

Original Research Article

A study about urinary tract infection among patients attending tertiary care hospital

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ABSTRACT

Background: UTI is a second most common type of infection, accounting for nearly 25% of all infections. Lower UTIs are much more common in women than in men, particularly in the under 50's. UTI are common among patients with type 2 diabetes mellitus. Recurrent UTI is a common phenomenon that is observed among women who have experienced uncomplicated UTIs. Usually 5-10 days of antibiotic therapy is done for treating UTI. Successful antimicrobial therapy will usually ameliorate symptoms promptly, with substantial clinical improvement in 48 to 72 hours. The objective is to find out the knowledge and practice about UTI among UTI sufferers.

Methods: The study design is cross sectional study. The study period is from July 2016 to February 2017. The study place is Sree Mookambika Institute of Medical Sciences. The sample size is $(4PQ/d^2) = 31$. Systematic random sampling techniques are used. Institutional ethical committee clearance was obtained.

Results: In the study 90.3% are women. In the study 32.3% had a recurrent UTI. In the study population about 51.7% take adequate or plenty of water. In this study 35.5% have poor knowledge, 42% have moderate knowledge and 19.5% have a good knowledge about UTI.

Conclusions: From the study, it is learnt that UTI is common among the women and recurrence is the most common thing among the asymptomatic UTI group. The common symptom experienced by the study group is dysuria and frequency and most in the study group used to take less than recommended amount of water daily. They believe drinking plenty of water and cleanliness can prevent the UTI. The knowledge about UTI among the group is fairly good.

Keywords: Knowledge, UTI, Water intake

INTRODUCTION

UTI is a second most common type of infection, accounting for nearly 25% of all infections.¹ Urinary tract comprises of ureters, urinary bladder and urethra. Infection of the bladder gives rise to symptoms of

frequency urgency, suprapubic discomfort, dysuria and cloudy offensive urine. These symptoms are often known as 'cystitis'. Lower UTIs are much more common in women than in men, particularly in the under 50's.² Pathogenic factors include bladder over distention, vesico ureteral reflux, high-pressure voiding, large post voiding

residual volume, stones in the urinary tract and outlet obstruction.³ UTI are common among patients with type 2 diabetes mellitus. In these patients, UTI are more severe, caused by more resistant pathogens, and is associated with worse outcomes than in patients without diabetes.⁴

Recurrent UTI is a common phenomenon that is observed among women who have experienced uncomplicated UTIs and they are classified as reinfection and relapse.⁵ Urinary tract infection (UTI) is the most common complications of pregnancy.⁶

Most clinical trials have evaluated 5-10 days of antibiotic therapy for treating UTI. Successful antimicrobial therapy will usually ameliorate symptoms promptly, with substantial clinical improvement in 48 to 72 hours.⁷ Phenazopyridine is a urinary tract antiseptic and analgesic that has for long been used to provide symptomatic relief of the pain, burning, frequency and urgency associated with UTI during the first 24-48 hours of therapy.⁸

Cranberry juice and tablets have been shown to reduce RUTIs as they contain a compound called tannin, or proanthocyanidin, which reduces *E. coli* vaginal colonisation.⁹ Antibiotics are often given empirically in the general practice and because of this resistance is an increasing problem.¹⁰ The objective is to find out the knowledge and practice about UTI among UTI sufferers.

METHODS

Study design is cross sectional study. Study period is from July 2016 to February 2017. Study place is Department of General Surgery, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari, Tamil Nadu. Sample Size is $(4pq/d^2) = 31$.¹ Inclusion criteria is people suffering or suffered from UTI. Exclusion criteria is those who are not willing to participate. Sampling technique is systematic random sampling. Data was entered in Microsoft Excel version 2016. Statistical analysis was done using SPSS trial version 21.0 Institutional ethical committee clearance was obtained.

RESULTS

In the study 90.3% are women, 54.8% belongs to lower middle class 38.7% to upper middle class and 6.5% to lower socio-economic class. 61.3% of study population knows that UTI is an infection.

When asked how long an UTI last about 38.7% answered less than 2 weeks, 25.8% answered more than 2 months and 22.6% answered more than 2 weeks. When asked about the symptoms they had when they suffered from UTI 32.3% said they had fever with chills and rigor and 29% had abdominal pain.

In the study 32.3% had a recurrent UTI. About 51.7% take adequate or plenty of water. 67.8% of study population takes less than 2 liters of water at work. About urinary voiding habits 41.9% voids urine more than 5 times daily, 35.5% voids two to four times daily and 22.6% voids one to two times daily.

Among the study group 9.7% has diabetes mellitus and 22.6% has hypertension and 9.7% has both DM and HTN. 71% believe that cleanliness will prevent UTI and 22.6% believe that adequate water intake will prevent UTI. In this study 35.5% have poor knowledge, 42% have moderate knowledge and 19.5% have a good knowledge about UTI.

Table 1: Results of the study.

| Study results | | |
|------------------------|-----------------------------|-------|
| UTI | Infection | 61.3% |
| | Not infection | 39.7% |
| Sex | Male | 9.7% |
| | Female | 90.3% |
| Socio economic class | Lower socio-economic class | 6.5% |
| | Lower middle class | 54.8% |
| | Upper middle class | 38.7% |
| Duration of illness | Less than 2 weeks | 38.7% |
| | More than 2 weeks | 22.6% |
| | More than 2 months | 25.8% |
| Symptoms | Dysuria and frequency | 56% |
| | Fever with chills and rigor | 32.3% |
| | Abdominal pain | 29% |
| Recurrent UTI | Yes | 32.3% |
| | No | 67.7% |
| Daily water intake | Adequate | 51.7% |
| | Inadequate | 48.3% |
| Urinary voiding habits | Less than 2 times per day | 22.6% |
| | 2-4 times per day | 35.5% |
| | More than 5 times per day | 41.9% |
| Co morbidities | Diabetes mellitus | 9.7% |
| | Hypertension | 22.6% |
| | Both DM and HTN | 9.7% |
| Preventive measures | Cleanliness | 71% |
| | Adequate water intake | 22.6% |
| Knowledge about UTI | Poor | 35.5% |
| | Moderate | 42% |
| | Good | 19.4% |

DISCUSSION

In this study prevalence of women suffered or suffering from UTI is 90.3% but in Lawindi El et al it is 41.4%, it is 78% in Monalisa et al.^{3,11} It is learnt from the study that 61.3% of study population knows that UTI is an infection. When asked how long an UTI last about 38.7% answered less than 2 weeks, 25.8% answered more than 2 months and 22.6% answered more than 2 weeks.

When asked about the symptoms they had when they suffered from UTI 56% had dysuria and frequency, 32.3% said they had fever with chills and rigor and 29% had abdominal pain. In Lawind El et al, 55.2% had dysuria and 43.9% had frequency and 42% had loin pain.¹¹ In Khanal N et al, dysuria 73.3%, frequency 43.3%, and fever with chills 43.3%.¹

In the study 32.3% had a recurrent UTI while in Lawind El et al it is 16.5%.¹¹ In the study population about 51.7% take adequate or plenty of water. In Khanal et al., 73.3% takes inadequate quantity of water.¹

About urinary voiding habits 41.9% voids urine more than 5 times daily 35.5% voids two to four times daily and 22.6% voids one to two times daily.

71% believe that cleanliness will prevent UTI and 22.6% believe that adequate water intake will prevent UTI. In the article Lawind El et al 48.2% believe cleanliness will do while 19.3% believe adequate water intake will prevent.¹¹ In Khana N et al 80% believe adequate water intake will help and 66.6 % says cleanliness will help.¹

In this study 35.5% have poor knowledge, 42% have moderate knowledge and 19.5% have a good knowledge about UTI. In Sirjana et al 24.39% had poor knowledge, 65.05% had average knowledge and 10.56% of respondents had good level of knowledge regarding urinary tract infection.⁶ In Kripa et al 93% have average knowledge and 7% were having inadequate knowledge regarding prevention of urinary tract infection.¹² Limitation of this study was study cannot be generalized since it is a Hospital based study.

CONCLUSION

From the study, it is learnt that UTI is common among the women and recurrence is the most common thing among the asymptomatic UTI group. The common symptom experienced by the study group is dysuria and frequency and most in the study group used to take less than recommended amount of water daily. They believe drinking plenty of water and cleanliness can prevent the UTI. The knowledge about UTI among the group is fairly good.

Recommendation

More number of studies must be conducted using large geographical area.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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