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Assessment of Factors contributed to Urinary Tract Infection (UTI) incidence in Sulaimani Teaching Hospital

Samir Y. Lafi*

College of Nursing / University of Sulaimani / Kurdistan Region / Iraq

Abstract

The study objectives are to assess the incidence of the risk factors that contribute to the (UTI), and to find out the relationship between UTI and some demographic characteristic such as age, gender, marital status, and educational level.

A descriptive study was carried out in the Sulaimani Teaching Hospital (Kurdistan Region),

The data were collected through the use of constructed questionnaire, which consisted of two parts: the firs one consist of (6) items which include the demographic information, and the second part consist of (13) items include contributing factors to (UTI).The study started from the middle of August 2007 up to the end of June 2008.To achieve the objectives of the study, a non-probability (purposive) sample of (50) patient: males, and females, who had (UTI), and admitted to the teaching hospital from the period of august 2007 up to April of 2008.The content validity of the instrument was established through a penal of (9) experts. Reliability of the instrument was determined through the split-half approach, (r=78).

Data was gathered by interview technique using the questionnaire formal and data was analyzed by application of descriptive and inferential statistical method.

The results of the study indicate that there is no association between (age, sex, level of education and marital status) and occurrence of UTI.

Keywords: Contributed factors, Urinary tract, infection, E coli.

1. Introduction

Urinary tract infection (UTI) is a serious health problem affecting millions of people each year. (UTI) is one of the most common infections; it is the second most common type of infection in the body. Over 50% of women have at least one episode of un complicated lower urinary tract infection during their life time, and (20-30%) will have recurrent episodes [1].

One woman in five develops a (UTI) during her life time, although UTIs in men are not as common as in women but can be very serious when it occurs [2].

Most infections arise from one type of bacteria. Escherichia coli (E coli), and staphylococcus saprophyticus which normally lives in the colon

More than 90 percent of UTI cases are caused by this type of bacteria normally found in the intestines, other organism-including Chlamydia and mycoplasma also cause urinary tract infection, which usually are limited to the urethra and reproductive organs, this type of infections might be sexually transmitted [3]. On the other hand Gulfareen,H and Nishat,Z stated that women are more susceptible to UTI than men due to short urethra, absence of prostatic secretion, and sexual activity [4]

Both sexes prone to UTI, however, women tend to get more often because their urethra is shorter and closer to the anus. [5]

The organisms that usually cause (UTI) are introduced via the ascending route from the urethra. Less common routes are via the blood stream or lymphatic system, most infections are due to gram-negative aerobic bacilli normally found in the gastrointestinal (GI) tract, A common factor contributing to ascending infection is urologic instrumentation(catheterization,

E-mail : sylafi59@yahoo.co.uk

cystoscopic examination, sexual intercourse promote milking of bacteria from vagina and predisposes women to UTI [6]

A common source of infection is catheter that stays in place for along time and prostate inflammation or enlargement [7]

For diagnosis of UTI the patient must test a sample of urine for pus and bacteria, the patient give a "clean catch" urine sample by washing the genital area and collecting a "midstream" sample of urine in a sterile container.

UTIs are treated with antibacterial drug. The choice of drug and length of treatment depend on the patient's history and urine tests that identify the offending bacteria. Often a UTI can be cured with 1 or 2 days of treatment if the infection is not complicated by an obstruction or other disorder. Patients must take antibiotics within a week or two to ensure that the infection has been cured. [8] .

2. Patients and Methods

This is a descriptive study; Quantitative design was conducted in the Sulaimani Teaching Hospital to identify the risk factors that contribute to the (UTI.

The study was carried out during the period from August 2007 up to June 2008.

A purposive, (Non-probability) sample of (50) patients which represented 100% of target population of male and females patients who were admitted to the hospital.

The criteria of the sample were involved adult patients, males and females of all ages

For the purpose of data collection, a questionnaire was designed and constructed; the content validity of the instrument was established through a penal of (9) experts.

Reliability was determined by split-half approach which was estimated as average (r=78).

Data was collected from patients themselves and gathered, organized, and coded into computer files by using the statistical package of social science (SPSS).

Appropriate statistical means are used in the data analysis which includes the following:

1-Descriptive data analysis: this approach is performed through the determination of:

-Frequencies (f)

-Percentage (%)

2-Inferential data analysis: this approach is performed through the determination of:

- Chi - Square

-Mean of scores (M.S)

-Severity

-Pearson correlation coefficient

The level of severity of contributing factors and symptoms are divided into three levels:-

(Always=3), (Some times=2), and

(Never=1)

A mean of score of less than 1.66 was considered low significant

More than1.66 and less than2.32 were considered moderate significant

More than 2.32 – 3 was considered high significant .

3. Results

Table(1) shows the distribution of (50) patients with UTI, which indicated that similar percentage of them (26%) was accounted for those who were (30-39), and (40-49) years old, (74%) were female.

(78%) of them were lived with extended family, while (70%) of them had low literate of education, (62%) of the sample were lived in the rural area, and most of them (82%) were married and (42%) were housewives.

Table (1) Distribution of demographic characteristics of (50) patients with (UTI) who were considered as a sample of the study.

Variables			
Age	**F**	**%**	**Cumulative %**
20-29	9	18	18
30-39	13	26	44
40-49	13	26	70
50 years and older	15	30	100
Total	50	100	100
Gender	**F**	**%**	**Cumulative %**
Male	13	26	26
Female	37	74	100
Total	50	100	100
Monthly income	**F**	**%**	**Cumulative %**
Sufficient	9	18	18
Barely sufficient	18	36	54
Insufficient	23	46	100
Total	50	100	100
Type of family	**F**	**%**	**Cumulative %**
Nuclear	11	22	22
Extend	39	78	100
Total	50	100	100
Level of education	**F**	**%**	**Cumulative %**
Illiterate	13	26	26
Low literate	35	70	96
High literate	2	4	100
Total	50	100	100
Residential area	**F**	**%**	**Cumulative %**
Urban	19	38	38
Rural	31	62	100
Total	50	100	100
Marital status	**F**	**%**	**Cumulative %**
Married	41	82	82
Single	9	18	100
Total	50	100	100
Occupation (Employed)	**F**	**%**	**Cumulative %**
Government employ	6	12	12
Self- employed	12	24	36
Occupation (unemployed)			
Retired	9	18	54
House wife	21	42	96
Out of work (jobless)	2	4.0	100
Total	50	100	

Table (2) Mean of scores for items of the (symptoms) of UTI of the sample.

No	Items	Always	Some time	Never	M.S	Severity
1.	I suffer from dysuria	34	12	4	2.6	H
2.	I have burn sensation during urination	27	16	7	2.4	H
3.	I experience frequency	18	27	5	2.26	M
4.	I develop urgency	29	16	5	2.48	H
5.	I have lower abdominal pain	37	9	4	2.66	H
6.	I develop pain in the back or side below the ribs	7	6	37	1.4	L
7.	My urine look's or cloudy	14	16	20	1.88	M
8.	I passed only a small amount of urine during urination	29	11	10	2.38	H
9.	I experience blood in the urine	2	6	42	1.2	L
10.	I experience a fullness in the rectum	5	7	38	1.34	L
11.	I have fever	8	6	36	1.44	L
12.	There is some change in my urine smell (bad odor)	31	7	12	2.38	H

Table (3) Mean of scores for items of the factors that contribute to the (UTI) of the sample (Male).

No	Items	Always	Some time	Never	M.S	Severity
1.	I suffer from prostate enlargement	7	1	5	2.15	M
2.	I experience frequent catheterization	9	2	2	2.53	H
3.	I experience cystoscopy	6	2	5	2	M
4.	I develop urinary tract stone	5	2	6	1.92	M
5.	I experience diabetes mellitus	4	0	9	1.62	M
6.	My wife suffer from frequent UTI	4	3	6	1.8	M
7.	I used to waiting too long time to urinate	3	6	4	1.92	M

H=High M=Moderate L=Low M.S=Mean of score

Table2 shows that the mean of scores are high on items (1, 2, 4, 5, 8, and 12) and moderate on items (3, 7) and low on the remaining items (6, 9, 10),while Table3 indicated that the mean of scores are moderate on all items except item (2) which is high.

Table (4) Mean of scores for items of the factors that contribute to the (UTI) of the sample (Female).

No.	Items	Always	Some time	Never	M.S	Severity
1.	I experience frequent catheterization	6	3	28	1.4	L
2.	My partner develop UTI	2	4	31	1.16	L
3.	I develop urinary tract stone	9	2	26	1.5	L
4.	I experience diabetes mellitus	5	0	32	1.27	L
5.	I used to waiting too long time to urinate	11	8	18	1.8	M
6.	I used to clean perineal area from back to front	18	6	13	2.1	M
7.	My partner use a condom as a birth control	8	9	20	1.67	M
8.	I suffer from vaginal discharge with bad odor	14	5	18	1.89	M
9.	I experience cystoscopy	8	0	29	1.43	L

Table (5) Association between UTI items and the age of the cases.

Level / Age	(UTI) items						Total
	High		Moderate		Low		
	F	%	F	%	F	%	
20-29	4	8.0	2	4.0	3	6.0	9
30-39	3	6.0	3	6.0	7	14	13
40-49	6	12	2	4.0	5	10	13
50 years and older	8	16	2	4.0	5	10	15
Total	21	42	9	18	20	40	50
X^2 obs = 4	df = 6		X^2 crit= 12.59		P≤ 0.05		

Table 4 indicates that the mean of scores are low on items (1, 2, 3, 4 and 9) and moderate on items (5,6, 7, and 8).Table 5 indicated that there is no significant association between age and UTI

Table (6) Association between UTI items and the gender of the cases

Levels / Gender	(UTI) items						Total
	High		Moderate		Low		
	F	%	F	%	F	%	
Male	5	10	4	8.0	4	8.0	13
Female	13	26	11	22	13	26	37
Total	18	36	15	30	17	34	50
X^2 obs=2.98	df=2		X^2 crit=5.99		P≤0.05		

Table (7) Association between UTI items and the marital status of the cases

Levels / Marital Status	(UTI) items						Total
	High		Moderate		Low		
	F	%	F	%	F	%	
Married	18	36	8	16	15	30	41
Single	4	8.0	2	4.0	3	6.0	9
Total	18	36	15	30	17	34	50
X^2 obs=0.48	df=2		X^2 crit=5.99		P≤0.05		

Table (8) Association between UTI items and the level of education of the cases.

Levels / Educational Level	(UTI) items						Total
	High		Moderate		Low		
	F	%	F	%	F	%	
Illiterate	9	18	3	6.0	1	2.0	13
Low literate	12	24	16	32	7	14	35
High literate	1	2.0	1	2.0	0	0.0	2
Total	22	44	20	40	8	16	50
X^2 obs=4.8	df=4		X^2 crit=9.49		P≤0.05		

The table 6,7,8 reveal that there is no Significant association between : gender ,marital state and level of education respectively with UTI.

4. Discussion

Through the course of the present study it has been noticed that the age of the highest percent of (50) patients of UTI is (26 %) on age (30-39) year old and similar percent were in age (40-49) year old (Table 1).

This finding supported with (Lewis and Heilkemper) who stated that the risk of UTI increased in men in their 40s continues to rise until age of 70, and the risk of UTI in women in their age of 50s and younger women related to hyper sexual activity. [9]

In relation to gender, the majority of the study samples (74 %) were females and (26%) were males. This result come along with the findings of Marchion,K who stated that UTIs in adult women gradually increased more than male, one factor may be that woman's urethra is short, allowing bacteria quick access to the bladder. [10]

The majority of the sample were married (82%) while the low percentages were single (18%), this result was in agreement with that of Marchiond (1998) who stated that sexual intercourse promotes milking of bacteria from vagina and perineum and may cause minor urethral trauma that predisposes married women to UTIs.[11]

Regarding (Table 2), the analysis of the data revealed that the mean of scores are high on items (1, 2,4,5,8, and 12) and moderate on items (3, 7) and low on the remaining items, that's to explain the main urinary disorder which effects patients who suffer from UTIs.

Relative to (Table 3), the mean of scores are moderate on all items except item (2) is high. Our findings come along with Gokula (2004) who emphasized that the risk of infection continues and increases as long as the catheter remains in place [12]. Furthermore regarding (Table 4), the mean of scores are moderate on items (5, 6, 7, 8,) and low score on the remaining items. These findings agree with Schaeffer AJ (1998) who stated that women must clean the genital area before sexual intercourse and avoid wiping from back to front to prevent bacteria around the anus from entering the vagina or urethra [13]

Regarding to their educational status, the majority of them were low literate (42%) and (Illiterate 26%).These findings come along with Baerheim A, & et.al. who concluded that traditional medical knowledge about symptoms presentation in UTIs is insufficient [14].

5. Conclusions

The study has confirmed that there is no significant association between (age, sex, level of education, and marital status) and occurrence of UTI.

6. Recommendations

1. Further study can be conducted on a largeSample size of patients.
2. Education programs should be designed to increase people information toward (UTI) and reduce the risk factor of disease.

7. Acknowledgment

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هەڵسەنگاندنی هۆکاری پەیوەندیدار بەهەوکردنی بۆری میزەرۆ لەنەخۆشخانەی فێرکاری سلێمانی

سمیر یونس لافی / کۆلیژی پەرستاری, زانکۆی سلێمانی, هەرێمی کوردستان/ عێراق

پوختـــە

ئاما نجی توێژینەوەکە برێتیە لە دیاریکردنی هەندێ لە هۆکارەکان کە بەشدارە لە ڕوودانی هەوکردنی کۆئەندامی میزکردن وەك هۆکارێکی ترسناك و دۆزینەوەی پەیوەندی نێوان هەوکردنی کۆئەندامی میز و هەندێ لە تا یبەتمەندییە دیمۆگرافیەکان کە ئەمانە دەگرێتە خۆ(تەمەن، ڕەگەز، باری کۆمەڵایەتی و ئاستی ڕۆشنبیری).توێژینەوەیەکی وەسفیە لە نەخۆشخانەی فێرکاری سلێمانی (هەرێمی کوردستان)ئە نجام دراوە.سەرەتای توێژینەوەکە لە ناوەراستی ئابی ساڵی ٢٠٠٧و کۆتاییەکەی لە حوزەیرانی ٢٠٠٨.

بۆ وەدەستهێنانی ئاما نجی توێژینەوەکە سەمپڵی مەبەستدار ی هەرەمەکی پێکهاتووە لە ٥٠نەخۆش پیاو ،ژن دووچاری نەخۆشیەکانی کۆئەندامی میز بوونە و لە نەخۆشخانەی ناوبراو لە ئابی ٢٠٠٧تا نیسانی ٢٠٠٨کەوتوونە. کۆکردنەوەی زانیارییەکان لە ڕێگەی فۆرمی ڕا پرسییەوە کە بۆ ئەم مەبەستە دارێژراوە و لە دوو بەش پێکهاتووە:بەشی یەکەم تایبەتمەند و پێکهاتووە لە (٦) بڕگە بۆ تایبەتمەندیە دیمۆگرافیەکانی نەخۆش .بەشی دووەم تایبەتمەندو پێکهاتووە لە (١٣)بڕگە کە هاوبەشە لە هەوکردنی کۆئەندامی میز.

بە مەبەستی ڕاستی توێژینەوەکە (٩)پسپۆری تایبەتمەند فۆرمی ڕا پرسیەکەیان بەسەرکردۆتەوە.دواجاریش بۆ سنووری راستی توێژینەوەکە لە ڕێگەی بەکارهێنانی (split-half) و بەکارهێنانی هۆکارەکانی بیرسون برێتی بوو لە (r=78) .هۆکاری کۆکردنەوەی زانیارییەکان بەشێوازی دیداری کەسێتی نەخۆشەکان بووە ، پاشان شیکاری ڕا پرسیەکە بە بەکارهێنانی شیکاری وەسفی و دەرئە نجام بووە.

دەر ئە نجامی تۆژینەوەکە ئەوەی دەرخستوە کە پەیوەندی هەیە لە نێوان ئاستی خوێندەواری و هەوکردنی کۆئەندامی میز, هەروەها زۆربەی ئەو کەسانەی هەوکردنی کۆئەندامی میزیان هەیە دانیشتوی لادێن .

تقييم العوامل المساهمة في التهاب المجاري البولية في مستشفى السليمانيةالتعليمى

سمير يونس لافي/ كلية التمريض/ جامعة السليمانية/ اقليم كوردستان/ العراق

الخلاصة

تهدف الدراسة الى بيان بعض العوامل التى تسهم في حدوث التهاب المجاري البولية كعوامل خطورة وا يجاد العلاقة بين التهاب المجاري البولية وبعض الخصائص الديموغرافية التي تشمل العمر،الجنس،الحالة الزوجية، وكذلك المستوى الثقافي .

دراسة وصفية اجريت في المستشفى التعليمي في محافظة السليمانية(اقليم كوردستان)، بدأت الدراسة في منتصف آب ٢٠٠٧ وأنتهت في نهاية حزيران ٢٠٠٨.

ولا نجاز اهداف الدراسة أختيرت عينة غرضية غير احتمالية مكونة من٥٠ مريض من النساء والرجال أصيبوا بالتهاب المجاري البولية كانوا قد رقدوا في المستشفى المذكور خلال الفترة من آب ٢٠٠٧ وحتى نيسان ٢٠٠٨ جمعت المعلومات من خلال استمارة استبيانية صممت لهذا الغرض مكونة من جزئين:خصص الجزء الاول والمتكون من (٦) فقرات للخصائص الديموغرافية للمرضى، وخصص الجزء الثاني والمتكون من(١٣) فقرة لبعض العوامل المساهمة في التهاب المجاري البولية.

ولصدق الاداة عرضت الاستبانة على (٩) خبراء في مجال الاختصاص ثم تم تحديد ثبات الاداة من خلال استعمال طريقة (Split-half) بأستعمال معامل بيرسون وكان ($r=78$). جمعت المعلومات بواسطة المقابلة الشخصية للمرضى ثم تم تحليل البيانات باستخدام التحليل الوصفي وكذلك التحليل الاستنتاجي.

بينت نتائج الدراسةان الغالبية هم من المستوى الادنى من الثقافة والذين يسكنون الريف .

وەرگیراوە لە ٢٠٠٩/١/١١ دا , و پەسەند کرا لە ٢٠٠٩/١٢/٧ دا

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