

MYRIAD PRESENTATION OF UTI IN A PRIVATE CLINIC

Medicine

Manuscript reference number
NJMDR_5317_17

Article submitted on: 07 June 2017
Article accepted on: 13 June 2017

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Abstract:

Introduction: Urinary tract infection is most common infectious presentation in hospital acquired and community acquired infections since long time. UTI is one of the major cause of hospital admissions and are associated with significant morbidity and mortality as well as a high economic burden.

Method: It was cross-sectional, retrospective and descriptive study conducted at a private clinic. A total of 363 patients were included in the study. The study included 217 females and 146 males with culture positive, uncomplicated UTIs.

Results: Maximum number of subjects were noted in the age group from 31-40 years overall. The most common clinical feature seen in uncomplicated urinary tract infection in present study was dysuria seen in 85.67% of subjects followed by urgency seen in 82.09% of subjects. Fever and chills was more frequent in males than females. The most common pathogen isolated in this retrospective study was E.Coli 45.18%, followed by Klebsiella, Enterococcus, Pseudomonas, Staphylococcus and Proteus.

Conclusion: From this study we can state that in this region females suffer more than males with Uncomplicated UTI. Urinary symptoms like dysuria, urgency and frequency are more pronounced in patients suffering from UTI followed by fever and chills.

Key words: Uncomplicated Urinary tract infection, dysuria, E coli,

Introduction:

Urinary tract infection (UTI) is one of the most common bacterial infections in general population.¹ Estimated overall incidence rate of UTI is about 18 per 1000 person per year. It is the most frequent bacterial infection recorded in older people. Urinary tract infection is one of the commonest complaints diagnosed in the Emergency Department and accounted for approximately 2.4 million visits in 2010 in USA.² Urinary tract infection is most common infectious presentation in hospital acquired and community acquired infections since long time.³ UTI is also most common

infection in diabetic patients of which India is growing hub.⁴

UTI is more common in women than men. UTI is one of the major cause of hospital admissions and are associated with significant morbidity and mortality as well as a high economic burden.¹ Both sex presents with almost similar findings. Severe symptoms are more predictive of UTI, than milder symptoms. The combination of symptoms are better indicator to predict UTI than only one symptom.⁵⁻⁷ As it is usually a part of sexually transmitted infection, it is also a concern to the sexual partner of the patient. Our study objective was demographic and

symptomatic clinical profiling of patients presenting with UTI in our clinic.

Method :

This was cross sectional, retrospective and descriptive study conducted at a private clinic. The study was carried out from August 2015 to October 2016. A total of 363 patients were included in the study. Informed Consent was taken from all the participants. The study included 217 females and 146 males with culture positive, uncomplicated UTIs. Exclusion criteria were pregnancy, chronic renal disease, diabetes mellitus or use of antibiotic therapy during previous one month. Clinical data and demographic details were obtained from clinical records of the patient and their treatment cards.

Results:

Out of the 363 patients included in the study female

outnumbered males. 217 females had culture positive while 146 males had positive culture.

Table No 1: Age wise distribution of subjects

Age Group	Males	Females	Total
14 to 20	11	7	18
21 to 30	18	57	75
31 to 40	23	68	91
41 to 50	40	28	68
51 to 60	37	31	68
≥ 61	17	26	43
Total	146	217	363

Maximum number of subjects were noted in the age group from 31 to 40 years overall. The most male subjects were belonged to age between 41 to 60 years while most female subjects belonged to the age between 21 to 40 years. Typical tapering of subjects is seen in the terminal age groups.

Table No 2: Showing clinical features in the subjects

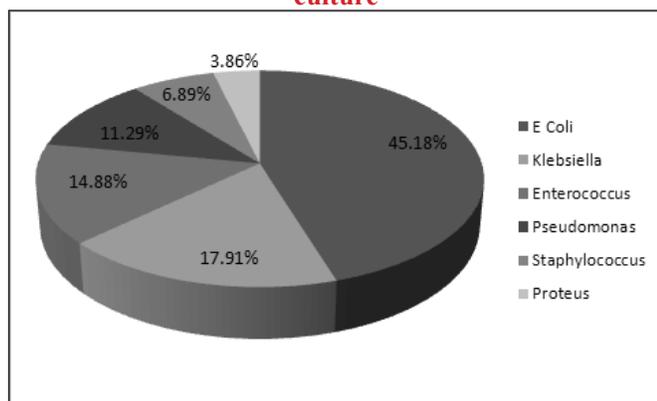
Clinical Features	Males	Females	Total
Fever	103 (70.54%)	137 (63.13%)	240 (66.12%)
Chills	82 (56.16%)	97 (44.70%)	179 (49.31%)
Nausea and vomiting	0	7 (3.23%)	7 (1.92%)
Lower abdominal pain	60 (40.09%)	130 (59.91%)	190 (52.34%)
Dysuria	135 (92.46%)	176 (81.11%)	311 (85.67%)
Frequency	110 (75.34%)	98 (45.16%)	208 (57.3%)
Flank pain	18 (12.32%)	24 (11.06%)	42(11.57%)
Hematuria	17 (11.64%)	37 (17.05%)	54 (14.88%)
Nocturia	35 (23.97%)	113 (52.07%)	148 (40.77)
Urgency	112 (76.71%)	186 (85.71%)	298 (82.09%)
Frequency	98 (67.12%)	148 (68.20%)	246 (67.77%)

The most common clinical feature seen in uncomplicated Urinary Tract infection in present study was dysuria seen in 85.67% of subjects followed by urgency seen in 82.09% of subjects. Dysuria was seen in 92.46% of male subjects followed by urgency in 76.71%, while urgency was most common clinical feature seen in 85.71% followed by

dysuria in 81.11% in female subjects. Nausea and vomiting was only clinical feature seen in females and was the least clinical feature. Hematuria was least clinical symptom seen in males. Fever and chills was more frequent in males than females.

Table no 3: Pathogens isolated from culture

S.N.	Pathogen isolated in culture	No of Subjects
1	E Coli	164 (45.18%)
2	Klebsiella	65 (17.91%)
3	Enterococcus	54 (14.88%)
4	Pseudomonas	41 (11.29%)
5	Staphylococcus	25 (6.89%)
6	Proteus	14 (3.86%)

Pie Diagram showing various Pathogen isolated from culture

The most common pathogen isolated in this retrospective study was E. Coli (45.18%), followed by Klebsiella, Enterococcus, Pseudomonas, Staphylococcus and Proteus. None of the subject in the study had candida or fungal growth on culture.

Discussion:

In the present retrospective study 363 subjects were taken into consideration. Out of these females outnumbered males. This showed that Urinary tract infections are more common in females as compared to males. Hummers-Pradier E⁸ et al in her study stated that one in two women suffer from a UTI at least once in her life. Our study finding is similar to the finding in the other studies such as Stamm WE et al⁹, Moue et al¹⁰, Momoh ARM¹¹ and Aswani SM et al⁴. Women are more susceptible to the UTI than men due both anatomical and physiological reasons.¹²

In this study more of young females between age group of 21 to 40 years are more prone for UTI. This observation may be attributed to more of active sexual life during this period of life. The males are more affected in middle age between age group of 41 to 60 years. This may be due to

changes taking place specially attributed to the prostate. This finding of our study is in line with findings of Moue et al¹⁰, Nerukar A¹³ and Banerjee et al.¹⁴

The clinical features are widely ranged in case of patients with Urinary tract infection. The most common symptom seen was dysuria followed by urgency and frequency. These first three symptoms seen are mainly related to the Urinary tract directly. The next in order was fever and chills. Nausea and vomiting was observed in females only. These findings in our study about females are much similar to the findings of Giesen LM et al¹⁵ and with the study of Shanti J et al.¹²

This study also revealed that most common pathogen in uncomplicated UTI was E Coli. It caused infection among 45.18% of cases. The other pathogens were Klebsiella, Enterococcus, Pseudomonas, Staphylococcus and Proteus. The most of the recent studies revealed that E coli is the commonest organism isolated from UTI patient with other co-morbid conditions. Our study findings are similar to most of these studies like Moue A¹⁰, Shanti J et al¹² and Aswani SM et al.⁴

Limitation of the study:

This study is conducted as retrospective study with laboratory constraints hence the results of the study may be influenced by it.

Conclusion:

From this study we can state that in this region females suffer more than males with uncomplicated UTI. The Urinary symptom like dysuria, urgency and frequency are more pronounced in the patients suffering from UTI followed by fever and chills. The most common pathogen involved in UTI is E Coli followed by other organisms.

Now days most of the studies are conducted on urinary tract infection along with other co-morbid conditions. This study can be a base line study for future studies to be undertaken on UTI.

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