



PREVALENCE OF LOWER URINARY TRACT INFECTION DURING PREGNANCY AND ITS COMPLICATIONS.

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ABSTRACT **Background-** Lower urinary tract infection is the most common disorder during pregnancy which can cause various complications during pregnancy. E coli is the most common organism. The study was conducted on outdoor patients of Jawaharlal Nehru Medical College and Hospital, Bhagalpur Bihar. A total of 300 patients with culture report during second trimester were followed. **Objectives-** The purpose of this study was to estimate the prevalence of UTI among pregnant women and its complications during pregnancy. **Patients and methods –** It is a retrospective cross sectional study, carried out during March 2021- February 2022. **Results-** Results were studied in the form of various complications during pregnancy and deliveries like pregnancy induced hypertension, preterm labour, puerperal pyrexia, and acute pyelonephritis and low birth weight new born.

KEYWORDS : Urinary tract infections, puerperal pyrexia, pregnancy induced hypertension.

INTRODUCTION:-

Urinary tract infection is one of the most common bacterial infection during pregnancy. Various microorganism are able to invade the urinary tract and can be involved in the pathogenesis of urinary tract infection.

The incidence of disease can be 40-50% and after anaemia urinary tract infections (UTIS) are the second common complication during pregnancy which if not controlled can adversely affect the health of infant and the pregnant mother.

UTI in pregnancy is classified into symptomatic and asymptomatic. The involvement of lower urinary tract leading to asymptomatic bacteriuria is the most common cause of UTI during pregnancy. The involvement of upper urinary tract leads to acute pyelonephritis. Various factors which leads to increased incidence of urinary tract infections are increased number of child birth, number of intercourse per week, diabetes, previous history of urinary tract infection, urinary tract abnormalities. Bacterial organisms which cause this disease are E coli, Kleibsell, pneumonia, proteus, acinetobacter, streptococcus group B and pseudomonas aeruginosa. The incidence of urinary tract infection increases from 6th week and reaches peak at 22-24 weeks of gestational age.

The anatomical and physiological changes during pregnancy are responsible for increased incidence of urinary tract infection during pregnancy. Another common reason is glycosuria which is present in 70% of pregnant women, which reduces the ability to fight against invasive bacteria. Since asymptomatic bacteriuria also increases the incidence of various complications during pregnancy It should be treated if detected. (S. Naik 2001)

AIMS AND OBJECTIVES-

1. To find the prevalence of lower urinary tract infection during pregnancy which is responsible for several complications, its diagnosis and treatment?
2. To find the effect of urinary tract infection on pregnancy outcome like pre term labour, premature rupture of membrane, pre eclampsia etc.

Patients And Methods -

It is a retrospective cross sectional study carried during March – 2021 to February 2022. The study was conducted on 300 outdoor patients of Jawaharlal Nehru Medical College and Hospital, Bhagalpur Bihar. The study was conducted after approval from ethical committee. The patients include in the study were between 20th -26th week of gestational age with positive culture report.

The pregnancy outcomes were compared with women of same gestational age but negative culture report.

OBSERVATIONS & RESULTS-

The study was conducted on 300 outdoor patients -150 pregnant women with negative culture report and normal leucocytes count in routine examination of urine and 150 pregnant patients with positive culture report.

Both groups were followed till delivery and various complications were recorded till term, delivery and post partum period.

Table 1 Demographic characteristics of pregnant women included in the study:-

Age	Freq. of urinary tract infection (UTI)
< 25Yrs.	78
25-30	26
>30	21

Table 2 Frequency of urinary tract infections based on season

Season	No. of pregnant patients (20-26 wks) followed with positive culture report
Summer	10
Spring	11
Autumn	36
Winter	68

Table 3 frequency of factors causing urinary tract infections.

Type of bacteria	No. of patients found positive culture report.
E. Coi	67
Coagulase (-) ve staph	19
Kleibsell	28
Acinetobacter	6
Proteus	3
Staph aureus	2

Out of the 150 positive UTI patients 83 patients had asymptomatic bacteria and 67 patients had symptomatic urinary tract infection

Table 1 shows the age group of patients and frequency of UTI.

Table 2 shows that incidence of UTI is maximum during winter season and minimum during summer and spring season.

Table 3 shows that the most common bacteria causing urinary tract infection is Escherichia coli followed by kleibsell & staphylococcus.

The average weight of the infant at birth was 3.0 kg in newborns with healthy mother and 2.76 kg in newborns of mothers with positive culture report.

The prevalence of anaemia in pregnant women with UTI was 60% as compared to 21% without UTI

The incidence of preterm labours and preterm premature rupture of membranes in pregnant women was significantly higher in women

with UTI, where it was >25%, while the incidence in pregnant women without UTI was <5%.

The incidence of puerperal pyrexia in women with UTI were almost double than women without urinary tract infection.

CONCLUSION:-

Based on this cross sectional study following conclusions can be drawn.

1. Urinary tract infection is a very common required bacterial infection which causes various complications during pregnancy.
2. Large majority of urinary tract infections are asymptomatic bacteria it can also cause various complication so should be treated once detected.
3. Escherichia coli is the commonest organism causing urinary tract infection in pregnancy followed by kleibseilla.
4. Women with history of urinary tract infection during pregnancy have increased risk of preterm labour. Preterm rupture of membrane, pre-eclampsia and low birth weight babies.

REFERENCES

1. 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.2014;8(9);oc23-5.
2. Asadi KM, ollomi M, Habibi M, Bouzari S. Cloning of fimH and fic and expression of the fusion protein fimH/Flic from Uro pathogenic Escherichia coli (UPEC) isolated in iran im micro-biol.2012;4(2)55-62.
3. Yasemi M peyman H , asadollahi K, feizi A Soroush S Hematian A ,et al. frequency of bacteria causing rinary tract infections and their antimicrobial resistance patterns among pediatric patients in western iran from 2007-2009 J bio regul homeost agents. 2014;28(3)443-8
4. Gomi H , goto Y, laopaiboon M, Usui R, Mori R, Mori R. Routine blood cultures in the management of pyelonephritis in pregnancy for improving outcomes. Cochrane database syst Rev.2015;13(2):CD009216.
5. Franklin TL, monif GR. Trichomonas vaginalis and bacterial vaginosis. Coexistence in vaginal wet mount preparations from pregnant women J reprod med.
6. Emamghorashi F, Mahmoodi N, tagarod Z, Heydari ST. Maternal urinary tract infection as a risk factor for neonatal urinary tract infection . Iran J Kidney dis.
7. Raza s, pandey s, Bhatt CP. Microbiological analysis of isolates in Kathmandu univ med J (KUM) .
8. Kladensky J, [urinary tract infection in pregnancy; when to treat, how to treat, and what to treat with] . ceska gynekol.
9. Mobbasheri ET, Ghaemi E moujloo M, vakili ma [prevalence of bacteriuria during pregnancy in gorgan, iran]. Gorgan medical journal.
10. Yaghobi RH, Roshan AZPZ , Hajiahmadi M, Nasirim Amiri F. [the role of hygienic behaviour in incidence of urinary tract infection among pregnant women referred to health center, Babol,2003-2005]. J Babol Univ Med Sci. 2006;8(2):56-62.
11. Fathian ZS. Factors affecting delivery Esfahan Health policy 2008;4:786-93.