows According to the study, the duration of the treatment given by the Physicians to the UTI patients as follows – 27 Physicians (5-15 days), 20 Physicians (15-30 days), 2 Physicians (30-48 days), 1 Physicians (above 48 days).

DISCUSSION

Among the 50 randomly chosen samples comprising Siddha physicians and Traditional Siddha practitioners in and around Chennai, the most commonly preferred treatment method is purgation, followed by Kudineer, Chooranam, Parpam, Mathirai, Nei, Legium, Mezhu, Chendooram, Manapagu, Chunnam for Internal

Medicine, and wash, Varma, oil bath for External Treatment.

In terms of disease diagnosis, 52% of the physicians utilize both Siddha and Modern Diagnostic methods, 44% rely solely on modern methods, and only 4% use Siddha diagnostic methods such as Mukkutram and Envagaiheruvu.

The most frequently prescribed internal medicines include Nerinjil kudineer (36%), Neermulli kudineer (32%), Amirthathisanjeevi chooranam (36%), Silasathu purpam (40%), Neeri tablet (32%), Seenthil sarkkarai (30%), Vedyuppu chunam (12%), Thanneervittannei, Madhulai manapagu (10%), Venpoosani legium, Kumarinei, Vediannabedhi chendooram, Sanstone syrup (8%), Rasagandhi mezhugu (4%), Idivallathi mezhugu (2%). Additionally, 40% of the practitioners recommend Thiripalachooranam for External wash, Varma, and Oil bath along with internal medicine. Purgation is described as the initial treatment for Vatha humors in Siddha literature. It was observed that 24% of the doctors administer purgation while 76% do not due to practical constraints and patient non-cooperation. Moreover, 54% of physicians provide medicines for a duration of 5 to 15 days, resulting in positive outcomes. Moreover research evidence of anti-microbial activity against *E. coli*, *S.aureus*, *Klebsiella*, *Pseudomonas*, *S.typhi* are available for the medicines Rasaganthi melugu, Nandukkal parpam, Neermulli kudineer, Sirupeelai kudineer (Pushkala and Mathukumar 2021; Eleza Chellakkan *et al.*, 2018). Triphala chooranam external wash shows strong anti-microbial activity against *S.aureus*. Moderate against *Proteus* and weak against equally *E. coli*, *Klebsilla*, *Pneumoniae* (Tambekar and Dahikar 2011).

CONCLUSIONS

The preliminary research conducted delves into the common internal medications and external therapies frequently utilized in Siddha medicine. It has been revealed that pre-treatment procedures are essential components of Siddha practice. The study sheds light on the various practices employed by Siddha physicians in treating Azhal neer churukku, which could potentially be developed into a standardized treatment protocol for managing UTI in Siddha Medicine. While this study is concise, there is potential for it to evolve into a more comprehensive research endeavor, such as a Randomized Controlled Trial (RCT) in the future. The findings of this study offer evidence-based insights for aspiring physicians and researchers in the same field,

aiding in the selection of appropriate medications and recommendations for treating UTI.

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Conflict of Interest. None.

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