

Evaluation of Complications during Pregnancy-A Prospective Observational Study

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ABSTRACT:

Background: Pregnancy-related medical complications mostly appear to resolve at delivery or shortly thereafter. Women who developed such complications are known to be at increased risk of developing similar complications in future pregnancies. The present study was conducted for Evaluation of complications during pregnancy and risk factors in a tertiary care hospital, Guntur. **Methodology:** The study was a prospective observational study done at Tertiary care hospital. The records of all patients who had pregnancy complications were collected; screened and relevant data was extracted. Then the filled forms were evaluated for risk factors and the trimester wise distribution of the complications that occur during pregnancy. **Results:** The study was performed on 150 patients, and the results are as follows; The distribution of pregnant women with complication 90% (n=135), without complications 10% (n=15). The major complication observed among the cases is Anaemia 25.33% (n=38). Majorly the 21-25 yrs age group is more prone to complications and the complications identified in the second trimester are more (n=72). The major risk factors identified are heavy blood loss during menstruation, infections, young age pregnancies multiple pregnancies and diet. **Conclusion:** We conclude that in our area that the complications during pregnancy were quite common among women of age group 21-25 years complications and the complications identified in the second trimester are more (n=72). The risk factors of complications during pregnancy are heavy blood loss during menstruation, infections, young age pregnancies multiple pregnancies and diet. The identified factors are interlinked to each other and modifiable. Careful monitoring and proper management of the identified risk factors may be helpful in the management of complications during pregnancy.

KEYWORDS: Pregnancy complications, Quality of Life, Risk factors, Trimester.

I. INTRODUCTION

Pregnancy is the period of gestation from the fertilization of an egg, through the development of a foetus, and ending at birth.

A pregnancy can be multiple gestations, as in the case of twins or triplets. Childbirth usually occurs about 38 weeks after conception, or approximately 40 weeks from the start of the last normal menstrual period. Pregnancy is divided into three trimesters that roughly approximate specific developmental stages. The risk of spontaneous abortion (miscarriage) is higher during the first trimester and lessens in the second and third trimesters. The growth and development of the foetus is more easily monitored during the second trimester, while a foetus is generally viable (although it possibly requires medical intervention) in the third trimester. Gravidity (gravid = heavy) is another term for pregnancy as a pregnant woman generally gains a significant amount of weight during gestation. A woman who has never been pregnant is a nulligravida; a woman who is pregnant for the first time is a primigravida; and a woman in subsequent pregnancies is a multigravida.

Key terms:

Gravidity: Another term for pregnancy.

Conceptus: The prenatal, developing offspring and its associated membranes.

Prenatal: During pregnancy, before birth.

Gestation: The carrying of an embryo or foetus inside the female viviparous (having live births) animals, including humans.

Trimester: A period of approximately three months.

Miscarriage: The spontaneous natural termination of a pregnancy that expels a foetus from the womb before term.

Pregnancy is the state of fertilization and development for one or more offspring within a woman's uterus. The prenatal offspring (also called the conceptus) is referred to as an embryo or foetus. The term embryo is used primarily for developing human up to eight weeks after fertilization (to the 10th week of gestation). After that, the term foetus is used.

In a pregnancy, there can be multiple gestations, as in the case of twins or triplets. Childbirth usually occurs about 38 weeks after conception. In women who have a menstrual cycle length of four weeks, this is approximately 40 weeks from the start

of their last normal menstrual period, human pregnancy is somewhat arbitrarily divided into three trimester periods as a means to simplify reference to the different stages of prenatal development. The first trimester carries the highest risk of miscarriage (natural death of embryo or foetus). During the second trimester, the development of the foetus is more easily monitored. The beginning of the third trimester often approximates the point of viability, or the ability of the foetus to survive, with or without medical help, outside of the uterus.¹

II. AIM AND OBJECTIVES

AIM: The main aim is to evaluate the complications during pregnancy in tertiary care hospitals - A Prospective Observational study.

OBJECTIVES:

To identify the complications during pregnancy

To conduct

risk factors wise distribution during pregnancy.

To find out whether the treatment

is effective for that disease.

To check the patient medication adherence.

To identify the age-

related complications during pregnancy.

To identify the trimester related complications.

To conduct

a prospective study regarding the complications during pregnancy.

NEED OF THE STUDY

Some women experience health problems during pregnancy. These complications can involve the mother's health, the fetus health, or both.

Even women who were healthy before getting pregnant can experience complications. These complications may make the pregnancy a high-risk pregnancy.

Getting early and regular prenatal care can help decrease the risk for problems

by enabling healthcare providers to diagnose, treat, or manage conditions before they become serious.

Hence a prospective study is required to evaluate the complications during pregnancy is needed.

EXPECTED OUTCOMES OF THE STUDY

Due to various risk factors during pregnancy, female population are facing many consequences such as preterm deliveries, several health disorders to fetus and mother, even deaths are also occurring due to severity of risk factors. After analyzing the different cases the outcome, we expected to identify the underlying cause associated with various pregnancy complications and to know how to relieve the patient from risk factors or complication and to improve the patient quality of life by treatment. From our study report the quality of pregnant women will be improved and a better future generation outcome is expected.

III. METHODOLOGY

STUDY CRITERIA:

Inclusion Criteria:

1. Pregnant women with complications are included.
2. Pregnant women regardless of age, race are included.
3. Pregnant women with infections are included.

Exclusion Criteria:

1. Non-Pregnant and lactating women are excluded.
2. Patients who are not willing to participate in the study are excluded.

ETHICAL APPROVAL:

This study was approved by the institutional human ethics committee of Narasaraopet Institute of Pharmaceutical Sciences, Narasaraopet.

SOURCE OF DATA:

The patient demographic details, clinical data, therapeutic data and other various relevant necessary data were obtained every day from the medical records and the information sources are documented. Data handling and management; Data collection form is enclosed; MS excel format will be used for collecting data. Strict privacy and confidentiality are maintained during data collection.

STUDY PROCEDURE:

Those who are having pregnancy with complications patients from the Guntur city hospital were reviewed to identify symptoms, risk factors and were assessed. Those patients who met the study criteria were enrolled into the study. A suitable data collection form was designed to collect

all the necessary and relevant information.

1, Guntur for a period of 6 months for our study.

Distribution of pregnant women based on Complications:

IV. RESULTS

A total of 150 patients selected from tertiary care hospital

Complications	No of pregnant women	Percentage
Anemia	38	25.33
Oligohydramnios	19	12.67
Normal	15	10
Hyperemesis gravidarum	13	8.67
Hyperthyroidism	3	2
Hypothyroidism	9	6
Leukorrhea	11	7.33
Pre-eclampsia	5	3.33
Uterine fibroids	5	3.33
Ectopic pregnancy	4	2.67
Mild oligohydramnios	4	2.67
PIH	4	2.67
Renal calculi	4	2.67
Polyhydramnios	3	2
RH-Vepregnancy	3	2
Anemia with ulcer	2	1.33
Functional ovarian cyst	2	1.33
Partial placenta abruption	2	1.33
Gestational DM	1	0.67
Placenta previa	1	0.67
Placenta: fundal, anemia	1	0.67
Vaginitis	1	0.67

Table 1.1: Distribution of pregnant women based on complications

Table 1 shows the distribution of pregnant women based on complications. Anemia 25.3% (n=38), Oligohydramnios 12.67% (n=19), Normal 10% (n=15), Hyperemesis gravidarum 8.67% (n=13), Leukorrhea 7.3% (n=11), Hypothyroidism 6

%(n=9), Pre-eclampsia 3.33% (n=5), Uterine fibroid 3.33% (n=5), Ectopic pregnancy 2.67% (n=4), Mild oligohydramnios 2.67% (n=4), PIH 2.67% (n=4), Renal calculi 2.67% (n=4), Hyperthyroidism 2% (n=3), Polyhydramnios 2% (n=3), RH-

Vepregnancy 2%(n=3),Anemia with ulcer 1.33%(n=2), Functional ovarian cyst 1.33%(n=2), partial

placentaabruption1.33%(n=2),gestationalDM0.67% (n=1),placenta previa0.67%(n=1),placenta:fundal, anemia0.67%(n=1),vaginitis0.67%(n=1).

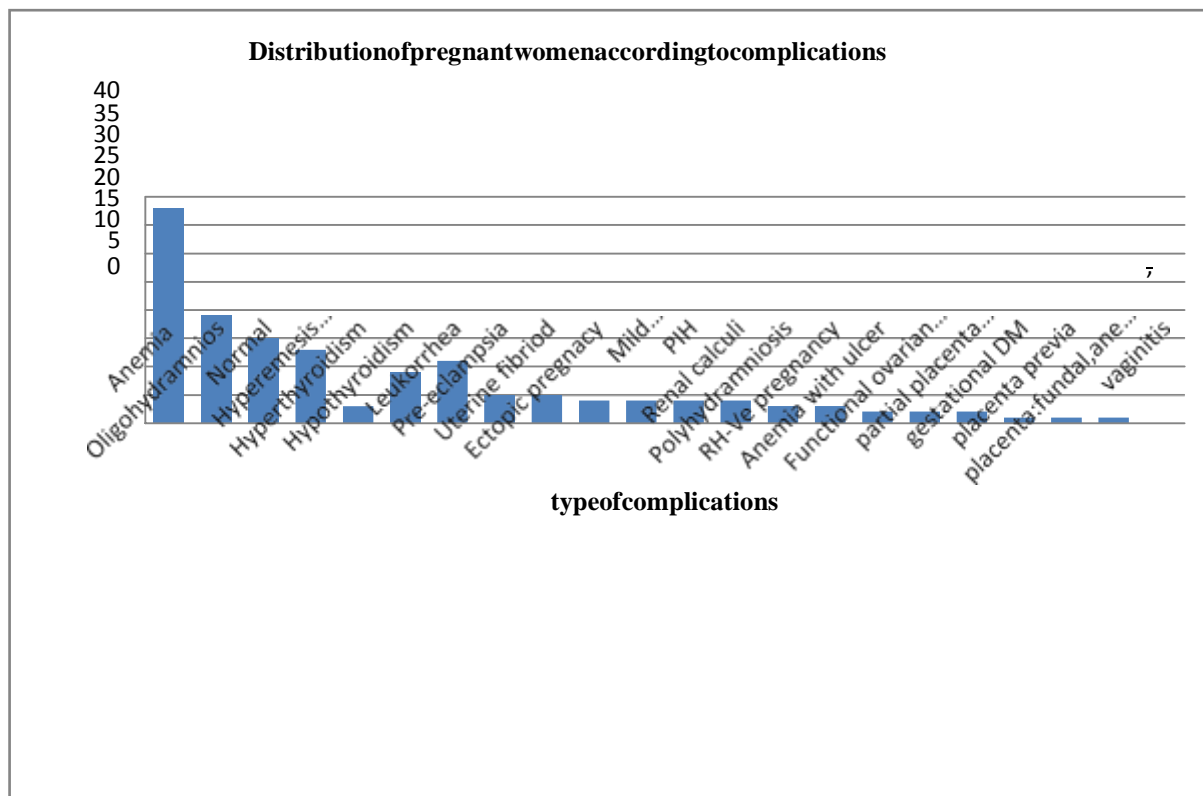


Figure 1.1: Distribution of pregnant women based on complications

Distribution of pregnant women based on Complications:

Complications	No. of pregnant women	Complications percentage
Yes	135	90
No	15	10

Table 1.2: Distribution of pregnant women with and without complication

Table 1.2 shows the distribution of pregnant women with and without complication. with complication 90%(n=135), without complications 10%(n=15).

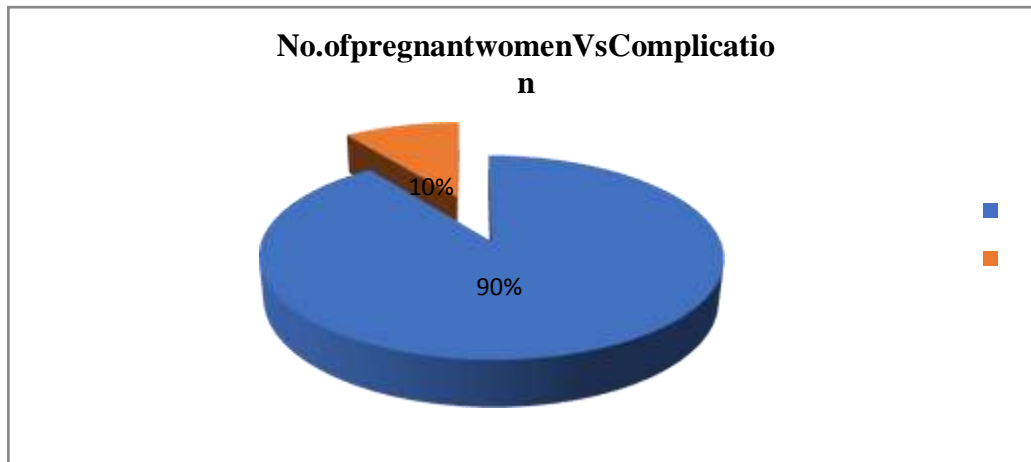


Figure1.2:Distributionofpregnantwomenwith andwithoutcomplication

DistributionofpregnantwomenbasedonAge:

Age	No.ofpregnantwomen	Percentage
17-20	32	21.3
21-25	69	46
26-30	45	30
31-35	3	2
36-40	1	0.67

Table1.3:Distributionofpregnantwomen basedonage

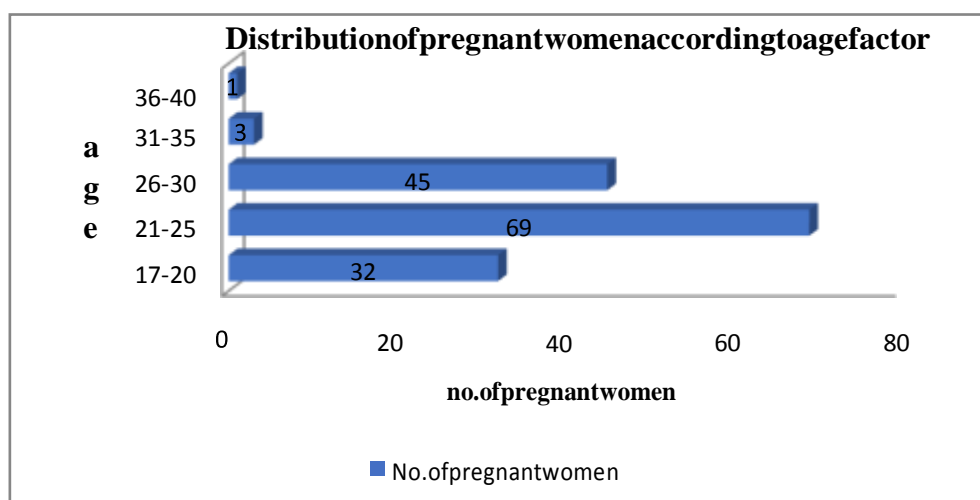


Figure1.4:Distributionofpregnantwomenbasedonage

Distribution of pregnant women based on Gravida:

Gravida condition	No. of pregnant women	Percentage
Primigravida	57	38
Multigravida	93	62

Table 1.4: Distribution of pregnant women based on gravida

Table 1.4 shows the distribution of pregnant women based on gravida. Primigravida 38% (n=57), Multigravida 62% (n=93).

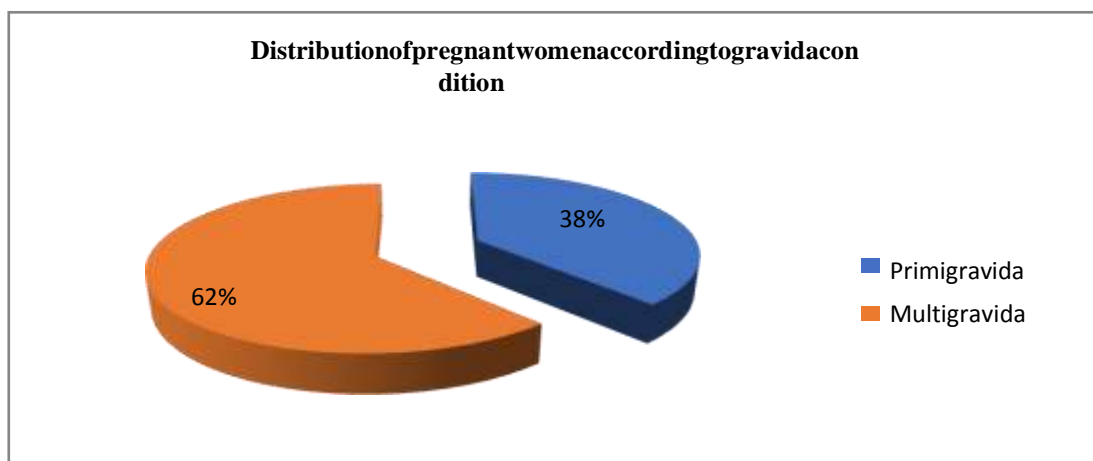


Figure 1.4: Distribution of pregnant women based on gravida

Distribution of pregnant women based on Trimester:

Table 1.5: Distribution of pregnant women based on Trimester

Trimester	No. of pregnant women	Percentage
First trimester	35	23.3
Second trimester	72	48
Third trimester	43	28.67

Table 1.5 shows the distribution of pregnant women based on Trimester. no. of pregnant women in First trimester 23.3% (n=35), Second trimester 48% (n=72), Third trimester: 28.67% (n=43)

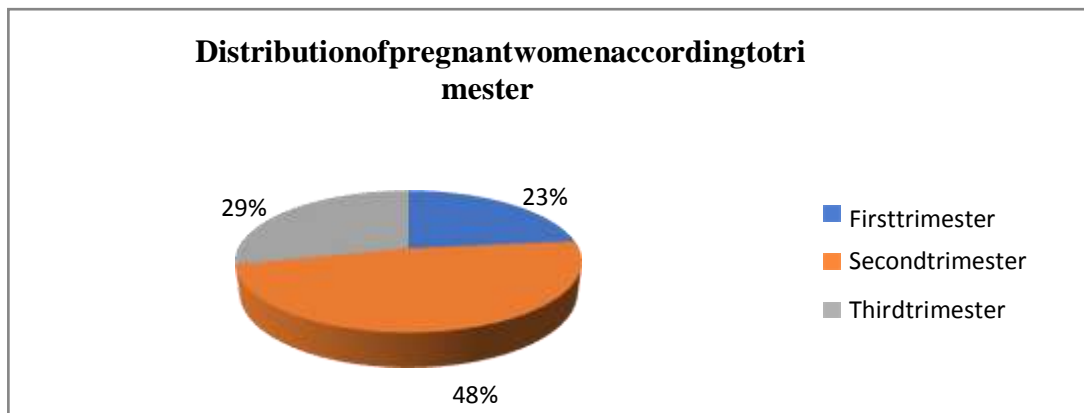


Figure 1.5: Distribution of pregnant women based on Trimester

V. DISCUSSION

Pregnant women especially during the third trimester had significantly lower quality of life scores than non-pregnant women of the same age but in our study, we noticed that the women with complications are identified high in the second trimester.

In our study we took a sample size of n=150 and this study is conducted in tertiary care hospital, Guntur physically, the quality of life decreased significantly during course of trimester and in our study among 150, 135 are reported with complications and in this study, we plotted the type of complications observed and also the trimester. According to our study the major complications that observed are anemia, Oligohydramnios, hyperemesis gravidarum, hypothyroidism, leukorrhea, preeclampsia and uterine fibroid.

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etal., in his study observed majority of complications occur in third trimester and in their study hypothyroidism accounts for 5.33% and in our study, it is 6%.¹⁶ Fergus P McCanthy et al., discussed that the hyperemesis gravidarum is a majorly seen complication and in our study, it accounts for 8.6%.

And the minor complications that are observed in our study are ectopic pregnancy, mild Oligohydramnios, PIH, renal calculi, a nemiawithulcer, functional ovarian cyst, partial placental abruption, gestational DM, placenta previa, placenta fundal anemia, Rh+ve pregnancy and vaginitis.

As per trimester wise distribution many of the complications are identified in second trimester and they may progress in third if not identified or treated and in our study pregnant women of second trimester are n=72 and third are n=43 among n=150.

Majorly anemia, hypothyroidism, Oligohydramnios, uterine fibroid and pre-eclampsia these can be observed in second trimester and ectopic pregnancy hyperemesis gravidarum, hyperthyroidism and leukorrhea are majorly seen in first trimester these may progress in third trimester if untreated or treated.

The major risk factors contributed in this study are recurrent miscarriage, less water intake can result in renal calculi and the other major risk factors are high BMI, BP, TC. And other factors like menstrual bleeding, first time pregnancy, multiple pregnancies leads to anemia and any abnormalities in uterus leads to tubal pregnancy and other factors like family history of diseases, diet, history of autoimmune diseases can trigger the occurrence of complications during pregnancy.

VI. CONCLUSION

In our study total population of 150 are taken from a tertiary care hospital. Among 150 the majority of women are 21-25 years of age (n=9), and among the total population as per gravidity = 93 is of multi gravida.

The main motive of the study is to identify the complications, and also their trimester and risk factor wise distribution. Out of 150, 135 are presented with complications and the rest are normal.

Anemia is noticed the major complication (n=38) which majorly identified in the women in second trimester and excess bleeding, pregnancy without 24-month

gap, hookworm infections are the associated risk factors are observed. Irrespective to other studies in this study majorly the complications are more in the second trimester than that of third that is (n=72).

In this study the complications that occur majorly in the second trimester are Anemia, Hypothyroidism, Oligohydramnios, Uterine fibroids and Preeclampsia. Major risk factors are associated with the complications are excess bleeding during their menstruation, miscarriage, high BMI, and majorly family history of cardiovascular and autoimmune disorders and unhygienic. These results cannot be extrapolated with others as it is limited to one hospital and also the study is small. We can further suggest for a large sample size study along with the prescribing patterns of drug distribution and also included diet related factors.

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