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FREQUENCY AND TYPE OF INFECTIONS AMONG PREGNANT WOMEN PRESENTING IN GYNAECOLOGY AND OBSTERTICS OPD

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Abstract:

Background: As compared with non pregnant women pregnant women are more severely affected by infections with some organisms including UTI causing organisms, influenza virus, hepatitis E virus, malarial parasites, and candida albicans. The evidence is more limited for organisms that cause coccidiomycosis, measles, small pox and varicella.

Objectives: *To evaluate types of infections among pregnant women visiting antenatal OPD, Jinnah Hospital Lahore.*

Study Design: *Descriptive Cross sectional e study*

Study Setting: *Antenatal OPD, Jinnah Hospital Lahore.*

Duration of Study: *April – June 2015.*

Sampling Technique: *Non probability / purposive sampling*

Data Collection Procedure: *150 pregnant women those fulfilling the inclusion criteria were included in the study. Demographic details and obstetrics history along with types and determinants of infections was evaluated from history; clinical examination and investigation were collected through a self-administered questionnaire. Data was entered and analyzed in SPSS ver: 21.0 and was presented as frequency and percentages.* ***Results:*** *Most common infection among pregnant ladies is urinary tract infection and candida infection 15% of pregnant ladies have UTI, 10% of pregnant ladies have pneumonia 8% have influenza 24.% have candida infection, 6.2% have varicella, 11% have malaria.* ***Conclusion:*** *The conclusion of our study is that pregnant women are at increased risk of certain infections like UTI and candida infections*

Keywords: *Antenatal, pregnancy, Infections, UTI,*

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INTRODUCTION:

As compared with non-pregnant women pregnant women are more severely affected by infections with some organisms including UTI causing organisms, influenza virus, hepatitis E virus, malarial parasites, and candida albicans. The evidence is more limited for organisms that cause coccidiomycosis, measles, small pox and varicella [1,2] As compared with non pregnant women pregnant women are more severely affected by infections with some organisms including UTI causing organisms, influenza virus, hepatitis E virus, malarial parasites, and candida albicans. The evidence is more limited for organisms that cause coccidiomycosis, measles, small pox and varicella. [3]

Pregnancy is one of the factors which increase the risk of UTI. UTI is common with varying prevalence by age, sexual activity and genitourinary abnormalities. In a study the chance of UTI was high among pregnant women in the presence of associated risk factors like anemia, low income level, past history of UTI and sexual activity. [4] Obstruction to the flow of urine in pregnancy leads to stasis and increases the likelihood that pyelonephritis will complicate asymptomatic bacteriuria [5]. There is no clear consensus in the literature on antibiotic choice or duration of treatment for urinary tract infection [6 7 8].

Urinary tract infection may present as asymptomatic bacteriuria, acute cystitis (bladder infection) or pyelonephritis (kidney infection) [9]. Asymptomatic bacteriuria occurs in 2 % to 10 % of all pregnancies. If untreated, up to 30 % of mothers may develop acute cystitis and up to 50 % acute pyelonephritis [9 10 11]. Pregnant women are at increased risk for severe illness from influenza virus infection. During the pandemic of 1918 maternal mortality was 27% and during the pandemic of 1957, 50% of deaths among reproductive age women occurred among those who were pregnant. During 2009 H1N1 influenza A pandemic pregnant was generally at increased risk for severe disease. During 2009 H1N1 pandemic as well as during interpandemic period's women in third trimester of pregnancy were at increased risk for severe disease as compared with women in earlier stages of pregnancy. [3]

Due to the high risk for influenza-related complications, women who will be pregnant during the influenza season should be vaccinated [12]

Pregnant women have a risk of severe Malaria that is three times as high as in non pregnant women. In India, 23% or more maternal deaths between 2004 and2006 were attributed to malaria. [3] Pregnant women in malaria-endemic regions are at risk of becoming infected with Plasmodium falciparum, 1 of 4 parasites that cause malaria in humans [13]

Earlier studies postulated that pregnancy particularly in third trimester is a risk factor for severe Varicella. In 1990 review of 34 published cases of varicella pneumonia mortality among pregnant women was 35% higher among pregnant women than in non pregnant adults. [3]

Varicella zoster virus is a highly contagious DNA virus of the herpes family. It is transmitted by respiratory droplets and by direct personal contact with vesicular fluid [14]

Incubation period lasts 10 to 21 days, and the disease is infectious 48 hours before the rash appears and continues to be infectious until the vesicles crust over [14 15]

As prevention is the most effective strategy for the reduction of maternal complications associated with varicella infections, immunoglobulin prophylaxis is an important objective for susceptible, exposed pregnant women [16]

However , no cases of congenital varicella syndrome were reported in any of the 97 women in whom varicella occurred after post-exposure prophylaxis with anti-VZIG [17]\ Before the advent of antibiotic agents, pregnancy was recognized as risk factor for severe complications of pneumococcal pneumonia including death. [3] Pneumocystis may be perinatally transmitted by HIV-infected women to their children [18].

To determine prevalence of Candida infection in pregnant women with and without diabetes, cross sectional analytical study was performed on 75 diagnosed diabetic pregnant women who were admitted to umaid hospital Jodhpur city Rajhistan India from November 2012 to July 2015 and 50 pregnant women were included as controlled group without diabetes. It was found that Candida was more prevalent in pregnant women with diabetes than ones without diabetes. [19]

The high incidence of vaginitis in pregnant women is related to levels of estrogens [20].

Objectives:

To evaluate types of infections among pregnant women visiting antenatal OPD of Jinnah Hospital, Lahore.

Subjects and Methods:

A cross sectional study was done among the pregnant women visiting antenatal OPD, Jinnah Hospital Lahore. All the pregnant women visiting antenatal OPD, JHL will be included in study during the data collection period. The relative information introduction, types and determinants of infections were collected. A self-administered questionnaire

will be filled in 15 to 20 minutes each. Data was entered and analyzed in SPSS ver: 21.0 and was presented as frequency and percentages.

RESULTS: 150 pregnant females were included in our study out of which 65.33% were between ages 20-30, 28.67% were above 30.63.3% were literate and 36.7% were illiterate while husband of 82% females were literate and 17.3% were illiterate. 80% of pregnant females were house wife 10.7% were factory workers 5.3% were office workers while 4% were laborer. 28.7% husband of these females were factory workers 22 % were office worker, 25% were laborer, 16% were businessman, 5.3% were farmer 2.7% were unemployed.76% had income between 20,000 to 40,000, 54% had income less than 20,000 while 20% had above 40,000. (Table no: 1).44% had gravidity above 5, 31.3% had between 2 -4 and 24.7% had gravidity less than 2. 40% had parity between 2-4, 34.7% had parity less than 2, 17.3% had parity above 5. 50.7% had none abortion, 45.3% had abortion less than 2 and 4 percent had abortion 2-4. (Table no: 2).In 150 pregnant women 23.6% had UTI, 27/0% were suffering from candida infection, 17.7% had malaria, 12.3% had pneumonia, 8% had influenza, 6.2% had varicella. (Table no: 3).

Table no: 1 Demographic history of subjects

Variables n= 150	**Frequency**	**Percent**
< 20 years	**9**	**6.0**
21 – 30 years	98	65.3
➢ 30 years	43	28.7
Educational status		
Illiterate	26	17.3
Literate	124	82.7
occupation		
Laborer / Factory Worker	22	14.7
House Wife	120	80.0
Office Worker	8	5.3
Income status		
< 20000	54	36.0
21000 – 40000	76	50.7
➢ 40000	20	13.3

Table no: 2 Obstetric histories of subjects

Variables n= 150	Frequency	Percent
Gravidity		
< 2	37	24.7
2 - 4	47	31.3
> 5	66	44.0
Parity		
Nil	12	8.0
< 2	52	34.6
2 - 4	60	40.0
> 5	26	17.4
Abortion		
Nill	76	50.7
< 2	68	45.3
2 - 4	6	4.0

Table no: 3 Infection Frequencies (multiple response)

Infection n= 150	Responses		Percent of Cases
	N	Percent	
Urinary Tract Infection	71	23.6%	47.3%
Influenza	27	9.0%	18%
Malaria	53	17.7%	35.3%
Varicella	21	7.0%	14.0%
Pneumonia	37	12.3%	24.7%
Candida Infection	81	27.0%	54.0%
Any Other Infection	10	3.3%	7.3%
Total	300	100.0%	224.7%

DISCUSSION:

Our research was conducted on 150 pregnant ladies in Gynea OPD Jinnah Hospital, Lahore during 18 may 2015 to 18 June 2015. It was found that most common infection among pregnant ladies is urinary tract infection and candidal infection 15% of pregnant ladies have UTI , 10% of pregnant ladies have pneumonia 8% have influenza 24.% have candidal infection, 6.2% have varicella, 11% have malaria. Other than these infections hepatitis B was also common. These infections were more common(65.33%) in age group 20-30 years and 50-

67% patients were having family income 20000-40000 Research conducted on 365 pregnant ladies in Felege Hiwot Refferal Hosital North West Ethioia (21) Chart that 18.9% of ladies have urinary tract infection. In our research 47.3% have urinary tract infection. Research conducted in US Public Health Service center for disease control and prevention in Emory University among 43 pregnant women pneumonia developed in 10%. Our research showed 24.7%had pneumonia, **(22)**

Research conducted on 350,000 ladies in a Canadian University er year, 700 -1050 cases of chicken pox in pregnant women occur annually we encountered 14.0% cases of varicella Research conducted by Shokhlo Malaria Research Unit (Cmru) Thailand, 700 pregnant women has malaria during 1994-2009. In our research, 11% out of 150 have malaria. Research conducted in Nigeria in 2010 on 8443 pregnant ladies, 2458 (29%) ladies have candida. In our research 24% pregnant ladies out of 150 have candidacies.

Research conducted in California in 2009, out of 239 pregnant ladies, 94 pregnant ladies (39.3%) had influenza. In our research, 8% pregnant ladies out of 150 have influenza.
In our research, other than above listed infections, hepatitis B infection was common. In a research conducted in Buea Health District Caameron in 1992 , 9% out of 176 pregnant women had hepatitis BA study conducted on UTI and other infection in amassona southern Nigeria they analysed 138 pregnant females. Out of these 25,3% were infected n there was no relationship betweenage and infection and in our study 65.33% developed infections in age group of 20-30 year. So our study is inconsistant with their study.

CONCLUSION:

The conclusion of our study is that pregnant women are at increased risk of certain infections like UTI and candidal infections are more common in lower middle class women aging 20-30 years.

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