

PREVALENCE OF URINARY TRACT INFECTION AND RISK FACTORS AMONG PATIENTS

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ABSTRACT

Urinary tract infections are among the most common bacterial infections in humans both in the community and hospital settings, and they occur in all age groups, and usually required urgent treatment. All the patients presenting with history of burning micturition and dysuria were included in this study. A total of 108 patients including male and female of ages between 18 to 60 years were included. There were 58 (53.70%) females and 50 (46.30%) males in the study. The mean age of all the patients was 35.34 ± 2.12 years. The mean time for onset of symptoms was 23.89 ± 3.45 days, with the minimum of 7 days and the maximum of 52 days. The symptoms were of greater duration in female patients than the male patients.

KEYWORDS: Urinary Tract Infection, UTI.**INTRODUCTION**

Urinary tract infections are among the most common bacterial infections in humans both in the community and hospital settings, and they occur in all age groups, and usually required urgent treatment. Urinary tract infection remains a leading cause of healthcare expenditure for people of all age groups, with an overall annual cost of 1.6 billion dollars in the United States of America. A urinary tract infection (UTI) is an infection that affects part of the urinary tract.^[1] When it affects the lower urinary tract it is known as a bladder infection (cystitis) and when it affects the upper urinary tract it is known as a kidney infection (pyelonephritis).

Symptoms from a lower urinary tract infection include pain with urination, frequent urination, and feeling the need to urinate despite having an empty bladder. Symptoms of a kidney infection include fever and flank pain usually in addition to the symptoms of a lower UTI. Rarely the urine may appear bloody. In the very old and the very young, symptoms may be vague or non-specific.^[2]

The most common cause of infection is *Escherichia coli*, though other bacteria or fungi may sometimes be the cause. Risk factors include female anatomy, sexual intercourse, diabetes, obesity, and family history. Although sexual intercourse is a risk factor, UTIs are not classified as sexually transmitted infections (STIs). Kidney infection, if it occurs, usually follows a bladder infection but may also result from a blood-borne

infection. Diagnosis in young healthy women can be based on symptoms alone. In those with vague symptoms, diagnosis can be difficult because bacteria may be present without there being an infection. In complicated cases or if treatment fails, a urine culture may be useful.^[3,4]

MATERIAL AND METHODS

This cross-sectional study was conducted in outdoor and departments of Tertiary Care Hospital. All the patients presenting with history of burning micturition and dysuria were included in this study. A total of 108 patients including male and female of ages between 18 to 60 years were included. Brief history of the patients i.e. name, age, gender, and date of onset of symptoms was taken. Complete urine examination and ultrasound KUB was performed and findings of all the patients were noted on a predefined proforma. The data was entered and analyzed in MedCalc software. Relevant statistical analysis was performed. The qualitative variables were presented as frequency and percentages. The quantitative variables were presented as mean and standard deviation.

RESULTS

There were 58 (53.70%) females and 50 (46.30%) males in the study. The mean age of all the patients was 35.34 ± 2.12 years, the mean age of male patients was 36.34 ± 1.23 years and the mean age of female patients was 34.67 ± 0.36 years. The mean time for onset of symptoms was 23.89 ± 3.45 days, with the minimum of 7

days and the maximum of 52 days. The symptoms were of greater duration in female patients than the male patients. Most of the patients had burning micturition alone and some had symptoms combined with dysuria. The complete urine examination of 79 patients (72.22%) revealed the true picture of urinary tract infection.

DISCUSSION

Urinary tract infections are the most frequent bacterial infection in women. They occur most frequently between the ages of 16 and 35 years, with 10% of women getting an infection yearly and more than 40–60% having an infection at some point in their lives. Recurrences are common, with nearly half of people getting a second infection within a year. Urinary tract infections occur four times more frequently in females than males. Pyelonephritis occurs between 20–30 times less frequently. They are the most common cause of hospital acquired infections accounting for approximately 40%. Rates of asymptomatic bacteria in the urine increase with age from two to seven percent in women of childbearing age to as high as 50% in elderly women in care homes. Rates of asymptomatic bacteria in the urine among men over 75 are between 7–10%. Asymptomatic bacteria in the urine occurs in 2% to 10% of pregnancies.^[4,6]

Urinary tract infections may affect 10% of people during childhood. Among children, urinary tract infections are most common in uncircumcised males less than three months of age, followed by females less than one year. Estimates of frequency among children, however, vary widely. In a group of children with a fever, ranging in age between birth and two years, two to 20% were diagnosed with a UTI.^[7]

REFERENCES

1. Foxman B. The epidemiology of urinary tract infection. *Nature Reviews Urology*, 2010; 7(12): 653-60.
2. Foxman B. Urinary tract infection syndromes: occurrence, recurrence, bacteriology, risk factors, and disease burden. *Infectious disease clinics of North America*, 2013; 28(1): 1-13.
3. Foxman B, Barlow R, D'Arcy H, Gillespie B, Sobel JD. Urinary tract infection: self-reported incidence and associated costs. *Annals of epidemiology*, 2000; 10(8): 509-15.
4. Hooton TM. Recurrent urinary tract infection in women. *International journal of antimicrobial agents*, 2001; 17(4): 259-68.
5. Hooton TM. Uncomplicated urinary tract infection. *New England Journal of Medicine*, 2012; 366(11): 1028-37.
6. Nielubowicz GR, Mobley HL. Host–pathogen interactions in urinary tract infection. *Nature Reviews Urology*, 2010; 7(8): 430-41.
7. Scholes D, Hooton TM, Roberts PL, Stapleton AE, Gupta K, Stamm WE. Risk factors for recurrent

urinary tract infection in young women. *The Journal of infectious diseases*, 2000; 182(4): 1177-82.