A Study to Assess the Knowledge Regarding Urinary Tract Infections among Antenatal Mothers at MCH Center, Tirupathi

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Abstract

Backgroud : Urinary tract infections are caused by the pesence and growth of microorganisms in the urinary tract and are perhaps the single commonest bacterial infections of mankind. Urinary tract infection (UTI) is a common clinical diseases established in health settings world wide. Urinary tract infection represents one of the most infectious pathologies, affecting pregnant women as it has been reported among 20% of pregnant women. Pregnant women are at increased risk of urinary tract infection beginning in the 6th week and peaking during the 22 to 24 weeks. The preventive measures it includes drinking plenty of water , wash hands before using the toilet. *Objectives* : 1) To assess the knowledge regarding urinary tract infections among antenatal mothers. 2)To find the association between knowledge regarding urinary tract infections among antenatal mothers with their selected socio demographic variables. 3)To develop information booklet regarding urinary tract infections. *Methods:* A descriptive study involving 100 antenatal mothers was carried out with interview schedule. Data were collected by using a structured questionnaire. Data regarding socio-demographic characteristics and checklist related to knowledge regarding urinary tract infections. Data were analysed with Cronbach'sAlpha, Correlation Coefficient. Hypothesis H_{01} states that there was no significant association between the levels of knowledge among antenatal mothers with their socio demographic variables. *Results*: Out of 100 study participants, 27% had inadequate knowledge, 49% had moderate knowledge and 24% had adequate knowledge. *Conclusion* : There should be improve knowledge regarding urinary tract infections among antenataal mothers in order to improve the health of the maternal and child health.

Keywords: Urinary Tract Infections; E.Coli; Antenatal Mothers.

Introduction

Urinary tract infections (UTI$_s$), are caused by the presence and growth of microorganisms in the urinary tract, and are perhaps the single commonest bacterial infections of mankind [1]. The urinary tract consists of the organs that collect and store urine and release it from the body which includes kidneys, bladder and urethra [2]. Urinary tract infections are the most frequent bacterial infection in women [3] and it occur four times more frequently in females than in males [4]. They occur most frequently between the age of 16 and 35 years, with 10% of women getting

an infection yearly and 60% having an infection at some point in their lives [5]. The female gender itself is a risk factor because of their shorter urethra, its proximity to the vagina and anus and the inability of women to empty their bladder completely [6]. Other main factors which make females more prone to urinary tract infection are pregnancy and sexual activity. Women with a history of urinary tract infections are at increased risk of having a UTI during pregnancy and other risk factors for urinary tract infections during pregnancy include lower socio economic status, individual hygiene, sickle cell trait and anemia, increased parity or age and lack of prenatal care [7]. Abnormalities of urinary tract or stones, diabetes mellitus, immunosupression and past history of urinary tract infection tend to increase the risk [8]. Actually the term variety of conditions urinary tract infection represent a wide variety of conditions, including asymptomatic forms of urinary tract infections, urethritis, cystitis, acute pyelonephritis and pyelonephritis with bacteremia or sepsis [9]. In recent years bacteriuria of pregnancy has drawn attention of obstetricians all over the world because of its effects on the mother and fetus. Pregnant women are at increased risk for urinary tract infections. Beginning in week 6 and peaking during weeks 22 to 24 [10]. Urinary tract infection represents one of the most infectious pathologies, affecting pregnant women as it has been reported among 20% of pregnant women and it is the most common cause of admissions in obstetrical wards[11]. Abortion, small birth size, maternal anemia, hypertension, preterm labor, phlebitis, thrombosis and chronic pyelonephritis are related to urinary tract infection during pregnancy [12]. Escherichia coli has been found to be the commonest cause of urinary tract infection among pregnant . Klebsiella, enterobacter, proteus species and gram positive bacteria account for the remaining cases. Three common clinical manifestations of urinary tract infections in pregnancy are asymptomatic bacteriuria, acute cystitis , and acute pyelonephritis [13]. Urinary tract infection in pregnant women is also characterised by fever, flank pain, and tenderness. Other symptoms may include nausea, vomiting, frequent urination, urgency, dysuria, premature birth, and low birth weight [14]. Standard quantitative urine culture should be performed routinely at first antenatal visit. The presence of bacteriuria in urine should be confirmed with a second urine culture. Dipstick testing should not be used to screen for bacterial urinary tract infection at first or subsequent antenatal visits. Dipsticks to test only for protienuria and the presence of glucose in the urine should be used for screening at the first and subsequent antenatal visits as a more cost effective alternative to multi reagent dipsticks that detect the presence of nitrite, leucocyte esterase and blood in addition to protein and glucose [15]. Urinary tract infections (UTI$_S$) are one of the most frequent complications of pregnancy. When the lower urinary tract infections of asymptomatic bateriuria and cystitis are not eradicated, the subsequent risk of the development of pyelonephritis is increased. The associated decreased maternal morbidity and fetal prematurity are the goals of a screening and treatment program for pregnant women [16]. The main stay of treatment is antibiotics for recurrent urinary tract infections before birth included a daily dose of nitrofurantoin and close surveillance of pregnant women [17]. Preventive measures for urinary tract infections include drinking plenty of water, wipe from front to back after urinating or defecating , wash hands before using the toilet, use washed cloth to clean the perineum , avoiding potentially irritating feminine products like deodorant sprays and powders wear all cotton under garments [18]. Home remedies are helpful for treating urinary tract infection and preventing recurrent urinary tract infection. Home remedies can use while first sign of urinary tract infection ounces and loss of water helps for acidification of urine [19].

Methodology

After obtaining permission from the HOD, Dept. Of obstetrics and gynaecology, MCH Center,Tirupati.The subjects were approached individually with the permission of authorities. The data was collected from antenatal mothers with informed consent. The sample was selected by non-probability convenient sampling technique. The total 100 antenatal mothers were interviewed by the investigator using a structured interview schedule.

Inclusion Criteria

Antenatal mothers who are willing to participate in the study. Who are attending to the MCH Center, Tirupati, who can understand Telugu / English to read and write.

Association between Demographic Variables with Level of Knowledge Regarding Urinary Tract Infections

There is a significant association between age and level of knowledge at p<0.01 level and source of information regarding urinary tract infection and level of knowledge at p<0.05 level. Hence null hypothesis is rejected.

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Table 1: Item wise distribution of level of knowledge among antenatal mothers

S. No.	Items		Yes	No
1	A urinary tract infection can occur in any part Of the urinary tract	N	24	76
		%	24.00%	76.00%
2	urinary tract infection may begin in the 6th week and will be peak during 22-24th week	N	32	68
		%	32.00%	68.00%
3	It is more commonly observed in sexually active women during pregnancy	N	49	51
		%	49.00%	51.00%
4	Several physiological and hormonal changes during pregnancy may increase the incidence of infection among pregnant women	N	42	58
		%	42.00%	58.00%
5	Urinary tract infection may not be neglected during pregnancy	N	88	12
		%	88.00%	12.00%
6	Shorter urethra which opens nearer to the anus	N	37	63
		%	37.00%	63.00%
7	Structural and hormonal changes will raise the risk of urinary tract infection in pregnancy	N	53	47
		%	53.00%	47.00%
8	Increased weight of enlarging uterus can cause urinary retention leading to infection	N	41	59
		%	41.00%	59.00%
9	Increase the moistness in the perineal area tend to growth of bacteria	N	75	25
		%	75.00%	25.00%
10	Anatomical changes in bladder position in late pregnancy also susceptible for infection	N	28	72
		%	28.00%	72.00%
11	Past history of urinary tract infection tend to increase the risk of infection	N	73	27
		%	73.00%	27.00%
12	Chills, fever are the signs that occur during pregnancy	N	66	34
		%	66.00%	34.00%
13	Nausea and vomiting are the common signs of pregnancy	N	69	31
		%	69.00%	31.00%
14	Frequent urge to urinate is the common symptom during pregnancy	N	71	29
		%	71.00%	29.00%
15	A burning sensation while urinating is the most common symptom	N	79	21
		%	79.00%	21.00%
16	Urinalysis has become the most frequently used test	N	50	50
		%	50.00%	50.00%
17	Renal ultrasound is also used to evaluate the renal system	N	49	51
		%	49.00%	51.00%
18	Urine culture will be positive in case of urinary tract infection	N	45	55
		%	45.00%	55.00%
19	A seven course of antibiotic is normally sufficient for urinary tract infection	N	67	33
		%	67.00%	33.00%
20	Intravenous antibiotic treatment should be guided by urine culture and sensitivity	N	29	71
		%	29.00%	71.00%
21	Intrauterine growth restriction, preeclampsia, preterm deliveries and caesarean deliveries are the complications of urinary tract infections	N	39	61
		%	39.00%	61.00%
22	Consuming plenty of water at least 6-8 glasses per day	N	99	1
		%	99.00%	1.00%
23	Do not delay going to the bath room when you need to urinate	N	79	21
		%	79.00%	21.00%
24	Empty the bladder completely while urinating	N	80	20
		%	80.00%	20.00%
25	After a bowel movement, wipe the perineum yourself from front to back to prevent bacteria	N	75	25
		%	75.00%	25.00%
26	Clean the genitals and perineum before and after intercourse	N	81	19
		%	81.00%	19.00%
27	Avoid sprays and powders and strong soaps that can irritate the urethra and genitals	N	62	38
		%	62.00%	38.00%
28	Better to wear loose cotton under garments only	N	71	29
		%	71.00%	29.00%
29	Consuming balanced nutritious and vitamin c rich foods	N	81	19
		%	81.00%	19.00%
30	Treating constipation as soon as possible	N	49	51
		%	49.00%	51.00%
31	Take showers rather than when ever possible	N	100	0

Table 2: Distribution of level of knowledge regarding urinary tract infections mong antenatal mothers

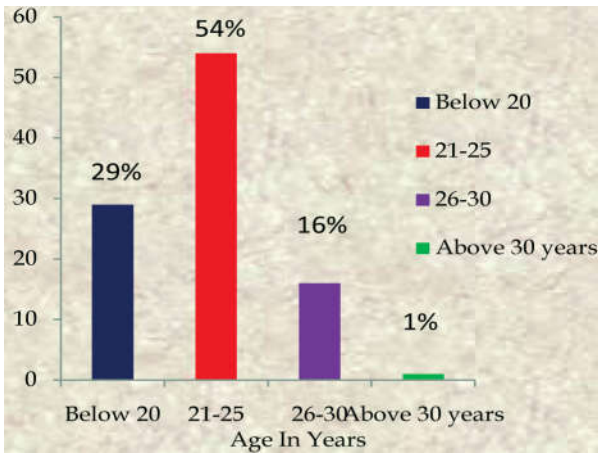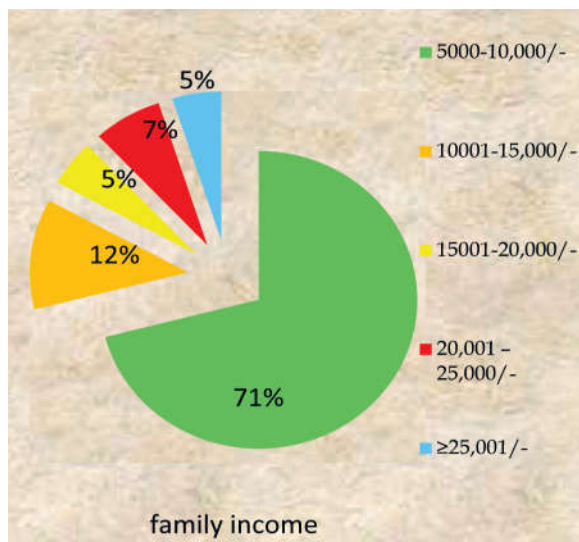| knowledge	Frequency(f)	Percentage(%)
Inadequate knowledge	27	27
Moderate knowledge	49	49
Adequate knowledge	24	24

Fig. 1: Percentage distribution of age among antenatal mothers

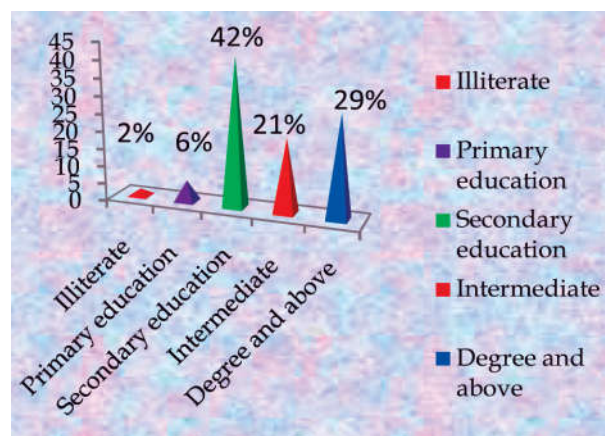**Fig. 2:** Percentage distribution of education among antenatal mothers.

Fig. 3: Percentage distribution of family income among antenatal mothers
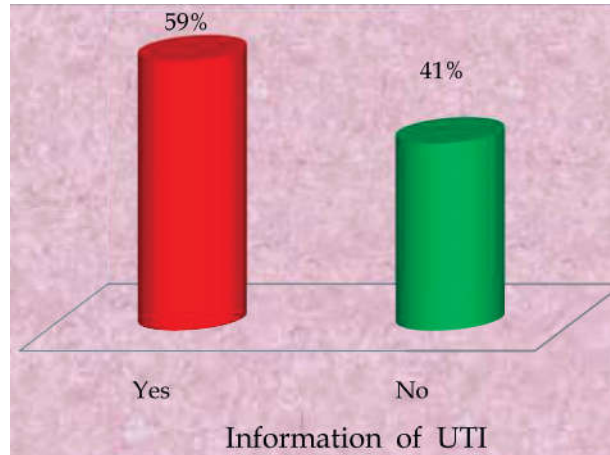
Fig. 4: Percentage distribution of information regarding urinary tract infection among antenatal mothers
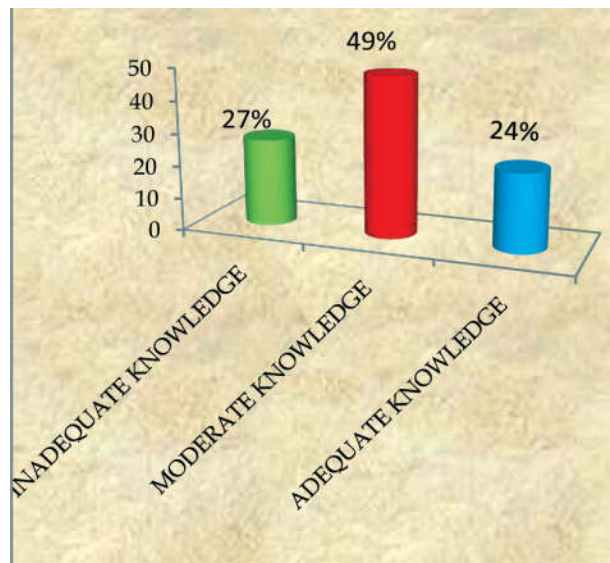

Fig. 5: Percentage distribution of level of knowledge regarding urinary tract infection among atenatal mothers.

There is no significant association between other socio demographic variables like, Religion, family type, residence, educational status, occupational status, family income and level of knowledge regarding urinary tract infection among antenatal mothers.

Discussion

Discussion with the part to the results, obtained from statistical analysis based on the data of the study, the reviewed literature, hypothesis which was selected for the study. The purpose of the study was to "assess the knowledge regarding urinary tract infection among antenatal mothers at MCH center, Tirupati".

The first objective of the study is to assess the knowledge regarding urinary tract infections among antenatal

mothers.

The results in the study shown that knowledge levels of urinary tract infections among antenatal mothers, out of 100 antenatal mothers, 27(27%) antenatal mothers had inadequate knowledge, 49(49%) antenatal mothers had moderate knowledge, and 24(24%) antenatal mothers had adequate knowledge. This study was supported by the descriptive study conducted by sirjana adhikari (2015) on knowledge on urinary tract infection among primigravida women at pokhara university. The study has shown that about 160(65.05%) of the antenatal mothers had the average knowledge on urinary tract infections.

The second objective of the study is to find out the association between knowledge regarding urinary tract infections among antenatal mothers with slected socio demographic variables.

In the present study, when see about the age wise distribution of antenatal mothers 54(54%) belonged to the age group of 21-25 years shown significant, regarding religion antenatal mothers belonged to hindu 64(64%) , most of antenatal mothers are from the joint family it is about 53(53%) and they residing at the urban area 8(88%) , coming to the educational status of the mother most of them were from the secondary education about 42(42%) , next coming to the occupational status of the mother 92(92%) were belonged to the house wife, were as the income of the family per month is 5,000-10,000, source of information regarding urinary tract infection among antenatal mothers 59(59%) were answered correct it has shown significant, and coming to the source of information 55(55%) of the antenatal mothers had got the information through health worker the result has shown significant.

The results of the present study has supported by the Reshma Rozalin Noronha (2016) has been conducted on prevalence, knowledge and the effectiveness of awareness programme on urinary tract infections among antenatal mothers attending the outpatient department of tertiary level hospital, manipal. The study was conducted on 1000 antenatal mothers from the medical record section to check the prevalence of UTI. Knowledge was assessed on UTI among 60 antenatal mothers during second trimester. The prevalence was 210 records (21%) present and 790(79%) no history of UTI. The result showed that 46.67% had good knowledge and 53.33% had average knowledge on UTI . Hence concluded that paired 't' test on the pretest and post test knowledge scores on UTI , found to be significant (p<0.001) [20].

So, H_{01} shows that there was no significant association between level of knowledge with socio demographic variables.

Conclusion

The study findings revealed that, Knowledge regarding urinary tract infections among antenatal mothers, out of 100 antenatal mothers, 27(27%) of antenatal mothers had inadequate knowledge, 49(49%) of antenatal mothers had moderate knowledge and 24(24%) had adequate knowledge. A majority of antenatal mothers were having moderate knowledge of urinary tract infections and some socio demographic variables were statistically significant, and hence it can be concluded that, there should be improvement in knowledge regarding urinary tract infections in order to improve the maternal and child health.

Recommendations

- An experimental study could be conducted with the help of planned health education programme on prevention of urinary tract infections.

- A comparative study could be done between urban and rural areas.

- Similar study can be conducted by using experimental and control groups.

- Instructional material must be prepared such as reading packages and video films on urinary tract infections and its preventive measures, which could be used in the community centers periodically.

- There should be in service education program for health workers about prevention of urinary tract infection.

Acknowledgement

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