

## Study of Medical Disease Affecting Pregnancy other than Pregnancy induced and its Effect on Outcome

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**KEY WORDS :** Medical diseases affecting pregnancy, Neonatal mortality, Maternal mortality

### ABSTRACT

Total 100 antenatal patients were selected on basis of history, clinical examination and investigation who came in OPD of department of Obstetrics and Gynaecology B.J. Medical College, Ahmedabad, with various medical conditions between May 2020 to september 2020 And observed till the termination of pregnancy. This study does not include those medical conditions which are pregnancy Induced like pregnancy induced hypertention, Gestational diabetes mellitus, Physiological anaemia etc. Study includes those medical conditions which are already presents before pregnancy or not directly related to the pregnancy. Study shows that highest chances of neonatal mortality among studied diseases is seen in pregnancy with jaundice, HIV, HBsAg, Asthma, Heart disease, epilepsy, TB, UTI, influenza, Typhoid, Dengue, thyroid dysfunction in pregnancy. Highest chances of Maternal mortality among studied diseases is seen in pregnancy with jaundice in pregnancy followed by Heart disease, epilepsy, tuberculosis, influenza and dengue in pregnancy. Where chances of Medically terminated abortion in early pregnancy is seen highest with heart disease in pregnancy followed by and thalassemia minor in pregnancy. Highest chances of Spontaneous Abortion. **Aims and Objectives :** Aim is to study the various medical condition which affects pregnancy and its outcome. **Material and methods :** Total 100 Random antenatal patients were selected on basis of history, clinical examination and investigation who came in OPD of department of Obstetrics and Gynecology B. J. Medical College, Ahmedabad, with various medical conditions between May 2020 to September 2020. **Exclusion Criteria :** this study does not involve those medical conditions which are directly related to the pregnancy which occurs or exaggerates because of pregnancy, for example Pregnancy induced hypertension, Gestational diabetes mellitus, Physiological anemia etc. **Inclusion Criteria :** This study includes medical disorders that women had before they became pregnant (preexisting disorders), such as diabetes or chronic high blood pressure and Disorders that develop during the pregnancy but are not directly related to the pregnancy. 14 cases of cardiac disease, 10 cases of jaundice (viral hepatitis), 8 cases of HbsAg, 8 cases of HIV, 8 cases of urinary tract infections, 8 cases of typhoid, 6 cases of epilepsy, 6 cases of dengue, 5 cases of thyroid disease, 5 cases of asthma, 5 cases of influenza, 5 cases of tuberculosis, 4 cases of renal disease, 4 cases of malaria, 4 cases of chronic hypertension.

### INTRODUCTION

- There are a variety of medical disorders which may impact on a mother's health during pregnancy and the puerperium.
- The risk of problems during pregnancy may be increased by Disorders that women had before they became pregnant (preexisting disorders), such as diabetes or high blood pressure.
- Disorders that develop during the pregnancy but are not directly related to the pregnancy.

- Disorders that are more likely to occur during pregnancy, directly related to pregnant state of uterus. This study does not include such diseases.

### OVERVIEW OF DISEASE DURING PREGNANCY WHICH ARE NOT RELATED TO PREGNANT STATE :

- Heart disease in pregnancy
- Chronic hypertension in pregnancy

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- Epilepsy in pregnancy
- Renal disease in pregnancy
- Thyroid dysfunction in pregnancy
- Asthma in pregnancy
- Jaundice in pregnancy
- HIV in pregnancy
- HBsAg in pregnancy
- Tuberculosis in pregnancy
- Influenza in pregnancy
- Urinary tract infection in pregnancy
- Dengue in pregnancy
- Typhoid in pregnancy
- Malaria in pregnancy

### OBSERVATION AND DISCUSSION

**Table -1 : Heart Disease In Pregnancy**

	Total (14)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	5	1	3	2	1
<b>Normal delivery</b>	6		5	1	
<b>Abortus</b>	3 (2 MTP 1 spontaneous)				

Effect of Heart Disease in Pregnancy 1

- Abortion
- Intra uterine growth retardation
- Still birth
- Premature labor

Out of total 14 cases of cardiac disease of pregnancy 5 cases are delivered by caesarean section and 6 cases delivered normally, 3 cases aborted.

2 babies out of 5 from caesarean section and 1 baby out of 4 from normal delivery seek NICU admission. 1 maternal mortality occurs on post LSCS

day 1 Cause of death : Sudden cardiorespiratory arrest due to congestive cardiac failure in post LSCS patient on day 1 k/c/o severe mitral stenosis with severe pulmonary artery hypertension.

Out of them 1 delivered by caesarean section baby expired on 1st day.

Cause of death : cardiorespiratory arrest with shock with severe birth asphyxia in extremely low birth weight baby.

**Table - 2 : Jaundice In Pregnancy**

	Total (10)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	2	1	1	1	1
<b>Normal</b>	6	2	4	2	1
<b>Abortus</b>	2				

Effect of jaundice in Pregnancy :<sup>2,3,4</sup>

- Premature Labor
- Still birth
- Post partum Hemorrhage

Out of total 10 cases of jaundice in pregnancy 2 case is delivered by caesarean section and 6 cases delivered normally, 2 cases aborted.

1 baby from caesarean section and 2 babies out of 4 from normal delivery seek NICU admission

1 normally delivered baby expired on 2nd day

Cause of death : Severe birth asphyxia with early onset septicemia with hypoxic ischemic injury grade 2 with DIC in low birth weight baby cried after bag and mask ventilation. 1 baby delivered by c-section expired on 3rd day Cause of death: Meconium aspiration syndrome with early onset septicemia with DIC in low birth weight baby cried after tactile stimulation.

1 maternal mortality occurs on postpartum day 2 Cause of death: Sudden cardiorespiratory arrest in post-partum patient of jaundice

1 maternal mortality occurs on postpartum day 4

Cause of death : hepatic encephalopathy in post-partum patient of jaundice

1 maternal mortality occurs on post operatively day 3

Cause of death: Sudden cardiorespiratory arrest due to fulminant hepatic failure consequent to viral hepatitis E infection with hepatic encephalopathy with hepatorenal Syndrome

**Table - 3 : Effect Of Epilepsy In Pregnancy**

	Total (6)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	2	1	1	1	1
<b>Normal</b>	4		1	3	

**Effect of epilepsy on Pregnancy<sup>5</sup>**

- Spontaneous abortion
- Fetal hypoxia
- Bradycardia
- Sudden death of Mother

Out of total 6 cases of epilepsy in pregnancy 2 cases are delivered by caesarean section and 4 cases delivered normally.

1 baby out of 2 from caesarean section and 3 babies out of from ss4 normal delivery seek NICU admission

1 normally delivered baby expired on 2nd day

Cause of death: Severe birth asphyxia with Early onset septicemia with hypoxic ischemic injury grade 2 with DIC in low birth weight baby.

1 maternal mortality occurs on postpartum day 4

Cause of death: Sudden cardiorespiratory arrest in post-partum patient with maternal collapse with shock on post-partum day 4 due to eclampsia with known case of epilepsy since 15 years.

**Table - 4 : Tuberculosis In Pregnancy**

	Total (5)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
Csection	-	-	-	-	-
Normal	4	1	2	2	1
Abortus	1				

**Effect of Tuberculosis on Pregnancy:**

- Low birth weight baby
- Perinatal Death
- IUGR
- Preterm birth

Out of total 5 cases of tuberculosis in pregnancy 4 cases delivered normally, 1 case aborted.

2 babies out of 4 from normal delivery seek NICU admission

1 normally delivered baby expired on day

Cause of death : Cardiorespiratory failure with shock with Early onset septicemia, severe birth asphyxia with hypoxic ischemic injury .

1 maternal mortality occurs on postpartum day

Cause of death : Respiratory failure due to infection

leading to septicemic shock and acute kidney injury in postnatal patient on day 6, k/c/o TB since 4 years

**Table - 5 : Influenza In Pregnancy**

	Total (5)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
Csection	2	-	1	1	1
Normal	2	1	1	1	
Abortus	1				

**Effect on pregnancy<sup>6,7,8</sup>**

- Increased incidence of miscarriages
- Preterm labor

It is not teratogenic but Asian influenza has been reported to cause anencephaly in early pregnancy.

Out of total 5 cases of influenza in pregnancy 1 baby out of from 2 caesarean section and 1 baby out of from 2 normal delivery seek NICU admission ,1 baby delivered by c-section expired 2nd on day

Cause of death: Severe birth asphyxia with meconium aspiration syndrome with early onset septicemia with hypoxic ischemic injury grade 2 in low birth weight baby cried after tactile stimulation

1 maternal mortality occurs on postpartum day 4

Cause of death : Respiratory failure due to infection leading to septicemic shock with DIC in postnatal patient on day 4 in diagnosed case of influenza (swine flu )since 1 week

**Table - 6 : Dengue In Pregnancy<sup>9</sup>**

	Total (6)	Maternal mortality	Baby with mother	NICU admission	Neonatal mortality
Csection	1		1	-	
Normal delivery	5	1	4	1	1

Out of total 6 cases of Dengue in pregnancy 1 cases are delivered by caesarean section and 4 cases delivered normally.

1 baby out of from 4 normal delivery seek NICU admission

1 normally delivered baby expired on 3rd day

Cause of death: Early onset septicemia, severe birth asphyxia with meconium aspiration syndrome hypoxic ischemic injury.

1 maternal mortality occurs on postpartum day 2

Cause of death : Sudden cardiorespiratory arrest with shock with maternal collapse on postpartum day 2 in diagnosed case of dengue since 8 days

**Table -7 : Thyroid Dysfunction In Pregnancy**

	Total (5)	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	1	1	-	-
<b>Normal delivery</b>	4	3	1	1

**Effect of thyroid dysfunction :**

- Early Pregnancy failure
- Preterm delivery
- Placental abruption
- Low birth weight
- Still birth
- PPH

Out of total 5 cases of thyroid dysfunction in pregnancy 1 case is delivered by caesarean section and 4 cases delivered normally. 1baby out of 4 from normal delivery seek NICU admission,1 baby expired which delivered normally

Cause of death : Cardiorespiratory arrest with shock with severe birth asphyxia low birth weight baby.

**TABLE - 8 : ASTHMA IN PREGNANCY**

	Total (5)	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	2	1	1	-
<b>Normal delivery</b>	3	2	1	1

**Effect of Asthma on effect:**

- Low birth weight
- Pre-term labor
- Pre-eclampsia

Out of total 5 cases of Asthma in pregnancy 2 cases are delivered by caesarean section and 3 cases delivered normally.

1 baby out of from 2 caesarean section and 1 baby out of from 3 normal

delivery seek NICU admission

normally delivered baby expired 3rd on day

Cause of death : Cardiorespiratory failure with shock with severe birth asphyxia with hypoxic ischemic injury

**EFFECT OF INFECTION ON PREGNANCY<sup>10</sup>**

Premature rupture of membrane

- Abortion
- IUGR
- Preterm Labor

**Table - 9 : Hbsagin Pregnancy<sup>11</sup>**

	Total (8)	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	1	1	-	-
<b>Normal delivery</b>	7	5	2	1

Out of total 8 cases of HbsAg in pregnancy 1 case is delivered by caesarean section and 7 cases delivered normally.

2babies out of from 7 normal delivery seek NICU admission

1 normally delivered baby expired on 3rd day

Cause of death :Early onset septicemia with hypoxic ischemic

injury grade 2 with DIC in low birth weight baby cried after tactile stimulation

**Table -10 : HIV In Pregnancy<sup>12,13,14,15</sup>**

	Total (8)	Baby with mother	NICU admission	Neonatal mortality
<b>Csection</b>	2	1	1	-
<b>Normal delivery</b>	6	5	1	1

Out of total 8 cases of HIV in pregnancy 2 cases are delivered by caesarean section and 6 cases delivered normally.

1 baby out of from 2 caesarean section and 2 babies out of from 6 normal delivery seek NICU admission

1 normally delivered baby expired on day

Cause of death : Cardiorespiratory arrest with shock with Early onset septicemia with DIC in extremely low birth weight.

**URINARY TRACT INFECTIONS IN PREGNANCY**

Out of total 8 cases of Urinary Tract Infections in pregnancy 1 case was delivered by caesarean section and 6 cases were delivered normally.

1 baby out of from 6 normal delivery seek NICU admission  
1 normally delivered baby expired on 3rd day

Cause of death : Early onset septicemia, severe birth asphyxia with meconium aspiration syndrome hypoxic ischemic injury

**EFFECT OF TYPHOID IN PREGNANCY:**

Out of total 8 cases of cardiac disease of pregnancy 1 case is delivered by caesarean section and 7 cases delivered normally.

1 baby from caesarean section and 2 babies out of from 7 normal delivery seek NICU admission

1 normally delivered baby expired on 3rd day

Cause of death : Early onset septicemia with hyaline membrane disease with severe birth asphyxia cried after tactile stimulation.

**MALARIA IN PREGNANCY :**

Malaria in Pregnancy : Out of total 3 cases of malaria in pregnancy all cases are delivered normally

1 baby seek NICU admission

**CHRONIC HYPERTENSION IN PREGNANCY**

Effect of Chronic Hypertension :

- Maternal Morbidity / Mortality
- Superimposed Pre eclampsia
- Placental Abruption
- Low Birth weight
- Preterm delivery

Out of total 4 cases of chronic hypertension in pregnancy 1 cases are delivered by caesarean section and 3 cases delivered normally. all abies are with mother.

no one seek NICU admission

**RENAL DISEASE IN PREGNANCY:**

Effect of Renal disease on pregnancy:

- Infertility
- Premature Delivery
- IUGR
- Pre-eclampsia

Out of total 3 cases of renal disease of pregnancy 2 cases are delivered by caesarean section and 1 cases delivered normally

**RESULT**

Out of 100 studied patients, there are 13 Neonatal mortality, 8 Maternal mortality

14 cases of Heart disease, 1 neonatal, 1 maternal mortality

10 cases of jaundice, 2 neonatal and, 3 maternal mortality

6 cases of epilepsy, 1 neonatal mortality, 1 maternal mortality

6 cases of dengue, 1 neonatal mortality, 1 maternal mortality

5 cases of influenza, 1 neonatal mortality, 1 maternal mortality

5 cases of tuberculosis, 1 neonatal mortality, 1 maternal mortality

8 cases of urinary tract infections, 1 neonatal mortality

8 cases of HbsAg, 1 neonatal mortality

8 cases of HIV, 1 neonatal mortality

8 cases of typhoid, 1 neonatal mortality

5 cases of thyroid disease, 1 neonatal mortality

5 cases of asthma 1 neonatal mortality

**Table - 11 : Neonatal Mortality**

Disease	No. of neonatal death
Jaundice in pregnancy	2
Thyroid dysfunction in pregnancy	1
Asthma in pregnancy	1
Tuberculosis in pregnancy	1
Influenza in pregnancy	1
Dengue in pregnancy	1
HBsAg in pregnancy	1
HIV in pregnancy	1
Typhoid in pregnancy	1
Urinary tract infection in pregnancy	1
Heart disease in pregnancy	1
Epilepsy in pregnancy	1

**Table - 12 : Maternal Mortality**

Disease	No. of neonatal death
Jaundice in pregnancy	3
Tuberculosis in pregnancy	1
Influenza in pregnancy	1
Dengue in pregnancy	1
Heart disease in pregnancy	1
Epilepsy in pregnancy	1

**Table - 13 : Abortus**

**Disease - No of abortus**

Heart disease in pregnancy (Medically terminated)-3

Jaundice in pregnancy (spontaneous)-2

Tuberculosis in pregnancy (spontaneous)-1

Medically terminated abortion in early pregnancy is seen highest with heart disease in pregnancy Highest chances of Spontaneous Abortion is seen MC in jaundice in pregnancy followed by tuberculosis.

**CONCLUSION**

- Study shows that highest chances of Neonatal mortality among studied diseases is seen in pregnancy with jaundice followed by HIV, HBsAg, asthma, Heart disease, epilepsy, TB, UTI, influenza, Typhoid, Dengue, Thyroid disease in Pregnancy
- Highest chances of Maternal mortality among studied diseases is seen in pregnancy with jaundice in pregnancy followed by Heart disease, epilepsy tuberculosis, influenza and dengue in pregnancy.
- Where chances of Medically terminated abortion in early pregnancy is seen highest with heart disease in pregnancy
- Highest chances of Spontaneous Abortion is seen MC in jaundice in pregnancy followed by tuberculosis.

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