



## International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

ISSN:2347-6567

IJAMSCR |Volume 5 | Issue 1 | Jan - Mar - 2017  
www.ijamscr.com

Research article

Medical research

### Pregnancy with urinary tract infection and foetal outcome in selected health care facilities in sebha, libya.

Darling .B. jiji<sup>1\*</sup>, Bazil Alfred Benjamin<sup>2</sup>

<sup>1</sup>Lecturer in college of nursing, Sebha University, Sebha.

<sup>2</sup>Radiographer in Ministry of health, Brack, Shathi.

\*Corresponding Author: Darling .B. jiji

Email id: jijinjijin2000@gmail.com

#### ABSTRACT

##### Aim of the study

Infections of the urinary tract (UTI) are the second most common type of infection in the body. The common problem during pregnancy was urinary tract infection. Pregnancy is one of the factors which increase the risk of UTI partly due to the pressure of gravid uterus on the ureters causing stasis of urine flow and is also attributed to the humoral and immunological changes during normal pregnancy. The aim of the study were to determine the prevalence of urinary tract infection among pregnant women and find out the maternal and the foetal outcome among pregnancy with urinary tract infection and pregnancy without urinary tract infection women in selected hospital of Sebha , Libya.

##### Materials and Methods

Non-probability purposive sampling technique was used to obtain pregnancy with urinary tract infection women and pregnancy without urinary tract infection women. A sample of 100 pregnancy with urinary tract infection women and 100 pregnancy with urinary tract infection women were selected. Data was collected using structured interview schedule.

##### Results

Findings of the study showed that 32% UTI gravid women had pre-term delivery; 35% UTI gravid women had postpartum haemorrhage and 34% UTI gravid women had delayed episiotomy wound healing. Regarding the foetal outcome 36% babies had asphyxia neonatorum; 40% babies had low birth weight; 35% prematurity and 38% babies had intra-uterine growth retardation [IUGR]. There was significant association (at  $p < 0.05$ ) in maternal and foetal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women.

##### Conclusion

Findings of the study indicated the need to conduct frequent assessment of knowledge and risk factors of urinary tract infection during pregnancy. Awareness programmes should be conducted among the pregnant women for their promotion of health. One of the most important function of antenatal care (ANC) is to detect high risk pregnancies and to give them the necessary care. Early detection of urinary tract infection among pregnant women is important in reducing the maternal and neonatal morbidity and mortality. Considering the importance of UTI in pregnant women which is responsible for several complications, its diagnosis and treatment are essential to maintain the health of mother and baby.

**Keywords:** Pregnant women, Pregnancy with urinary tract infection, Pregnancy without urinary tract infection, Maternal outcome, Foetal outcome. UTI-urinary tract infection

## INTRODUCTION

Urinary tract infection (UTI) also called bladder infection, is a bacterial inflammation in the urinary tract. Pregnant women are at increased risk for UTI's starting in week 6 through week 24. The reasons for increased probability of infection in pregnant women are probably increased bladder volume and its expansion and expanded ureter.[1] Anatomical and physiological changes occurring during pregnancy alter the course of bacteriuria and make pregnant women more susceptible to UTI complications such as pyelonephritis.[2] Urinary tract infection and its associated complications are the cause of nearly 150 million deaths per year worldwide. The disease can be developed in 40% - 50% of women and 5% of men. [2, 3]

Urinary tract infections are common during pregnancy, and the most common causative organism is *Escherichia coli*. [3] Asymptomatic bacteriuria can lead to the development of cystitis or pyelonephritis. All pregnant women should be screened for bacteriuria and subsequently treated with antibiotics such as nitrofurantoin, sulfisoxazole or cephalexin. [4, 5] Patients with urinary tract infection had significantly higher rates of intra-uterine growth retardation, pre-eclampsia, caesarean deliveries and pre-term deliveries. [6]

Studies have shown that urinary tract infection in pregnancy may result in maternal and foetal morbidity. [7 -10] The pregnant woman should be educated, about the physiological changes during pregnancy which may be one of the risk factors for development of urinary tract infection and also its prevention. Regular antenatal care should be taken to minimize the complications of pregnancy, and to ensure a healthy maternal and foetal outcome. [11]

Pregnant women seem no more prone to UTIs than other women. However, when a UTI does occur in a pregnant woman, it is more likely to travel to the kidneys. According to some reports, about 4 to 5 percent of pregnant women develop a UTI. [12, 13] Many women suffer from frequent UTIs. About 20 percent of young women with a first UTI will have a recurrent infection. [14-16] With each UTI, the risk that a woman will continue having recurrent UTIs increases. [15,16,17] Some women have three or more UTIs a year. However, very few women will have frequent infections throughout their lives. More typically, a woman will have a period of 1 or 2 years with frequent

infections, after which recurring infections cease. Men are less likely than women to have a first UTI. But once a man has a UTI, he is likely to have another because bacteria can hide deep inside prostate tissue. Anyone who has diabetes or a problem that makes it hard to urinate may have repeat infections. [18-21]

Following sexual intercourse, most women have a significant number of bacteria in their urine, but the body normally clears them within 24 hours. However, some forms of birth control increase the risk of UTI. [22,23] In some women, certain spermicides may irritate the skin, increasing the risk of bacteria invading surrounding tissues. Using a diaphragm may slow urinary flow and allow bacteria to multiply. Condom use is also associated with increased risk of UTIs, possibly because of the increased trauma that occurs to the vagina during sexual activity. Using spermicides with diaphragms and condoms can increase risk even further. [22-27] Another common source of infection is catheters, or tubes, placed in the urethra and bladder. Catheters interfere with the body's ability to clear microbes from the urinary tract. Bacteria travel through or around the catheter and establish a place where they can thrive within the bladder. [28]

Urinary tract infections are the second most common type of infection in the body, accounting for about 8.1 million visits to health care providers each year. [23-25] Women are especially prone to UTIs for anatomical reasons. One factor is that a woman's urethra is shorter, allowing bacteria quicker access to the bladder. Also, a woman's urethral opening is near sources of bacteria from the anus and vagina. For women, the lifetime risk of having a UTI is greater than 50 percent. [29] UTIs in men are not as common as in women but can be serious when they occur. Most UTIs are caused by bacteria that live in the bowel. The bacterium *Escherichia coli* (*E. coli*) causes the vast majority of UTIs. Microbes called *Chlamydia* and *Mycoplasma* can infect the urethra and reproductive system but not the bladder. *Chlamydia* and *Mycoplasma* infections may be sexually transmitted and require treatment of sexual partners. [30]

The urinary tract is a common site of infection in humans. During pregnancy, urinary tract infection (UTI) is associated with increased risks of maternal and neonatal morbidity and mortality, even when the infection is asymptomatic. [13, 14]

By mapping available rates of UTI in pregnancy across different populations, we emphasize this as a problem of global significance. Many countries with high rates of preterm birth and neonatal mortality also have rates of UTI in pregnancy that exceed rates seen in more developed countries.[27,29] A global analysis of the aetiologies of UTI revealed familiar culprits as well as emerging threats. Screening and treatment of UTI have improved birth outcomes in several more developed countries and would likely improve maternal and neonatal health worldwide. However, challenges of implementation in resource-poor settings must be overcome. We review the nature of the barriers occurring at each step of the screening and treatment pipeline and highlight steps necessary to overcome these obstacles. It is our hope that the information compiled here will increase awareness of the global significance of UTI in maternal and neonatal health and embolden governments, non-governmental organizations, and researchers to do their part to make urine screening and UTI treatment a reality for all pregnant women.[30]

After anaemia, UTIs are the second common complications in pregnant women, which if not controlled well, can adversely affect the health of infant or the pregnant mother. [10,11] Pregnancy UTI is classified into two categories of symptomatic and asymptomatic. [27] Based on performed researches, the prevalence of symptomatic urinary tract infection in pregnant women has been 17.9% and asymptomatic form in 13%. If asymptomatic infection is not treated, it leads to some clinical manifestations in mother and new born. [18-21]

Increased age, number of childbirths, number of intercourses per week, diabetes, recessive sickle cell anaemia, previous history of UTI, immunodeficiency and urinary tract abnormalities can increase the risk of UTI in pregnant women [30] The incidence of UTI increases by pregnancy.[27,28] UTI has a conspicuous role in increasing the number of stillbirth deliveries.[25-29] In addition, anaemia, preeclampsia and premature rupture of foetal membranes, respiratory failure and risk of septicaemia and shock are other risk factors in UTI pregnancy.[17, 23] Moreover, children born with mothers with pyelonephritis are much more prone to impairment of mental and motor development. There is a significant statistical

correlation between UTI and congenital retardation.[29,30] In addition, according to some studies, UTIs are associated with premature delivery, low-birth-weight infants, caesarean delivery, morphological abnormalities and infant mortality.[32] pregnant women with poor personal hygiene have more chances to develop UTI.[32,33,34]

Urinary tract infection is more commonly seen in primi gravida than multiparous. Ignorance about the potential of this health hazard also constitutes a barrier that prevents the initiation of preventive and remedial measures at appropriate time. Comparing to the urban population most of the pregnant women belonging rural area are still not aware about this. Previous history of urinary tract infection increases the chance of recurrent infection by 50%, presence of asymptomatic bacteriuria increases the chance by 25%, and abnormality in the renal tract is found in about 25%. About 2-10% of young women are susceptible to asymptomatic bacteriuria in pregnancy on routine screening. If not detected early and treated promptly, this infection complicates 1-3% of all pregnancies. [25, 29]

According to 1997 survey, urinary tract infection accounted for nearly 7 million outpatient cases and 1 million emergency cases during pregnancy. It is resulting in 0.1 million hospitalizations. As per the WHO report, 20 to 50% of pregnant women will experience bacteriuria in their pregnancy, 5 to 10 % of them are getting expose in their 1st pregnancy. [30-32]

Studies have shown that urinary tract infection in pregnancy may result in maternal and foetal morbidity. The pregnant woman should be educated, about the physiological changes during pregnancy which may be one of the risk factors for development of urinary tract infection and also its prevention. Regular antenatal care should be taken to minimize the complications of pregnancy, and to ensure a healthy maternal and foetal outcome.

### **Objectives of this study were to**

1. To compare the maternal outcome of pregnancy with urinary tract infection women and pregnancy without urinary tract infection women

2. Compare the foetal outcome of pregnancy with urinary tract infection women and pregnancy without urinary tract infection women.

### Materials and methods

To achieve the objectives a descriptive research design was adopted. Non-probability purposive sampling technique was used to obtain pregnancy with urinary tract infection and pregnancy without urinary tract infection women. A sample of 100 pregnancies with urinary tract infection and 100 pregnancies without urinary tract infection women were selected. The study was conducted at selected hospital in Sebha, Libya. Data was collected using structured interview schedule. It consisted of three parts, viz. Part –I, that helped to collect the demographic data of pregnancy with urinary tract infection women with pregnancy without urinary tract infection women; Part – II, that was aimed at assessing the maternal outcome of pregnancy with urinary tract infection women with pregnancy without urinary tract infection women. Assessment proforma and measurement inch tapes were used to assess the preterm delivery, premature rupture of membrane and anaemia. Noronha, (1999) developed episiotomy wound assessment scale was used to assess the episiotomy wound healing. Part – III, that was aimed at assessing the foetal outcome of pregnancy with urinary tract infection women with pregnancy without urinary tract infection women. Apgar score was used to assess asphyxia neonatorum. A standardized weighting scale was used to check the birth weight of the baby. Dubowitz scale was used to determine prematurity and IUGR. Dubowitz graph was used to plot the final score. The prepared tool was validated by experts. The reliability of tool was found to be  $r = 0.98$ .

### RESULTS

The maternal and neonatal complications of a UTI during pregnancy can be devastating. The study sample consisted of 100 pregnancy with urinary tract infection and 100 pregnancy

without urinary tract infection women. Table 1 indicate that, maximum 44% of pregnancy with urinary tract infection women belongs to the age group of 20 and below; Regarding education 38% pregnancy with urinary tract infection women studied up to secondary school. In both the groups maximum 44% pregnancy with urinary tract infection women and 50% pregnancy without urinary tract infection women were employed respectively. In both the groups maximum 39% pregnancy with urinary tract infection women. Maximum 58% pregnancy with urinary tract infection women were primi gravidae and majority 60% pregnancy without urinary tract infection women were multi gravidae. Table 2 shows that, there was significant association in maternal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women. Majority 32% pregnancy with urinary tract infection women had preterm delivery whereas 15% pregnancy without urinary tract infection women had preterm delivery. Maximum 35% pregnancy with urinary tract infection women and 18% pregnancy without urinary tract infection gravid women had anaemia. In the both group 34% pregnancy with urinary tract infection women and 14% pregnancy without urinary tract infection women had partial episiotomy wound healing. The incidence of preterm delivery  $\chi^2 8.03$  ( $P >0.05$ ), anaemia  $\chi^2 7.41$  ( $P >0.05$ ) and episiotomy wound healing  $\chi^2 10.96$  ( $P >0.05$ ) respectively. Table 3 shows that, there was significant association in foetal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women. The incidence of asphyxia neonatorum  $\chi^2 7.24$  ( $P >0.05$ ), low birth weight  $\chi^2 7.57$  ( $P >0.05$ ), prematurity  $\chi^2 8.43$  ( $P >0.05$ ) and IUGR  $\chi^2 12.27$  ( $P >0.05$ ) respectively. It also implies that there is significant association in incidence of asphyxia neonatorum, low birth weight, prematurity and IUGR between pregnancy with urinary tract infection and pregnancy without urinary tract infection gravid women.

**Section I. Description of baseline proforma****Table 1. Frequency and percentage distribution of sample characteristics of pregnancy with urinary tract infection women and pregnancy without urinary tract infection women**

Variables	pregnancy with urinary tract infection	pregnancy without urinary tract infection
	N=100 frequency & percentage	N=100 frequency & percentage
Age ( in years)		
20 and below	44	23
21 – 28	35	59
29 – 35	11	15
36 and above	10	3
Educational status		
Illiterate	2	-
Primary	35	3
Secondary	38	26
Higher secondary	22	46
Graduate	3	25
Occupation		
Employed	44	50
Unemployed	56	50
Monthly family income (dinar)		
200 and below	38	27
201 - 400	39	39
401 and above	23	34
Gravidity		
Primi gravida	58	40
Multi gravida	42	60

Table 1 indicate that, maximum 44% of pregnancy with urinary tract infection women belongs to the age group of 20 and below; whereas in pregnancy without urinary tract infection women majority 59% were between 21 – 28 years. Regarding education 38% pregnancy with urinary tract infection women studied up to secondary school whereas majority 46% pregnancy without urinary tract infection women studied up to higher secondary school. In both the groups maximum 44% pregnancy with

urinary tract infection women and 50% pregnancy without urinary tract infection women were employed respectively. In both the groups maximum 39% pregnancy with urinary tract infection women and 39% pregnancy without urinary tract infection women were had 201 – 400 LD as a monthly family income. Maximum 58% pregnancy with urinary tract infection women were primi gravidae and majority 60% pregnancy without urinary tract infection women were multi gravidae.

**Table 2 Frequency and percentage distribution and association of Maternal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women**

Variables	pregnancy with urinary tract infection	pregnancy without urinary tract infection	Chi-square	P – value
	N=100	N=100		
<b>Maternal outcome</b>				
Preterm delivery				
Present	32	15	8.03	3.84

Absent	68	85		
Anaemia				
Present	35	18	7.41	3.84
Absent	65	82		
Episiotomy wound healing				
Partially healed	34	14	10.96	3.84
Healed	66	86		

Table 2 shows that, there was significant association in maternal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women. Majority 32% pregnancy with urinary tract infection women had preterm delivery whereas 15% pregnancy without urinary tract infection women had preterm delivery. Maximum 35% pregnancy with urinary tract infection women and 18% pregnancy without urinary tract infection gravid women had anaemia. In the both group 34% pregnancy with urinary

tract infection women and 14% pregnancy without urinary tract infection women had partial episiotomy wound healing. The incidence of preterm delivery  $\chi^2$  8.03 (P >0.05), anaemia  $\chi^2$  7.41 (P >0.05) and episiotomy wound healing  $\chi^2$  10.96 (P >0.05) respectively. It also implies that there is significant association in incidence of preterm delivery, anaemia and episiotomy wound healing between pregnancy with urinary tract infection and pregnancy without urinary tract infection gravid women.

**Table 3 Frequency and percentage distribution and association of foetal outcome among pregnancy with urinary tract infection women and pregnancy without urinary tract infection women**

Variables	pregnancy with urinary tract infection	pregnancy without urinary tract infection	Chi-square	P-value
<b>Foetal outcome</b>	<b>N=100</b>	<b>N=100</b>		
Asphyxia				
Present	36	19	7.24	3.84
Absent	64	81		
Low birth weight				
Present	40	22	7.57	3.84
Absent	60	78		
Prematurity				
Present	35	16	9.56	3.84
Absent	65	84		
IUGR				
Present	38	16	12.27	3.84
Absent	62	84		

[UTI increases the risk of low-birth-weight infants (weight less than 2,500 g [5 lb, 8 oz]), prematurity (less than 37 weeks of gestation at delivery) and preterm, low-birth-weight infants (weight less than 2,500 g and less than 37 weeks of gestation at delivery)]

Table 3 shows that, there was significant association in foetal outcome among pregnancy with urinary tract infection women and

pregnancy without urinary tract infection women. Majority 36% pregnancy with urinary tract infection women's babies had asphyxia whereas 19% pregnancy without urinary tract infection women's babies had asphyxia. Maximum 40% pregnancy with urinary tract infection women's babies had low birth weight and 18% pregnancy without urinary tract infection women's babies had low birth weight. In the both group 35%

pregnancy with urinary tract infection women's babies had prematurity and 16% pregnancy without urinary tract infection women's babies had prematurity. Majority 38% pregnancy with urinary tract infection women's babies had IUGR and 16% pregnancy without urinary tract infection women's babies had IUGR. The incidence of asphyxia neonatorum  $\chi^2$  7.24 ( $P > 0.05$ ), low birth weight  $\chi^2$  7.57 ( $P > 0.05$ ), prematurity  $\chi^2$  8.43 ( $P > 0.05$ ) and IUGR  $\chi^2$  12.27 ( $P > 0.05$ ) respectively. It also implies that there is significant association in incidence of asphyxia neonatorum, low birth weight, prematurity and IUGR between pregnancy with urinary tract infection and pregnancy without urinary tract infection gravid women.

## DISCUSSION

Urinary tract infection is a serious health problem affecting millions of people each year. Infections of the urinary tract (UTIs) are the second most common type of infection in the body. Symptoms. Urinary tract infection is an excellent example of host-microbe interaction. Symptoms of UTI include frequent feeling or need to urinate, pain during urination, and cloudy urine. The most common cause for the infection is unhygienic bathrooms where these bacteria are found. Urinary tract infection (UTI) is the leading cause of morbidity and health care expenditures in persons of all the ages.

## CONCLUSION

Out of 100 pregnancy with urinary tract infection women and 100 pregnancy without urinary tract infection women, 32% pregnancy with urinary tract infection women had preterm delivery and 15% pregnancy without urinary tract infection women had preterm delivery. 35% pregnancy with urinary tract infection women had anaemia and 18% pregnancy without urinary tract infection women had anaemia. 34% pregnancy with urinary tract infection women had partial episiotomy wound healing and 14% pregnancy without urinary tract infection women had partial episiotomy wound healing on fifth day. It also implies that there is significant association in incidence of preterm delivery, anaemia and episiotomy wound healing between pregnancy with urinary tract infection and pregnancy without

urinary tract infection women. Among pregnancy with urinary tract infection and pregnancy without urinary tract infection women's babies; 36% babies got asphyxia among pregnancy with urinary tract infection mothers and 19% babies got asphyxia among pregnancy without urinary tract infection mothers, 40% babies got low birth weight among pregnancy with urinary tract infection mothers and 22% babies got low birth weight among pregnancy without urinary tract infection mothers, 35% babies got prematurity among pregnancy with urinary tract infection mothers and 16% babies got low birth weight among pregnancy without urinary tract infection mothers, 38% babies got IUGR among pregnancy with urinary tract infection mothers and 16% babies got IUGR among pregnancy without urinary tract infection mothers. Early screening and proper treatment of pregnancy with urinary tract infection is very much important in reducing the maternal and neonatal morbidity and mortality.

## Recommendation

The prevalence of symptomatic and asymptomatic bacteriuria among women during pregnancy is very common and the previous history of the infection is a major risk factor. The effect of asymptomatic UTI can be subsided by employing suitable treatment which in turn prevents the adverse consequences of its progress. Urinary tract infection is a consequence of poor diagnosis during pregnancy and this in turn enhances the scope of infection and pregnant women under such circumstances are susceptible to serious complication. It has been suggested that risk factors for UTI can be categorized as anatomic and physiologic, genetic and behavioural. Anatomical and physiological anomalies, which restrain the flow of urine, delay bladder emptying or cause an increased post-void residual volume, seem to be risk factors for UTI. It is a widely accepted fact that pregnancy is associated with variety anatomical changes in women followed by hormonal and physical changes which increases the possibility of urinary stasis which in turn causes the backward flow of urine from bladder to ureter. This as a consequence of physical aberrations enhances the occurrence of UTI among women during pregnancy. Drink 6-8 glasses of water each demand unsweetened cranberry juice regularly.

Eliminate refined foods, fruit juices, caffeine, alcohol, and sugar. Take Vitamin C (250 to 500 mg), Beta-carotene (25,000 to 50,000 IU per day) and Zinc (30-50 mg per day) to help fight infection. Develop a habit of urinating as soon as the need is felt and empty your bladder completely when you urinate. Urinate before and after intercourse. Avoid intercourse while you are being treated for an UTI. After urinating, blot dry (do not rub), and keep your genital area clean. Make sure you wipe from the front toward the back. Avoid using strong soaps, douches, antiseptic creams, feminine hygiene sprays, and powders. Change underwear and pantyhose every day. Avoid wearing tight-fitting pants. Wear all cotton or cotton-crotch underwear and pantyhose. Don't soak in the bathtub longer than 30 minutes or more than twice a day. Many researchers have

regarded UTI as the most common bacterial infection encountered by human beings and have attempted to investigate the antimicrobial pattern exhibited by these pathogens responsible for the infection. Scientists think that hormonal changes and shifts in the position of the urinary tract during pregnancy make it easier for bacteria to travel up the ureters to the kidneys and cause infection. For this reason, health care providers routinely screen pregnant women for bacteria in the urine during the first 3 months of pregnancy.

### Acknowledgement

The authors wish to thank the all pregnant women who took part in this study. We are thankful to the management and staff of the health care facilities for allowing us to carry out this research in their health care centres.

### REFERENCES

- [1]. Parveen K, Momen A, Begum AA, Begum M , Prevalence of urinary tract infection during pregnancy. J Dhaka National Med College Hospital: 17(2), 2011, 8-12.
- [2]. Koffuor GA, Boye A, Siakwa PM, Boampong JN, Ephraim RKD, et al. Asymptomatic urinary tract infections in pregnant women attending antenatal clinic in Cape Coast, Ghana. E3 Journal of Medical Research 1(6), 2012, 74-83.
- [3]. Kolawole AS, Kolawole OM, Kandaki-Olukemi YT, Babatunde SK, Durowade KA, et al. Prevalence of urinary tract infections (UTI) among patients attending Dalhatu Araf Specialist Hospital, Lafia, Nasarawa State, Nigeria. International Journal of Medicine and Medical Sciences1(5), 2009, 163-167
- [4]. Hooton TM, et al. Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: International clinical practice guidelines from the Infectious Diseases Society of America. Clinical Infectious Diseases. 50(5), 2010, 625–663.
- [5]. Tolkoff-Rubin NE, Cotran RS, Rubin RH. Urinary tract infection, pyelonephritis, and reflux nephropathy. In: Brenner BM, ed. Brenner & Rector's The Kidney. Philadelphia: Saunders; 2(8), 2008, 1203–1238.
- [6]. Schaeffer AJ. Infections of the urinary tract. In: Walsh PC, Retik AB, Vaughan ED, Wein AJ, eds. *Campbell's Urology*. Philadelphia: Saunders; 8(1), 2002, 515–602.
- [7]. Anderson GG, Palermo JJ, Schilling JD, et al. Intracellular bacterial biofilm-like pods in urinary tract infections. *Science*. 301, 2003, 105–107.
- [8]. Stapleton AE, Nudelman E, Clausen H, Hakomori S, Stamm WE. Binding of uropathogenic *Escherichia coli* R45 to glycolipids extracted from vaginal epithelial cells is dependent on histo-blood group secretor status. *Journal of Clinical Investigation*. 90, 1992, 965–972.
- [9]. Sharma JB, Aggarwal S, Singhal S, Kumar S, Roy KK. Prevalence of urinary incontinence and other urological problems during pregnancy: a questionnaire based study. *Archives of Gynaecology and Obstetrics* 279(6), 2009, 845–851.
- [10]. Awonuga DO, Fawole AO, Dada-Adegbola HO, Olola FA, Awonuga OM Predictors of asymptomatic bacteriuria among obstetric population in Ibadan. *Niger J Med* 19(3), 2010, 339.
- [11]. Hooton TM, Scholes D, Stapleton AE, et al. A prospective study of asymptomatic bacteriuria in sexually active young women. *N Eng J Med* 343(14), 2000, 1037–1039.
- [12]. Masinde A, Gumodoka B, Kilonzo A, Mshana SE , Prevalence of urinary tract infection among pregnant women at Bugando Medical Centre, Mwanza, Tanzania. *Tanzan J Health Res* 11(3), 2009, 154–9.



- [13]. Akinloye O, Ogbolu DO, Akinloye OM, Terry Alli OA, Asymptomatic bacteriuria of pregnancy in Ibadan, Nigeria: a re-assessment. *Br J Biomed Sci* 63(3), 2006, 109–12.
- [14]. Liao Y, Yang C, Kao C, Dougherty M, Lai Y, et al. Prevalence and impact on quality of life of lower urinary tract symptoms among a sample of employed women in Taipei: A questionnaire survey. *Int J Nurs Stud* 46, 2009, 633–644.
- [15]. Dielubanza EJ, Urinary tract infections in women. *Med Clin North Am* 95(1), 2011, 27–41.
- [16]. Demilie T, Beyene G, Melaku S, Tsegaye W, Urinary bacterial profile and antibiotic susceptibility pattern among pregnant women in North West Ethiopia. *Ethiop J Health Sci* 22(2), 2012, 121-128.
- [17]. Rajaratnam A, Baby NM, Kuruvilla TS, Machado S. Diagnosis of asymptomatic bacteriuria and associated risk factors among pregnant women in mangalore, karnataka, India. *J Clin Diagn Res.* 8(9), 2014, 23–5.
- [18]. Yasemi M, Peyman H, Asadollahi K, Feizi A, Soroush S, Hematian A, et al. Frequency of bacteria causing urinary tract infections and their antimicrobial resistance patterns among pediatric patients in Western Iran from 2007-2009. *J Biol Regul Homeost Agents.* 28(3), 2014, 443–8.
- [19]. Masinde A, Gumodoka B, Kilonzo A, Mshana SE. Prevalence of urinary tract infection among pregnant women at Bugando Medical Centre, Mwanza, Tanzania. *Tanzan J Health Res.* 11(3), 2009, 154–9.
- [20]. Litza JA, Brill JR. Urinary tract infections. *Prim Care.* 37(3), 2010, 491–507.
- [21]. Al-Haddad AM. Urinary tract infection among pregnant women in Al-Mukalla district, Yemen. *East Mediterr Health J.* 11(3), 2005, 505–10.
- [22]. Totsika M, Moriel DG, Idris A, Rogers BA, Wurple DJ, et al. Uropathogenic *Escherichia coli* mediated urinary tract infection. *Curr Drug Targets.* 13(11), 2012, 1386–99.
- [23]. Mittal P, Wing DA. Urinary tract infections in pregnancy. *Clin Perinatol.* 32(3), 2005, 749–64.
- [24]. Schnarr J, Smail F. Asymptomatic bacteriuria and symptomatic urinary tract infections in pregnancy. *Eur J Clin Invest.* 38(2), 2008, 50–7.
- [25]. Davidson R. Michele, London L. Maricia. *OLDS Maternal Newborn Nursing and Women’s Health Across the lifespan.* New Jersey; Pearson Prentice Hall, 2008.
- [26]. Wong Donna L, Perry Shannon E. *Maternal and child nursing care.* United States of America: Mosby; 1, 1998, 58, 79.
- [27]. Mc Laughlin. P Sean, Carson C. Culley. *Urinary Tract Infections in Women.* The medical clinics of North America 88, 2004, 417.
- [28]. Mazor Dray, Lew A, Schlaeffer F, Sheiner E. Maternal Urinary Tract infection: is it independently associated with adverse pregnancy outcome? *J Matern Fetal Neonatal Med* 22(2), 2009, 124-8.
- [29]. Gulfareen hyder, Shazia rani, Saima gaffar, “Frequency of bacteriuria during pregnancy”, *nursing research*, 5, 17-20.
- [30]. A.Mahendra, A.Krishne gowda, “Prevalence of symptomatic and asymptomatic UTI in pregnancy”, *journal of health research*, 11(3), 2009, 56-58.
- [31]. Haider G, Zehra N, Munir A A, Haider A. Risk factors of urinary tract infection in pregnancy. *J Pak Med Assoc.* 60(3), 2010, 213-6.
- [32]. Nworie, Eze. U.A., “Prevalence and etiologic agents of urinary tract infection”, *journal of medical science, Riyadh.* 21(4), 2009, 16-8.
- [33]. Al-Haddad A M. Urinary tract infection among pregnant women. *Eastern Mediterranean Health Journal* 11(3), 2005, 505-10.
- [34]. Dhital A D, Badhu B P, Paudel R K, Uprety D K. Effectiveness of structured teaching program in improving knowledge and attitude of Primi parous mothers regarding prevention of Urinary Tract Infection. *University Medical Journal.* 3(4), 2005, 380-3.

**How to cite this article:** Darling .B. jiji, Bazil Alfred Benjamin. Pregnancy with urinary tract infection and foetal outcome in selected health care facilities in sebha, libya. *Int J of Allied Med Sci and Clin Res* 2017; 5(1): 71-79.

**Source of Support:** Nil. **Conflict of Interest:** None declared.