Int. J. Pharm. Med. Res. 2014; 2(4):113-115 **ISSN: 2347-7008**

International Journal of Pharmaceutical and Medicinal Research

Journal homepage: www.ijpmr.org

Research Article

Study of Cases of Urinary Tract Infection in Rural Population

Richa Kansal*[1], Prerna Panjeta[2], R.Mahendru[3], Isha Bansal[4], Nivesh Agrawal[5], Sunita Siwach[6]

[1]Asso. Prof., [3]Professor,[4]Lecturer,[6]Asst. Prof. Dept. of Obst & Gynae, BPS Govt. Medical college for women, Khanpur Kalan, Sonepat, Haryana, India

[2]Demonstrator, Dept. of Biochemistry, BPS Govt. Medical college for women, Khanpur Kalan, Sonepat, Haryana, India

[5]Professor, Dept. of Surgery, BPS Govt. Medical college for women, Khanpur Kalan, Sonepat, Haryana

ARTICLE INFO:

Article history:

Received: 20 June 2014
Received in revised form: 30 June 2014
Accepted: 10 August 2014
Available online: 30 August 2014

Keywords:

Urinary tract infection
Urethritis
Cystitis

ABSTRACT

UTI occurs more frequently in women than in men since women have a short distance between the urethral opening and the anus and a short urethra. Both factors make it easier for bacteria to enter the bladder and cause infection. Careful diagnosis and treatment result in successful resolution of infection in most instances.

Introduction

Urinary tract infections (UTI) are common, affect men and women of all ages and vary dramatically in their presentation and sequele. They are a common cause of morbidity and can lead to significant mortality. Although the urinary tract is normally free of bacterial growth, bacteria that generally ascend from the rectal reservoir may cause UTI. When bacterial virulence increases or host defence mechanisms decrease, it causes bacterial inoculation, colonization, and subsequent infection of the urinary tract. Careful diagnosis and treatment result in successful resolution of infections in most instances. A better understanding of the pathogenesis of UTI and the role of host and bacterial factors has improved the ability to identify patients at risk and prevent or minimize sequele.

UTI occurs more frequently in women than in men since women have a short distance between the urethral opening and the anus (where bacteria commonly thrive) and a short urethra. Both factors make it easier for bacteria to enter bladder and cause infection. UTIs are common in children. By the age of 5 years, about 8% of girls and about 1- 2% of boys have had at least one episode of UTI[1] .

Clinical manifestations may vary from asymptomatic bacterial colonization of the bladder to irritative symptoms such as frequency and urgency associated with bacterial infection; upper tract infections associated with fever, chills and flank pain; and bacteremia associated with severe morbidity, including sepsis and death. New nonnephrotoxic antimicrobial agents which achieve high urinary and tissue levels and which can be administered orally have significantly reduced the need for hospitalization for severe infection. Shorter-course therapy and prophylactic antimicrobial agents have reduced the morbidity and cost associated with recurrent cystitis in women. Although the vast majority of patients respond promptly and are cured by therapy, early identification and treatment of patients with complicated infections that place them at significant risk, remains a clinical challenge to urologists[2].

Viller et all had observed that approximately 4 percent of the adult females had bacteriuria and were asymptomatic, 10-29 percent of the entire female population was calculated to experience urinary tract infection at some time during their life and 40 percent of the patients with asymptomatic bacteriuria in early pregnancy and later on developed acute pyelonephritis[3].

In our study we have evaluated the frequency and magnitude of problem of primary urinary tract infection in rural females.

Material & methods

Female patients attending General OPD, who were clinically diagnosed as having symptoms of UTI and subsequently admitted were selected .The selection of patients was made on the basis of the history of a episode of urinary tract infection,

***Corresponding author:** Dr. Richa Kansal, Department of Obst. & Gynae, BPS Govt. Medical College Khanpur Kalan, Sonepat, Haryana, India

clinically and/or bacteriologically diagnosed .Care was taken that the patients selected did not suffer from medical diseases like glomerulonephritis, diabetes[4], neurogenic bladder & gynaecological disorders as these could secondarily aggravate the existing urinary tract infection. Pregnant females were also not included in this study.

Each patient who gave a history indicative of urinary tract infection was clinically examined and investigated in detail.

Table 1: Age distribution and marital status of the 100 patients enrolled in the study

AGE IN YEARS	TOTAL	PERCENT	MARRIED	UNMARRIED
0-9	1	1	0	1
10-19	25	25	4	21
20-29	25	25	17	8
30-39	14	14	14	0
40-49	18	18	18	0
50-59	9	9	9	0
60-69	5	5	5	0
70-79	1	1	1	0
80-90	2	2	2	0
	100	**100**	**70**	**30**

It will be noted that seventy percent of the females included were married, while unmarried females constituted the remaining 30 percent. This disease was most commonly seen in second or third decade of life. 50 percent of patients were between the ages of 10 to 29 years but the disease was common in all age groups. The youngest patient was 11months old and the oldest was eighty five years of age.

Socio-economic status

64 patients were engaged in household work, 24 patients were students and 12 were labourers. 61 patients belonged to middle class families and 26 patients were from poor section of the community. There were only 13 patients from upper middle class income group.

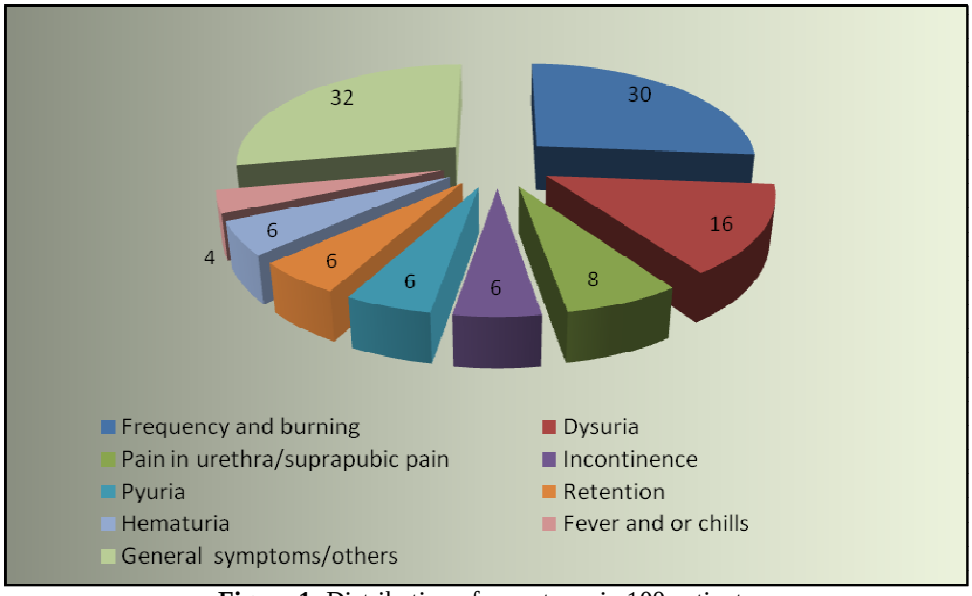

Figure 1: Distribution of symptoms in 100 patients

It is noted that most of the patients complained of only one symptom, while more than one presenting symptoms indicative of urinary tract infection were present in a small number (14 cases). Frequency with burning or painful micturition was the commonest presenting symptom recorded in 46 patients. This associated with burning pain along the urethra or in the bladder region was found in 8 patients. Incontinence, retention of urine, pyuria and intermittent hematuria were the primary symptoms in six patients each and four patients presented with symptoms of irregular fever with or without chills.

Lapides et al observed over distended bladder with a capacity of over 500 mL and presence of residual urine as a cause of UTI in some females with urinary tract infections. These findings were explained on the basis of the history of infrequent voiding by the patients. The over distended bladder is believed to be more susceptible to bacterial invasion as a result of decreased blood flow to the bladder following raised intravesical pressure. Infrequent voiding as a cause of recurrent infection was found in 65 out of 112 patients[5].

There were several reasons for this infrequent voiding:

1. Too busy with occupation or household work
2. Too few toilets for the number of people willing to use them at the place of work or at the shopping areas.
3. Fear of contracting veneral disease and trichomonas infestation.
4. Sense of modesty restraining the individual from leaving the room in a social gathering.
5. Belief that holding the urine longer will make the bladder stronger: and
6. That learning to hold urine for a longer time will make them a better traveller.

3. Conclusion

A detailed study of 100 female patients suffering from urinary tract infection was undertaken at Department Of Obst & Gyane and Surgery at BPS Govt. Medical College for women, Khanpur kalan, Sonepat. These patients belonged to all age groups between 11 months to 85 years but 82% patients were from age group between 10-49 years of age. Majority of these patients were married and the highest incidence was reported in the reproductive period of life[6]. In majority of these patients, the symptoms of urinary tract infection pertained to lower urinary tract infection. But in many of these patients there were vague symptoms not exclusively localised to the lower urinary tract[7]. The symptoms of UTI were related to a variety of factors like menstruation, vaginal discharge, pregnancy, sexual intercourse , instrumentation or operation in many of these patients[8]. These episodes of infection were characterized by lack of physical signs in almost all cases. The indication and the need for a careful examination and gynaecological check up has been stressed. The diagnosis of urinary infection can be easily reached by examination of a carefully collected mid stream specimen of the urine. Estimation of pyuria and culture by standard loop method have been found to be the reliable methods of demonstrating infection. Quantitative estimation of bacteriuria by standard loop method and determination of sensitivity by antibiotic disc method are essential for proper control and choice of medical treatment and evaluation of results.

Acknowledgement

We acknowledge the patients and management of BPS GMC(W), Khanpur kalan Sonepat, for their cooperation.

References

[1]. Stamm WE, Norrby SR. Urinary tract infections: disease panorama and challenges. J Infect Dis 2001;183:S1.

[2]. Najar M.S., Saldanha C.L. and Banday K.A. Approach to urinary tract infections. Indian J Nephrol. 2009 October;19(4):129-139.

[3]. Villar J, Lydon-Rochelle MT, Gülmezoglu AM, Roganti A. Duration of treatment for asymptomatic bacteriuria during pregnancy. Cochrane Database Syst Rev 2000; CD000491.

[4]. Stapleton, 2002. Stapleton A: Urinary tract infections in patients with diabetes. Am J Med 2002; 113(Suppl 1A):80S-84S.

[5]. Lapides, J. and Alkema, H.D., Invest Urol. 4: 485,1967.

[6]. Foxman B, Geiger AM, Palin K, Gillespie B, Koopman JS. First-time urinary tract infection and sexual behavior. Epidemiology. 1995;6:162–168.

[7]. Kunin CM. Urinary tract infections in females, Clin Infect Dis.1994; 18:1.

[8]. Kucheria R, Dasgupta P, Sacks SH, et al. Urinary tract infections: new insights into a common problem, Bostgrad Med J.2004; 81:83.

Source of support: Nil, Conflict of interest: None Declared