A STUDY OF OBSTETRIC OUTCOME AFTER PREVIOUS SPONTANEOUS ABORTION IN FIRST TRIMESTER

Dissertation submitted to

The Tamilnadu Dr.M.G.R Medical University, Chennai

in partial fulfillment of the requirement for the award of

M.S (Branch - II)

OBSTETRICS AND GYNAECOLOGY

Registration Number: 221916802

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

GOVERNMENT THOOTHUKUDI MEDICAL COLLEGE AND HOSPITAL

TAMILNADU DR.MGR MEDICAL UNIVERSITY, CHENNAI

MAY 2022

CERTIFICATE FROM THE DEAN

This is to certify that this dissertation entitled "**A study of obstetric outcome after previous spontaneous abortion in first trimester**" is the bonafide work done by **Dr.MALATHY G S,** Postgraduate student, Department of Obstetrics and Gynaecology, Government Thoothukudi Medical College and Hospital, Thoothukudi under the guidance and supervision of **DR.P.MUTHUPRABHA M.D,** Professor and HOD and **DR. M.VANITHA M.D., D.G.O.,** Associate professor, Department of Obstetrics and Gynaecology, Government Thoothukudi Medical College and Hospital during her post graduate study for MS Branch II Obstetrics and Gynaecology from November 2019 to November 2021. This dissertation is submitted to Dr. MGR Medical University in partial fulfillment of the University rules and regulations for the award of MS Degree in Obstetrics and Gynaecology.

Place : Thoothukudi
Date

Prof. Dr. D. NEHRU M.D., DMRD
Dean
Govt Thoothukudi Medical College
Thoothukudi

CERTIFICATE BY THE HEAD OF THE DEPARTMENT

This is to certify that this dissertation entitled "**A study of obstetric outcome after previous spontaneous abortion in first trimester**" is the bonafide work done by **Dr. Malathy G S,** at the Department of Obstetrics and Gynaecology, Government Thoothukudi Medical College and Hospital, Thoothukudi during her post graduate study for MS Branch II Obstetrics and Gynaecology from November 2019 to November 2021 under our direct supervision and guidance. This dissertation is submitted to Dr. MGR Medical University in partial fulfillment of the University rules and regulations for the award of MS Degree in Obstetrics and Gynaecology.

Place : Thoothukudi
Date :

Dr.P.MUTHU PRABHA, M.D (OG),
Head of the Department,
Department of Obstetrics and Gynaecology,
Govt Thoothukudi Medical college
Thoothukudi

CERTIFICATE FROM THE GUIDE

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Place : Thoothukudi
Date :

Dr.M.VANITHA M.D., D.G.O
Associate Professor,
Department of Obstetrics and Gynaecology,
Govt Thoothukudi Medical college
Thoothukudi

DECLARATION

I, with immense pleasure, declare that this dissertation titled, "**A study of obstetric outcome after previous spontaneous abortion in first trimester**" was prepared by me. This is submitted to the Tamilnadu Dr. M.G.R. Medical University - Chennai, in partial fulfilment of the rules, regulations and requirements for the award of M.S. Degree Examination (Obstetrics and Gynaecology) to be held in May 2022. This record of work has not been submitted previously by me for the award of any degree or diploma from any other university.

Place : Thoothukudi **Dr.G.S.Malathy**

Date : **Registration Number: 221916802**

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GOVT. THOOTHUKUDI MEDICAL COLLEGE
THOOTHUKUDI -620 008
E Mail: iectkmc@gmail.com
INSTITUTIONAL ETHICS COMMITTEE

IEC Ref. No: [redacted] 08/2019

Date: 10.10.2019

CERTIFICATE FOR APPROVAL

The Institutional Ethics Committee of Govt.Thoothukudi Medical College, Thoothukudi, reviewed the research proposal titled: **"A study of obstetric outcome after previous spontaneous abortion in first trimester"** submitted by **Dr.G.S.Malathy, MBBS, I-Year Post Graduate Degree Student,** Department of Obstetrics and Gynaecology, during the Ethic Committee Meeting held on 10.10.2019.

After discussion, the committee approves the project and instructs that it has to be conducted as per the protocol submitted.

The committee expects to be informed about the progress of the study with any changes in the protocol/ information/ informed consent and asks to be provided a copy of the final report

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Thesis accepted by Institutional Ethics Committee (IEC) Members

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Dr.P.Rajavelmurugan, MD.,
Associate Professor of General Medicine
Member

Dr.Mercy Rodrigo, MD.,
Associate Professor of O&G
Member

Dr.Rakesh Fernando, MS.,
Associate Professor of General Surgery
Member

Thiru.P.Swamy Iyyah, BBA,BL.,
Advocate/Legal Expert
Member

Tmt.C.S.Purnima, B.Sc.,MBA.,
Lay Person
Member

Thiru.S.Lakshmanan,MSW.,
Social Worker
Member

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Submitter email	malathyshanmugasundaram25@gmail.com
Similarity	17%
Analysis address	malathyshanmugasundaram25.mgrmu@analysis.urkund.com

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CERTIFICATE II

This is to certify that the dissertation work titled **"A STUDY OF OBSTETRIC OUTCOME AFTER PREVIOUS SPONTANEOUS ABORTION IN FIRST TRIMESTER"** of candidate **Dr.MALATHY G S,** with **Registration Number 221916802** for the award of **M. S.** degree in the branch of **OBSTETRICS AND GYNAECOLOGY**. I personally verified the urkund.com website for the plagiarism check. I found that the uploaded thesis file contains pages from introduction to conclusion and the result shows **17percentage** of plagiarism in the dissertation.

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1. INTRODUCTION

The word ‘abortion’ derives from the Latin word ‘aboriri’ meaning ‘to miscarry’[1]. Abortion is defined as spontaneous or induced termination of a pregnancy before viability of fetus. It is thus appropriate that miscarriage and abortion are terms used interchangeably in a medical context. But, because of popular use of the word ‘abortion’ by laypersons implies a intended termination of intact pregnancy, but still, many prefer the word ‘miscarriage’ for spontaneous fetal loss than abortion.

Types of abortion

- Spontaneous
- Induced
- Therapeutic
- Threatened
- Inevitable
- Incomplete
- Complete
- Recurrent or habitual
- Missed
- Septic

Spontaneous

- Non-induced abortion.

Induced

- Elective termination of pregnancy for medical or other reasons.

Therapeutic

- Termination of pregnancy because the woman's life or health is endangered, or because the fetus is dead or has malformations incompatible with life.

Threatened

- Vaginal bleeding occurring before 20 weeks of gestation without cervical dilatation, indicating that spontaneous abortion may occur.

Inevitable

- Vaginal bleeding or rupture of the membranes accompanied by dilatation of the cervix.

Incomplete

- Expulsion of some products of conception.

Complete

- Expulsion of all products of conception.

Recurrent or Habitual

- Two or more consecutive spontaneous abortions.

Missed

- Undetected death of an embryo or a fetus with no bleeding (also called as blighted ovum, anembryonic pregnancy, or intrauterine embryonic demise).

Septic

- Serious infection of the uterine contents during or shortly before or after an abortion.

2. AIM AND OBJECTIVES

Aim

The major goal of my study is to calculate the risk of low birth weight, preterm delivery, intrauterine fetal death (IUD), intrauterine growth retardation (IUGR), stillbirth, premature rupture of membrane (PROM) in women with previous history of spontaneous abortions, and any other adverse outcomes in women with previous history of spontaneous abortions.

Objectives

1. To assess whether a previous unfavourable pregnancy outcome increases the chance of a negative pregnancy outcome in the current one.
1. To look for a link between the previous spontaneous abortion and preterm delivery, IUGR, low birth weight, PROM, stillbirth, or IUD in subsequent pregnancies.

II – REVIEW OF LITERATURE

ABORTION

INCIDENCE

It is difficult to precisely assess the incidence of abortion since many induced and spontaneous abortions are not reported[2]. Some of the very early abortions usually look like delayed periods. Ten percent of all pregnancies end up in spontaneous abortion. Another 10% comprise illegally performed abortions. Around 25% of abortions happen before 16 weeks of pregnancy and 75% of miscarriages happen before eight weeks of pregnancy[3].

RISK OF RECURRENCE[30]

(i). The risk increases with each subsequent loss

- After one abortion — 20%
- After two abortions — 28%
- After three abortions — 43%

(ii). The risk increases with increasing maternal age

- 20–24 years is 11.1%
- 25–29 years is 11.9%
- 30–34 years is 15%
- 35–39 years is 24.6%
- 40–44 years is 51%
- 45 years or older is 93.4%

AETIOLOGY

The origin of spontaneous abortion is usually complicated and unclear. The causes of abortion can be classified as:

1. Fetal factors
2. Maternal factors
3. Paternal factors
4. Immune factors
5. Unknown

1. FETAL FACTORS

About 50% of spontaneously occurring abortions have been found to have chromosomal abnormality. Autosomal trisomy is the most common abnormality accounting for 50% of the pregnancy losses. Monosomy X accounts for 9–13% of pregnancy loss and triplody X accounts for 11–12% [30].

a. Abnormal zygote development:

In an early spontaneous abortion, we can find zygote, embryo, or even placenta in some cases. In case of a blighted ovum, the embryo is either degenerated or absent[4].

b. Aneuploid abortion:

Chromosomal anomalies are common among early fetuses and embryos that are spontaneously aborted[4].

i. Autosomal trisomy is the most common chromosomal abnormality associated with abortion in the first trimester.
ii. Monosomy X (45 x) is the second most common abnormality.
iii. Triploidy is mostly connected to hydropic placental degeneration.
iv. Tetraploid abortus: The possibility of a live-born is uncommon, and the fetus gets aborted in the early gestation period.
v. Chromosomal structural abnormality.
vi. Autosomal monosomy is extremely rare and is always incompetent with life.
vii. Sex chromosomal polysomy (47, XXX) is very uncommon.

c. Euploid abortion[4]

The reasons for euploid abortions are:

i. Genetic abnormality such as polygamy factors or an isolated irritation
ii. Some paternal factors
iii. Various maternal factors

d. Interference with circulation:

Knots or entanglements in the umbilical cord causing death and expulsion of the fetus.

e. Twins and Hydramnios

Rapid stretching of myometrium due to large size of uterus may cause abortion.

2. MATERNAL FACTORS

a. Infections[3, 4]

Viral infections

If the mother gets infected by viruses like Cytomegalovirus and Rubella in first trimester of pregnancy, abortion and congenital malformations may occur. Also, the Hepatitis and Influenza viruses can cause death and expulsion of fetus.

i. **Parasites** like Plasmodium and Toxoplasmosis may cause abortion if infection got incurred in early weeks of pregnancy.

ii. **Spirochetes:** Abortion due to these bacteria is because of the defective thickness of placental barrier.

iii. **Other organisms** that may cause abortion by infection in the early weeks of pregnancy are:

- *Chlamydia trachomatis*
- *Mycoplasma hominis*
- Group B Streptococcus
- *Ureaplasma urealyticum*
- *Listeria monocytogenes* and
- HIV

b. Maternal hypoxia and shock [3, 4, 5]

Acute or chronic respiratory problems, severe anaemia, heart diseases, severe gastroenteritis or infective diseases like cholera are at a higher risk of abortion as they may experience maternal hypoxia and shock.

c. Chronic debilitating disease[3, 4]

Chronic debilitating diseases such as carcinomatosis or tuberculosis in early pregnancy may cause abortion in some cases.

d. Endocrine abnormalities

i. **Hypothyroidism**: An increased rate of abortion (25–30%) is noticed in mothers with thyroid auto-antibodies. In patients with hypothyroidism, prevalence of habitual abortion is about 48–62%[6].

ii. **Diabetes mellitus**: In women with uncontrolled diabetes, abortion rate is 25 to 30%[30]. Early glucose control (within 21 days of conception) resulted in similar abortion rate as those with non-diabetic[4].

iii. **Progesterone deficiency**: Insufficient progesterone secretion by corpus luteum or placenta are associated with abortion[4, 6]. Raised levels of luteinizing hormone (LH) in the follicular phase (greater than 10 IU/L on Day 8) are linked with higher number of abortions[30]. Elevated LH levels in follicular phase prevents maturation of oocytes and affects its implantation in the uterus.

iv. **Nutrition**: There is no definitive evidence of dietary deficiency of any nutrients as a major cause of abortion[3, 4].

e. Trauma

Direct trauma to the abdomen or iatrogenic trauma, either to abdominal or vaginal walls may be related to abortion[7].

f. Psychic

Emotional instability or any environmental changes may induce abortion by affecting activity of uterus. Even a minor injury in the form of travel or sexual intercourse in the first trimester of pregnancy, per vaginal (PV) examination may lead to abortion in susceptible individuals[3].

g. Toxic drugs

i. **Tobacco:** Women who have a habit of smoking 14 cigarettes a day are more prone to euploid abortion[4].

ii. **Alcohol:** Doubled abortion rates are seen in women drinking twice a week as compared to those who do not[4].

iii. **Caffeine:** Coffee consumption of more than five cups/day gives way to a higher rate of abortion[4].

iv. **Contraception:** In situ intrauterine contraceptive device (IUCD) has an increased risk of causing septic abortion.

h. Acquired uterine defects

i. **Uterine leiomyoma** — Implantation of blastocyst is interfered by sub-mucosal and intramural leiomyomas.

ii. **Uterine synechiae (Asherman syndrome)** — Abortion is caused by improper implantation due to insufficient support by the endometrium.

iii. **Developmental uterine defects —** Abortion is caused as an effect of defective Mullerian duct formation or fusion. Septate or bicornuate uterus usually causes abortion in the mid-trimester. Anomalies of uterus accounts for 12% of spontaneous recurrent abortion (Bennet, 1987)[30].

i. Cervical incompetence

The cause of cervical incompetence is obscure or due to trauma to cervix in the past, especially in procedures like conization, dilatation and curettage, amputation, and cauterization.

It is characterized by painless cervical dilatation in the second trimester with prolapse and ballooning of membrane into the vagina, followed by membrane rupture and expulsion of the immature fetus. Incidence of cervical incompetence is around 0.5–1% and the incidence of recurrence is about 7–8%.

3. PATERNAL FACTORS

Defective sperm, i.e., contributing only half the number of chromosomes to the ovum, may lead to abortion. However, it is difficult to prove. Increase in paternal age is significantly associated with greater risk of abortion.

4. UNKNOWN FACTORS (40–60%)

Unknown aetiology of about 25% is also a cause of abortion. In spite of multiple factors mentioned, it is indeed difficult to pin-point the exact cause of abortion.

5. IMMUNE FACTORS (5–10%)

Autoimmune factors

In case of recurrent pregnancy loss, there is always an underlying cause to be suspected. It usually contributes for about 15% of abortions.

APLA syndrome[8]

In a mother with recurrent abortions, 5% has lupus anticoagulant and 20% shows presence of anticardiolipin antibody. Pregnancy loss with antiphospholipid antibody (APLA) syndrome constitutes 80%, out of which 60% occurs in the first 3 months. In a study which was conducted on 420 mothers with 128 pregnancy losses by Carp[9] showed that 95, 29, and 4 losses occurred in the first, second, and third trimesters, respectively.

The most commonly detected antibodies are anticardiolipin antibody and lupus anticoagulant. APLA are acquired from antibodies that are targeted against phospholipids. The mechanism of abortion in these women is due to placental infarction and thrombosis.

Three potential mechanisms of APLA–induced thrombosis[4] are:

1. Endothelial cells that normally convert arachidonic acid present in plasma membrane into prostacyclin, which is released into the circulation preventing the aggregation of platelets. APLA inhibits the endothelial cells from producing prostacyclin, thereby causing thrombosis.

2. Arachidonic acid present in the plasma membrane is converted into thromboxane by the platelets. An increased risk of thrombosis is noticed as APLA enhances the release of thromboxane.

3. During clotting, thrombin forms a complex on surface of endothelium with the help of its receptor forming thrombomodulin complex, which is enzymatically active, activates the circulating protein C. The activated protein C binds with protein S on the surface of endothelial cells. The protein C/protein S complex degrades circulating activated components of clotting cascade, factor Va, and factor VIIa.

Alloimmune factors[10]

When women are found to have recurrent abortions, they usually tend to have an alloimmune cause. Couples who are found to have significant HLA-type homology or anti-paternal antibodies that were found in some women were judged to represent an alloimmune disorder. Some studies state that the presence of a lymphocyte culture inhibitors and the presence of lymphocytotoxic antibodies can lead to recurrent pregnancy losses.

The conceptus as a semi-allograft

It is apparent that the conceptus does not behave like usual transplanted tissue or organ. Fetal cells are endowed with a paternal set of the six major human leucocyte antigens (HLA) and maternal HLA haplotype. The paternally derived HLA would be expected to elevate a maternal immune response; however, HLA expression has not been detected on blastocyst tissue or placental syncytiotrophoblast of implanted conceptus. HLA-G, a HLA variant, has been detected on cytotrophoblast and might mediate immune rejection[10].

In as many as 50% of couples who have experienced repeated pregnancy loss, evaluations including parenteral karyotyping, hysterosalphingogram (HSG) or hysteroscopy, endometrial biopsy, and antiphospholipid antibody testing were negative. As there is no known reason

for repeated pregnancy loss in this substantial percentage of couples, alloimmune causes have been proposed[10, 30].

MECHANISM OF ABORTION[11]

Before the second trimester of pregnancy, 80% of the pregnancy can be diagnosed.

Before 8 weeks:

- The fetus is extruded from the uterus as en masse along with the pregnancy sac.

In 8–14 weeks:

- There is not a full expulsion of the fetus completely, and it leaves the placenta and membranes behind causing frank haemorrhage.

Beyond 14 weeks:

- The process of abortion usually mimics that of a labour. Like in a delivery, the membranes get ruptured at any stage during dilatation of cervix and the fetus is born first and placenta is delivered separately. The uterus is not sensitized to pregnancy properly, so the muscles are less efficient; hence, some parts of the chorion are left behind, and these retained bits causes excessive haemorrhage leading to shock.

PATHOLOGY OF ABORTION[4]

Some necrotic changes and haemorrhage into the decidua basalis in the adjacent tissue usually results in an abortion. Detachment of the ovum is seen, which in turn stimulates uterine contractions resulting in expulsion of fetus. The sac seems opened, and fluid is found surrounding the small, matured fetus or vice versa. In some, there may be no demonstrable fetus found in the sac called as blighted ovum.

In Blood or carneous mole, the ovum is covered by a capsule of blood clot. The small cavity containing fluid is seen which is compressed by thick walls of old blood clot. In twins, single fetus can undergo missed abortion. There are several outcomes possible here. The retained fetus may undergo degeneration. The bones of skull collapse and override, the abdomen gets distended with blood stained fluid causing swelling of the fetus. The skin softens and peels off in utero. Degeneration of the internal organs occur and necrosis happens. The Amniotic fluid is absorbed causing the fetus to get compressed upon itself, it gets desiccated called as fetus compressus. Occasionally, the lack of amniotic fluid causes fetus to become so dry and compressed that it looks like a parchment which is referred to as fetus papyraceous.

CATEGORIES OF ABORTION[3]

1. Threatened abortion

It is a clinical condition when the process of abortion gets started but has not completely happened where recovery may be still possible.

Clinical features

1. Pain
2. Bleeding per vaginum.

Diagnostic features

1. Uterine size and the period of amenorrhea are almost the same
2. In primi, external os is closed — in case of a multipara internal os should be closed and the external os may be patulous.
3. Speculum examination will reveal sign of bleeding, if any conceptus comes through the external os and any local lesion in the cervix.

2. Inevitable abortion

It is a type of abortion where the recovery of the fetus is almost nearly impossible, as it has crossed the recoverable stage where the mother can no longer continue the pregnancy. The abortion is inevitable and it is featured by gross rupture of membranes and dilatation of cervix.

Clinical features

Bleeding per vaginum, pain in the lower abdomen, internal examination shows dilatation of internal os of the cervix which can help to feel the products of conception.

3. Complete abortion

It is the type of abortion where the products of conception are expelled in toto.

Clinical features

Abdominal pain increases and then gradually decreases with expulsion of sac and vaginal bleeding becomes traces or absent. On examination, it shows: (1) Uterus is smaller than the period of amenorrhoea and a little firm; (2) os on examination is closed; (3) bleeding is trace; (4) a Fleshy mass is expelled, which on examination is found intact.

4. Incomplete abortion

When the entire products of conception are not expelled completely, some parts of it remain still inside the uterus.

Clinical features

1. Expulsion of a fleshy mass per vaginum
2. Lower abdomen pain
3. Vaginal bleeding

Internal examination

1. Uterine size less that the size of amenorrhoea
2. Cervical os is patulous and often admitting only fingertip.
3. Vaginal bleeding of varying magnitude is seen.
4. Expelled product found to be incomplete.

5. Missed abortion

When the fetus is dead and it is retained inside the uterus.

Clinical features

Brownish vaginal discharge, diminishing pregnancy symptoms, size of the uterus less than amenorrhoea.

Firm cervix, pregnancy test becomes negative, real-time ultrasound shows a sac which is found empty in early pregnancy, and in late pregnancy, there is absence of fetal motion.

6. Septic abortion

It is a type of abortion which is associated with clinical evidence of infection of uterus.

Criteria for septic abortion:

1. Temperature of at least 100 °F for 24 hours.
2. Vaginal discharge which is offensive or purulent.
3. Lower abdominal pain and tenderness.

The microorganisms that are involved in sepsis are those that are present in vagina normally — these microorganisms can be either aerobic or anaerobic or mixed infection.

The common cause of septic abortion is due to illegally induced abortion because of native methods or improper methods used by non-medical professional, this causes incomplete expulsion of fetus and reckless injury to genital organs and to structures adjacent to them.

Grades of septic abortion

- **Grade1:** The infection is confined only to uterus.
- **Grade 2**: Infection spreads away from the uterus to involve the pelvic peritoneum, parametrium, tubes, ovaries.
- **Grade 3:** Endotoxic shock/ Generalized peritonitis / or jaundice/acute renal failure.

Complications of Septic abortion

Immediate:

Thrombophlebitis, haemorrhage, generalized peritonitis, endotoxic shock, acute renal failure.

Remote:

Secondary infertility, chronic pelvic pain, chronic debility and backache.

7. Habitual / recurrent abortion

When three or more consecutive spontaneous abortions occur, it is called habitual abortion.

Its overall Incidence is 0.34 percent

- Idiopathic 15–50%
- Endocrinological 5–29%
- Immunological 2–5%
- Genetic 1–28%
- Anatomical 6–65%

Prognosis[12]

With excluding two major causes antiphospholipid antibody and incompetent cervix, the predicted cure rate after three consecutive spontaneous abortion will range as high as 70–80% despite of treatment.

When a woman has three or more spontaneous abortion, they are at maximum risk of breech presentation, preterm delivery, fetal malformations, and placenta previa.

INVESTIGATIONS NEEDED IN CASE OF ABORTION

- Urine –routine examination and microscopy
- Hemoglobin, total count, differential count
- Blood sugar-fasting and post-prandial
- VDRL, HIV, HBsAG

- Special investigations like:
    - Hormonal assay — FSH, LH, TSH
    - Karyotyping, HLA typing
    - Cervical swabs — culture and sensitivity, anti-cardiolipin antibody and Lupus anticoagulant, Thyroid function test, Husband's semen analysis, USG, Hysterosalphingogram.

PRETERM[4, 5]

Definition

Any woman delivered before 37 completed weeks of gestation.

The incidence is 30 to 40 % in developing countries.

Etiology

1. Chorioamnionitis — It is seen in 20–30% of all preterm delivery.

   The causative organisms are *Gardenella vaginalis, Ureaplasma urealyticum, Listeria monocytogenes E. coli, Mycoplasma hominis, Fusobacterium, Chlamydia trachomatis*, Group B streptococcus.
2. Most common cause is by urinary tract infection.
3. Placental abnormalities — such as circumvillate placenta, battledore placenta, marginal insertion of umbilical cord.
4. Anatomic abnormalities of uterus — septate and bicornuate uterus which accounts for 1–3%.

5. Fetal pathology — inborn errors of metabolism, neural tube defects, hyperbilurubinemia are linked to a number of birth abnormalities in preterm labour.
6. Uterine over distention — Hydramnios and multifetal gestation are fairly typical cause for preterm labour.
7. Idiopathic.

Warning symptoms of preterm

- Low backache, abdominal pain, increase or change in vaginal discharge.
- Abdominal cramping, leaking per vaginum , contraction of uterus that last for 10 minutes (sometimes painless).

Management of patient at risk of preterm labour

Education about preterm labour, serial ultrasound examination, aggressive treatment of cervical and vaginal infection, limitation of physical activity, coital abstinence.

Management of patients with warning symptoms

Bed rest, antibiotics, prophylactic tocolytics, steroids and search for placental insufficiency.

Management of patient with established preterm labour

- Identification of patients that needs to be delivered
- Maternal disease.
- Chromosomal anomalies.
- Advanced labour.
- Fetal growth retardation.
- Fetal congenital abnormalities.

INTRAUTERINE GROWTH RESTRICTION

It refers to babies whose birth weight is below 10^{th} percentile of the average for the gestational age .The incidence among the term babies and post term babies is 5% and 15%, respectively .These babies are more prone to have polycythemia, asphyxia, meconium aspiration syndrome, necrotizing enterocolitis , hypothermia and hypoglycaemia.

LOW BIRTH WEIGHT BABY

According to WHO low birth weight baby is defined as those whose birth weight is less than 2500 gm irrespective of their gestational age. Those Infants who weigh less than 1500 gm are categorized as Very low birth weight and extremely low birth weight infants are those infants who weigh less than 1000 gm. Low birth weight babies are classified into small for gestational age and premature babies. The incidence of these babies ranges

from 5% to 40%. These kinds of babies are more prone for jaundice, asphyxia, hypothermia, heart failure, infection, dehydration, anaemia, pulmonary syndrome and retinopathy of prematurity.

David[13] had evaluated the association between spontaneous abortion and subsequent adverse birth outcomes. They concluded that women with three and more spontaneous abortions were at higher risk of preterm (95%), placenta previa (95%), premature membranes rupture (1%), Breech presentation (95%), congenital malformation (95%).

Alberman[14] have compared birth weight of babies in patients with previous live birth and in patients with spontaneous abortion. The important observations were that the mean birth weights of babies preceding a spontaneous fetal loss were lower than that of others and that in the subgroup of women with repeated early losses, mean birth weight fell with increasing pregnancy order.

Parazzini[15] have analyzed the relation between induced abortion and subsequent abortion in 782 cases in their study with 1543 controls who had given birth at term (> 37 weeks). They concluded that there was no strong association between induced and spontaneous abortion.

De hass[16] did a case control study of spontaneous preterm birth. In this study the risk factors analyzed were prior preterm delivery, smoking during pregnancy, pregnancy weight < 61.5 kg and H/O prior induced abortion. They found out that patients with > 2 or more number of pregnancies, spontaneous abortion, induced abortion, prior preterm significantly increased the risk of spontaneous preterm birth, secondly H/O cigarette smoking particularly women who smoked > 6 to 10 cigarettes per day also increased the risk of spontaneous preterm births.

Brigham[17] did a study to find out how many fetuses continued pregnancy and survived in women with history of idiopathic recurrent miscarriage. They also showed that there is decrease in pregnancy success rate with increasing number of previous abortions.

Basso[18] did a study to evaluate the risk of preterm delivery, low birth weight and growth retardation following spontaneous abortion.The abortion cohort had a higher risk of preterm (95%) delivery, low birth weight 7.5% and growth retardation 10.2%. They concluded that spontaneous abortion is associated with preterm delivery, low birth weight, IUGR in the subsequent pregnancies.

Reginald[19] did a study in which they have compared the outcomes of pregnancies progressing beyond 28 weeks of gestation in women with a

history of recurrent miscarriage. Out of the 97 women who had 3 miscarriages 30 percent were small for gestational age, 28 percent were born preterm and perinatal mortality was 161/1000 births.All the parameters are significantly increased above the prevalence for a normal obstetric population.

Schoenbaum[20] did a study to find out the influence of induced and spontaneous abortions on the outcome of subsequent pregnancies. They concluded that the percentage of still births and premature births among women with previous abortions, induced or spontaneous were doubled than that in the control group.

Schoenbaum[20] did a study to find out the outcome of delivery following an induced or spontaneous abortion. They have compared women with one prior induced or spontaneous abortion with women of similar gravidity or parity with no prior pregnancy losses. They found that women with a single prior induced abortion have no increased risk of poor outcome in the next pregnancy after 27 weeks. In contrast, offspring of second gravidas with a prior spontaneous abortion had an increased frequency of short gestations, low birth weights, low apgar score, and congenital malformation, indicating that these women are at high risk for subsequent poor late pregnancy outcomes.

DaVanzo[12] did a study to estimate the effects on pregnancy outcomes of the duration to the preceding interpregnancy interval (IPI) and type of pregnancy outcome. They concluded that women whose pregnancies are between 15 and 75 months after a preceding pregnancy outcome have a lower likelihood of fetal loss than those with shorter or longer IPIs.

Keirse[21] did a study about risk of pre-term delivery in patients with previous pre-term delivery and/or abortion. Patients with a history of two or more abortion had an increased risk of spontaneous pre-term labour and delivery in future pregnancies. This increased risk related mainly to previous second trimester abortions and not to previous first trimester abortions. Patients with one previous spontaneous pre-term labour and delivery had a 37% risk, and those with two or more pre-term deliveries had a 70% risk of delivering preterm again. There appeared to be no beneficial effect of cervical suture on the incidence of pre-term delivery in these patients.

Knudsen[22] did a study on the prognosis of a new pregnancy following previous spontaneous abortions. The risk for a clinical spontaneous abortion in a pregnancy following 0 to 4 consecutive spontaneous abortions were estimated. The overall risk for spontaneous abortion was 11% and the risk for a spontaneous abortion was 16, 25, 45 and 54% after 1 to 4 previous consecutive spontaneous abortions, respectively. For women over 35 years, the risk for spontaneous abortion was significantly increased, but the identical

abortion rates after repeated abortions in both young and old women indicate that risk is not age related.

Sheiner[23] did a study to examine the association between spontaneous consecutive recurrent abortions and pregnancy complications such as hypertensive disorders, abruptio placenta, intrauterine growth restriction and cesarean section (CS) in the subsequent pregnancy. A population-based study comparing all singleton pregnancies in women with and without two or more consecutive recurrent abortions was conducted. In their study, the following complications were significantly associated with recurrent abortions — advanced maternal age, cervical incompetence, previous CS, diabetes mellitus, hypertensive disorders, placenta previa and abruptio placenta, mal-presentations and PROM. A higher rate of CS was found among patients with previous spontaneous consecutive recurrent abortions (15.9% versus 10.9%; $P < 0.001$). Another multivariate analysis was performed, with CS as the outcome variable, controlling for confounders such as placenta previa, abruptio placenta, diabetes mellitus, hypertensive disorders, previous CS, mal-presentations, fertility treatments and PROM. A history of recurrent abortion was found as an independent risk factor for CS (95%; $P < 0.001$). They concluded that a significant association exists between consecutive recurrent abortions and pregnancy complications such as placental abruption, hypertensive disorders and CS. This association persists after controlling for

variables considered to coexist with recurrent abortions. Careful surveillance is required in pregnancies following recurrent abortions, for early detection of possible complications.

Zlopaša did a study to compare reproductive outcome in women with uterine anomalies and women with a normal uterus and evaluate the effect of resectoscope metroplasty. In their study, uterine anomalies were associated with higher rates of spontaneous abortion, preterm delivery, intrauterine growth retardation, breech presentation, and caesarean delivery (Pb0.001). compared with their previous pregnancies, the abortion rates were lower and delivery rates were higher in women who conceived following hysteroscopic metroplasty.They concluded that resectoscope metroplasty significantly improved pregnancy outcome in women with uterine anomalies.

Tomaževič[24] did a study on small uterine septa (AFS Class 6) represent an important risk variable for preterm birth and spontaneous abortion They compared pregnancy outcomes before and after hysteroscopic dissection of small and large uterine septa. Besides large uterine septa, small uterine septa represent an important hysteroscopically preventable risk variable for preterm birth and spontaneous abortion.

4. MATERIALS AND METHODS

Sample Size: 150 cases

Source of data

This prospective study was carried out in 150 pregnant women attending OPD and labour ward of O&G department in Government Thoothukudi Medical College and Hospital during the period for 2 years from November 2019 to November 2021.

Inclusion criteria

In this study patients with history of spontaneous abortion, irrespective of cause and period of gestation were included.

- Age group: 18 to 35 years.
- Patients with one and/or more than one spontaneous abortion.
- Patients with previous live birth, followed by spontaneous abortion.

Exclusion criteria

- Patients with induced abortion.
- History of spontaneous abortion with twin gestation.
- History of PIH, chronic hypertension, GDM, juvenile DM, heart disease, anaemia.
- History of carcinoma.
- History of HIV/HBsAG/VDRL infections.

5. OBSERVATION AND RESULTS

Study Design

A prospective study with 150 mothers.

Table 5.1

Age Distribution

S.No	Age	Nos	%
1	18-20	24	16.00
2	21-25	65	43.33
3	26-30	45	30.00
4	31-35	12	8.00
5	>35	4	2.67
Mean Age		**25.2 ± 4.3**	

From table 5.1 the mean age of study group was 25.2 ± 4.3. With most of the cases predominantly in the 21 to 25 age group. Among 150 women studied, 43.3% belonged to age group 21–25 years, 30% belonged to 26–30 years, 16% belonged to 18–20 years, 8% belonged to 31–35 years, and 2.67 belonged to greater than 35 years. The mean age was 25.2 years.

Figure 5.1 Age Distribution

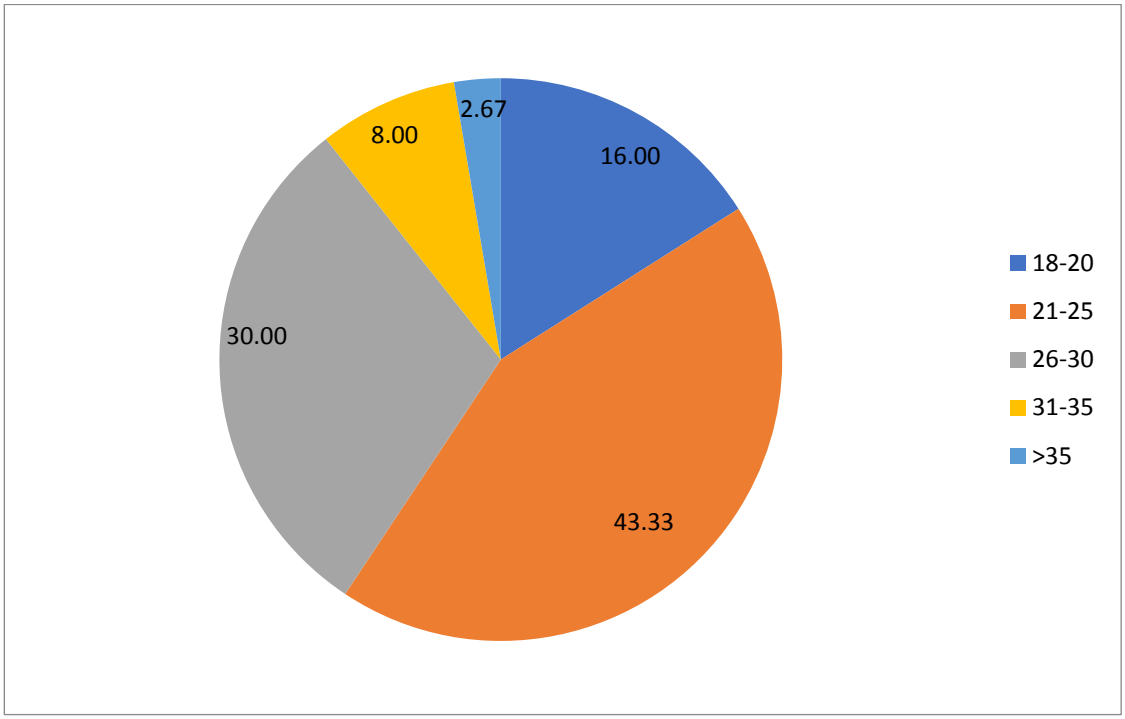


Table 5.2 Gravida

S.No	Gravida	Nos	%
1	G2A1	105	70.00
2	G3A2	22	14.67
2	G3P1L1A1	22	14.67
3	G4A3	1	0.67

Table 5.2 shows the distribution of the patients with gravid status of the patients. Out of 150 study population, 70.0% belong to G2A1, 14.67% belong to G3A2, 14.67% belong to G3P1L1A1, and 0.67% belong to G4A3.

Figure 5.2 Gravida

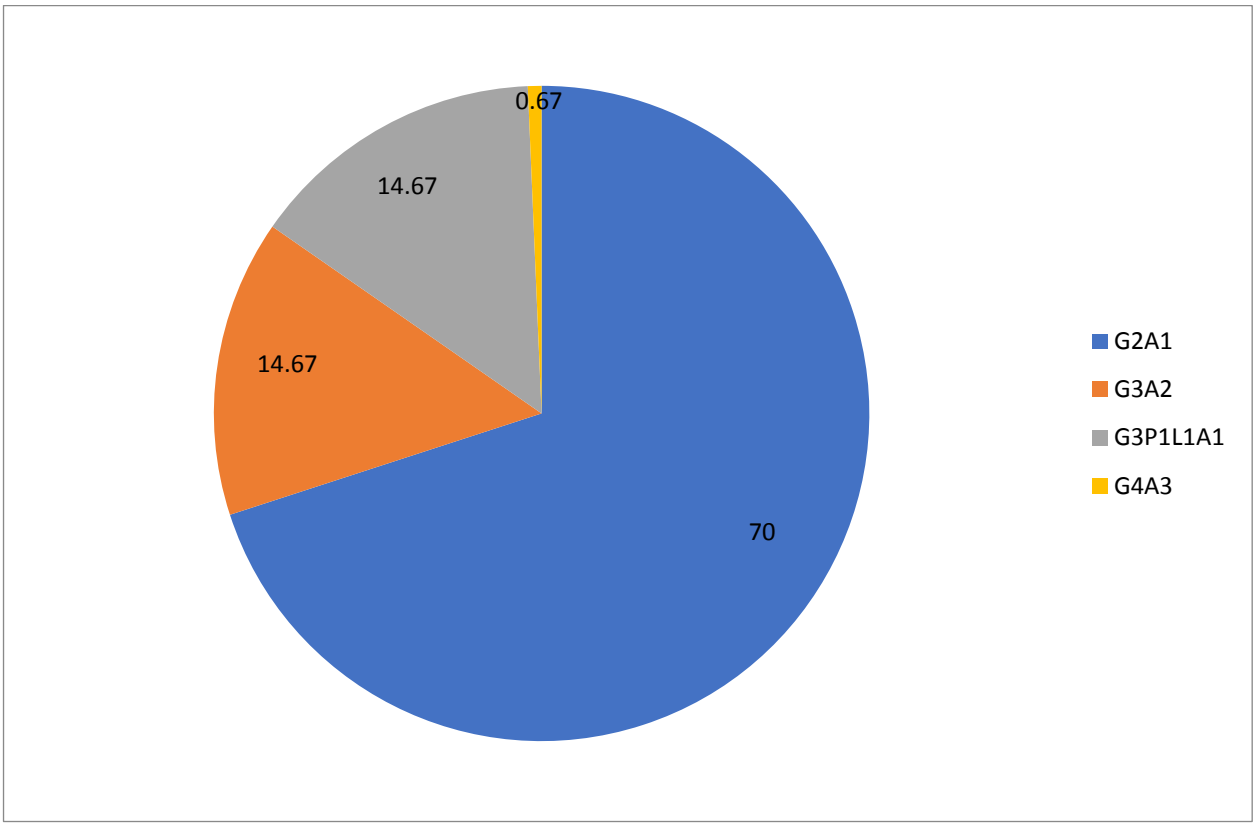


Table 5.3 Abortion

S.No	Abortion	Nos	%
1	1	127	84.67
2	2	22	14.67
3	3	1	0.67

Table 5.3 shows distribution with respect to number of previous abortions. 84.67% of patients had 1 previous abortion, 14.67% of patients had 2 previous abortions and only 0.67% had 3 previous abortions.

Figure 5.3 Abortion

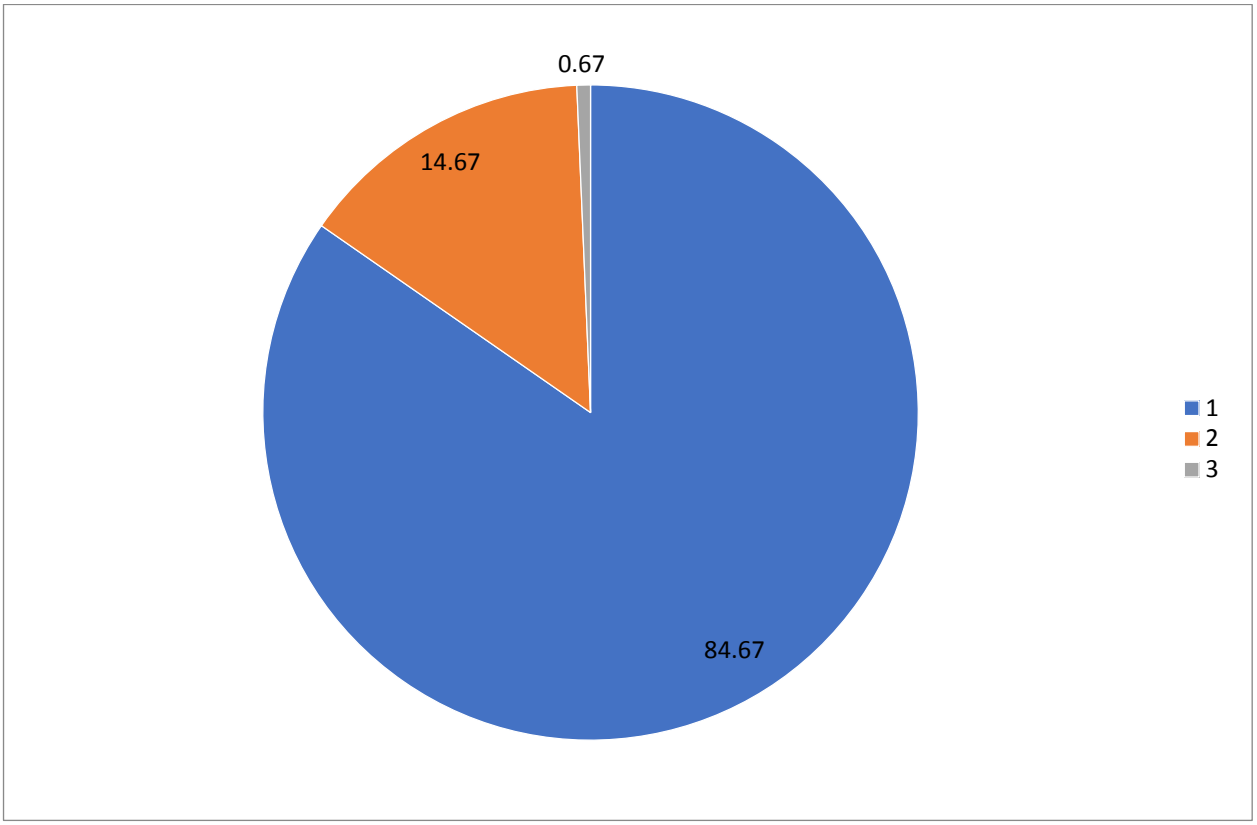


Table 5.4 Mode of Termination

S.No	Termination	No	%
1	LN	88	58.67
2	Instrumental Delivery	20	13.33
3	LSCS	42	28.00

Table 5.4 shows the mode of termination of pregnancy. Out of 150 mothers, 58.67% of cases had labour natural, 28% had LSCS and 13.33% had instrumental delivery.

Figure 5.4 Mode of Termination

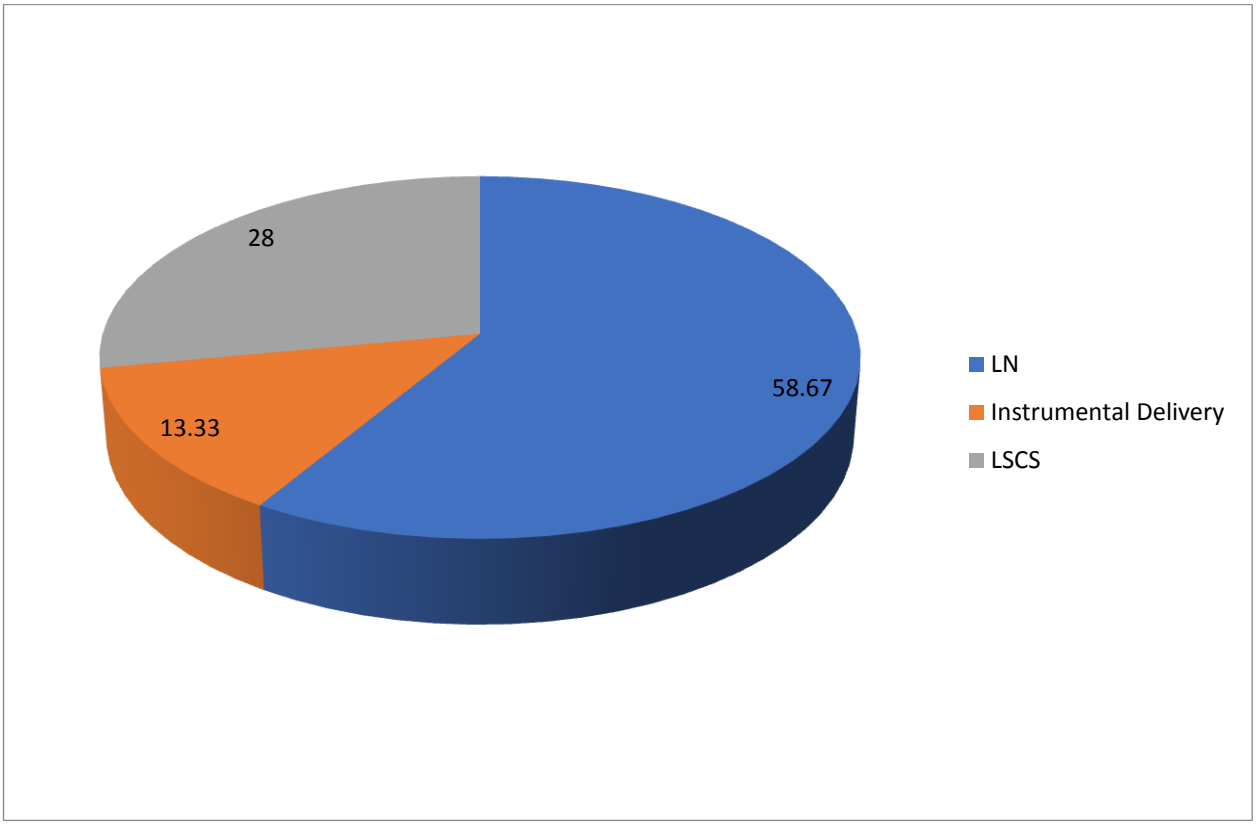


Table 5.5 Outcome

S.No	Outcome	Nos	%
1	Full Term	119	79.33
2	Pre Term	11	7.33
3	Post Term	20	13.33
4	PROM	23	15.33
5	IUGR	1	0.66

Table 5.5 shows the outcome of pregnancy of 150 mothers. About 79.33% of women had full term delivery and 13.33% of women had post term delivery and 7.33% of women had preterm delivery. Out of our 150 study population 15.33% had PROM and 0.66% had IUGR.

Figure 5.5 Outcome

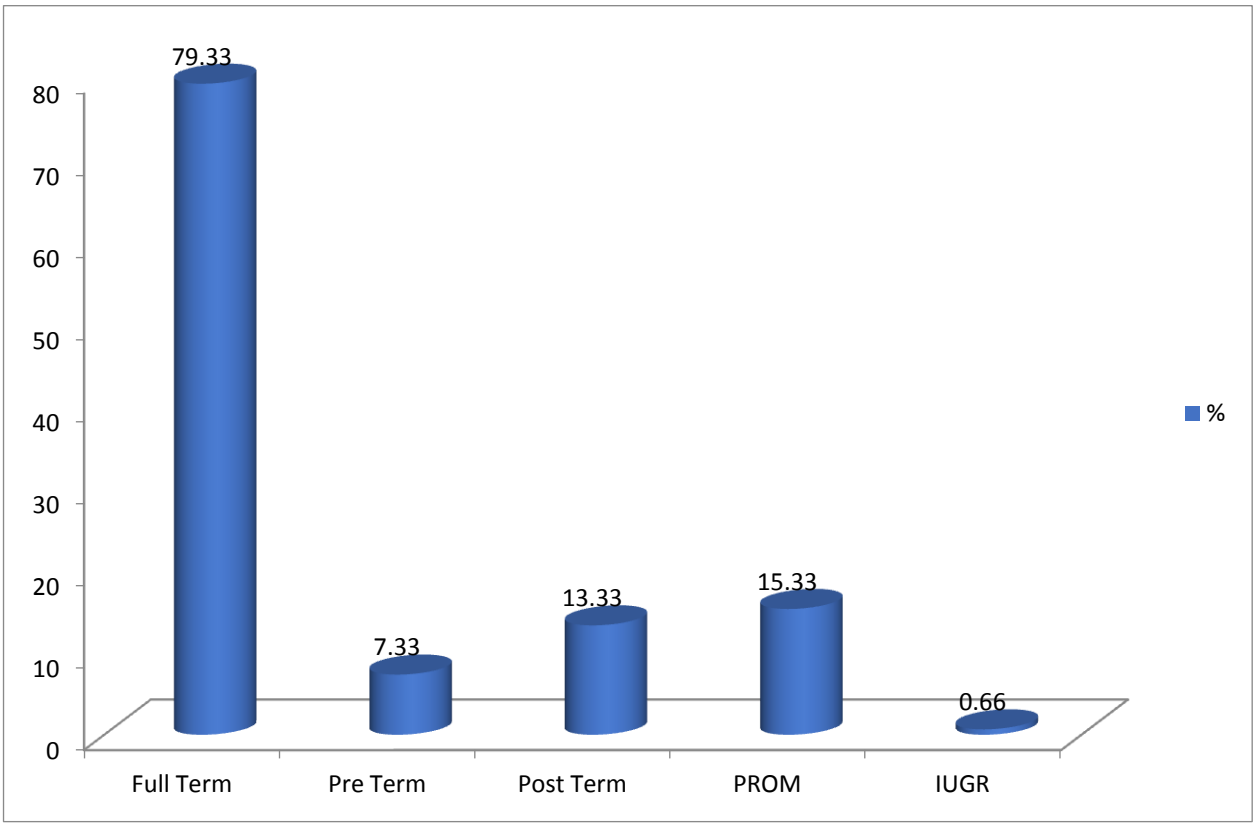


Table 5.6 Indication for LSCS

S.No	Indication for LSCS	Nos	%
1	Breech in Labour	3	2.00
2	CPD in Labour	3	2.00
3	CPD/Fetal Distress	1	0.67
4	Elective LSCS	1	0.67
5	Failed Induction	1	0.67
6	Fetal Alarm Signal	3	2.00
7	Fetal Distress	8	4.67
8	IUGR/Oligo	1	0.67
9	Long Period of Infertility	3	2.00
10	MSL	2	1.33
11	MSL/Fetal Distress	3	2.00
12	OLIGO	2	1.33
13	OLIGO/Nonreactive CTG	1	0.67
14	Prev LSCS in labour	3	2.00
15	Prom/Fetal Distress	2	1.33
16	Severe OLGO/Fetal Distress	2	1.33
17	Thick MSL	3	2.00
18	Unengaged Head/Fetal Distress	1	0.67
		42	28.00

Figure 5.6 Indication for LSCS

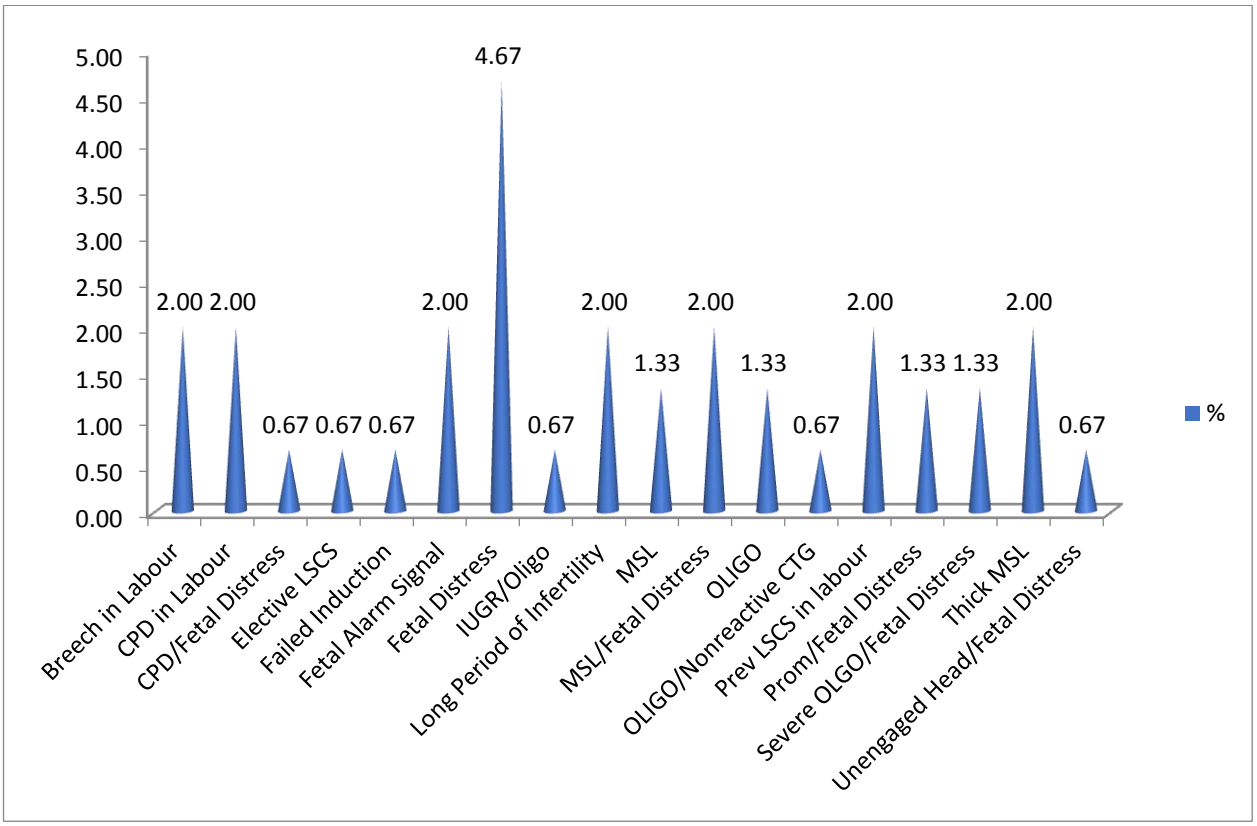


Table 5.7 Low Birth Weight

Obstetric Index	Total Number	Low Birth Weight Babies	
		Number	%
G2A1	105	18	17.14
G3A2	22	3	13.64
G3P1L1A1	22	1	4.35
G4A3	1	0	0.00

Table 5.7 shows the low birth weight. Among the study population of 150, 17.14% low birth weight babies were in G2A1, 13.64% in G3A2, 4.35% in G3P1L1A1, and 0% in G4A3.

Low Birth Weight

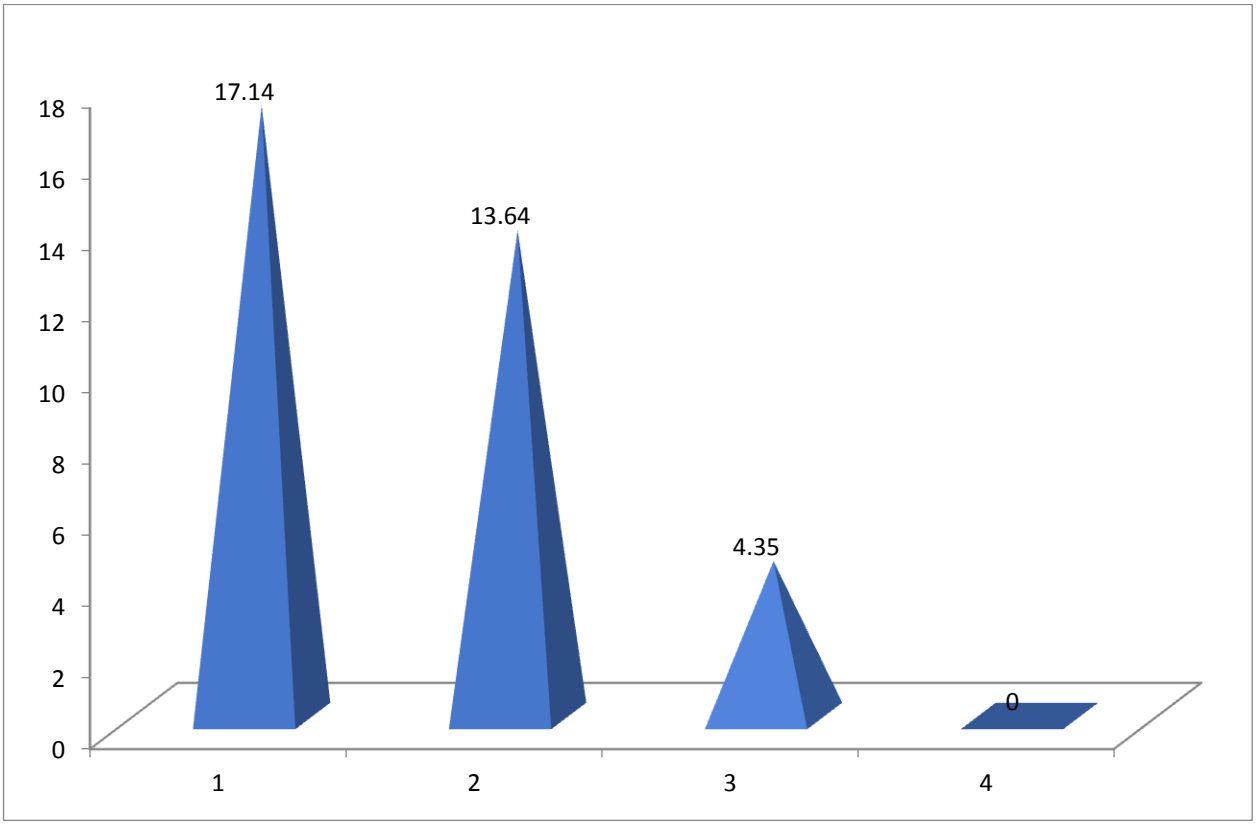


Table 5.8 G2A1

S.No		G2A1	%
1	Term	84	56.00
2	Preterm	7	4.67
3	Post term	14	9.33
4	IUGR	1	0.67
5	IUD	0	0.00
6	PROM	16	10.67
7	Stillbirth	0	0.00
8	Induction of Labour	11	7.33
9	LN	65	43.33
10	Instrumental Delivery	11	7.33
11	LSCS	30	20.00

Table 5.8 shows about the outcome of pregnancy in G2A1 in various aspects. Out of 105 G2A1 mothers, 56% had term delivery, 9.33% had post-term delivery, and 4.67% had preterm delivery. Out of 105 G2A1 mother, 43.33% had labour natural, 20.00% had LSCS, and 7.33% had instrumental delivery. Further adding to our study, 10.67% had PROM, 7.33% had induced labour, and 0.67% were found to be IUGR.

Figure 5.8 G2A1

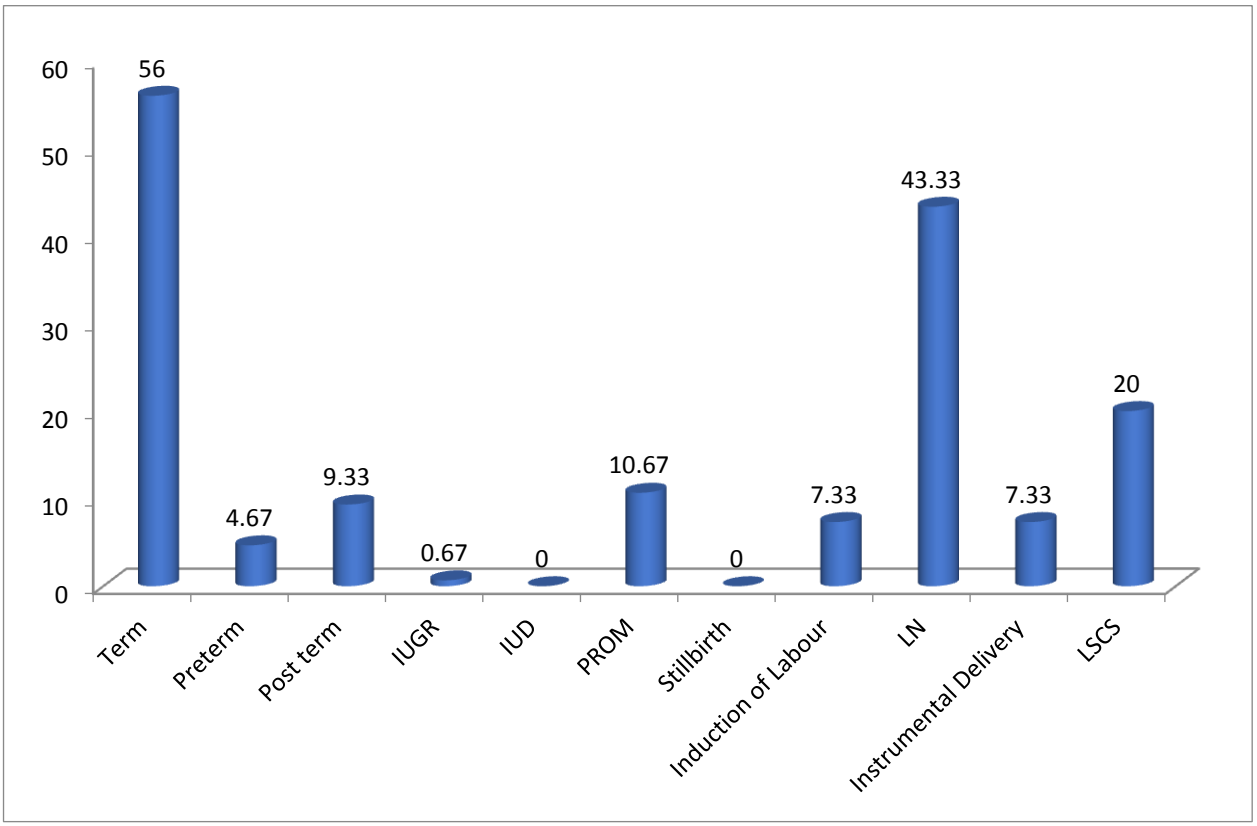


Table 5.9 G3A2

S.No		G3A2	%
1	Term	17	11.33
2	Preterm	3	2.00
3	Post term	2	1.33
4	IUGR	0	0.00
5	IUD	0	0.00
6	PROM	0	0.00
7	Stillbirth	0	0.00
8	Induction of Labour	2	1.33
9	LN	11	7.33
10	Instrumental Delivery	3	2.00
11	LSCS	9	6.00

Table 5.9 shows about the outcome of pregnancy in G3A2 in various aspects. In the study population of 150, 22 women were G3 A2. Out of which 11.33% had term delivery, 2% had preterm delivery and 1.33% had post-term delivery. In addition, out of 22 mothers, 7.33% had labour natural, 6.00% had LSCS and 2% had instrumental delivery. Induction was done in 1.33% of mothers.

Figure 5.9 G3A2

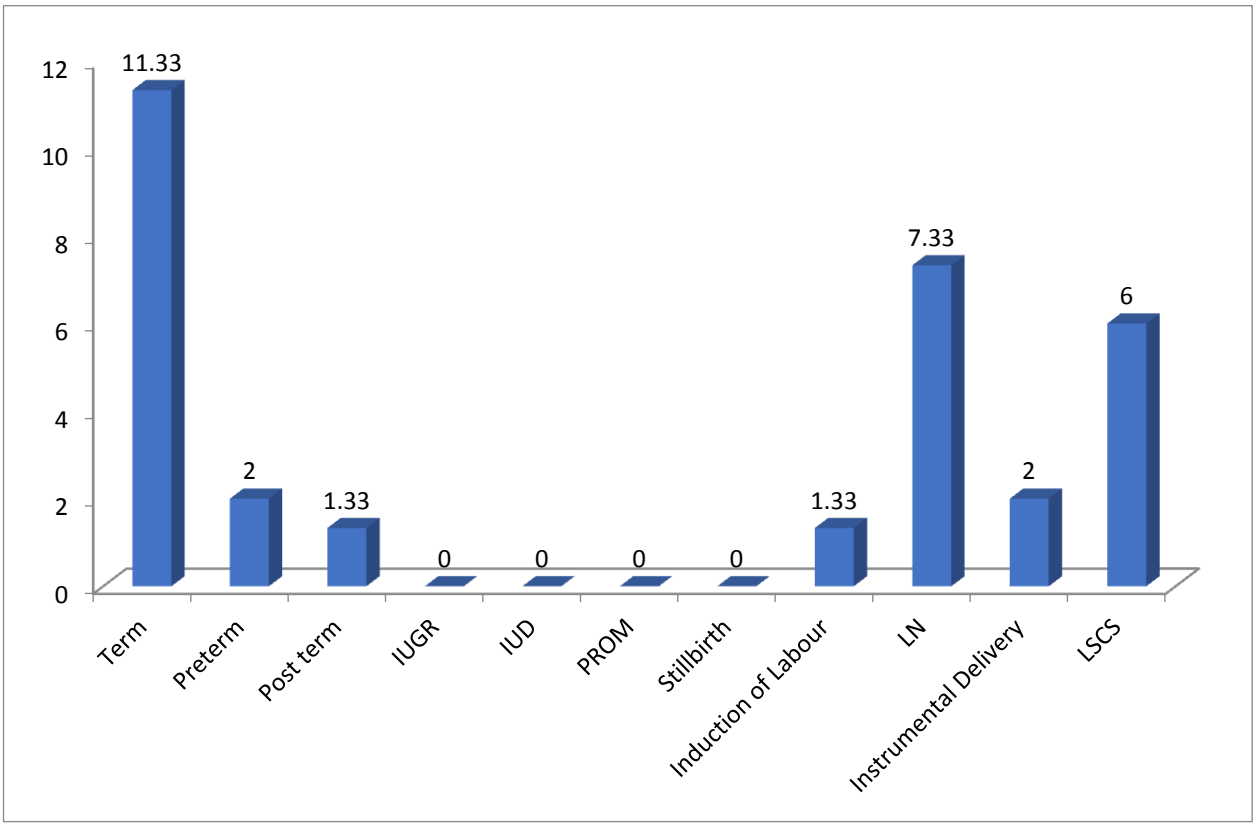


Table 5.10 G3P1L1A1

S.No		**G3P1L1A1**	%
1	Term	17	11.33
2	Preterm	1	0.67
3	Post term	4	2.67
4	IUGR	0	0.00
5	IUD	0	0.00
6	PROM	7	4.67
7	Stillbirth	0	0.00
8	Induction of Labour	1	0.67
9	LN	12	8.00
10	Instrumental Delivery	3	2.00
11	LSCS	5	3.33

Table 5.10 shows about the outcome of pregnancy in G3P1L1A1 in various aspects. In the study population of 150, 22 mothers were G3P1L1A1. Out of which 11.33% had Term delivery, 2.67% had Post term delivery, 0.67% had preterm delivery. Also, 8% had labour natural, 3.33% had LSCS and 2% had instrumental delivery. Also 4.67% had PROM and 0.67% had induction of labour.

Figure 5.10 G3P1L1A1

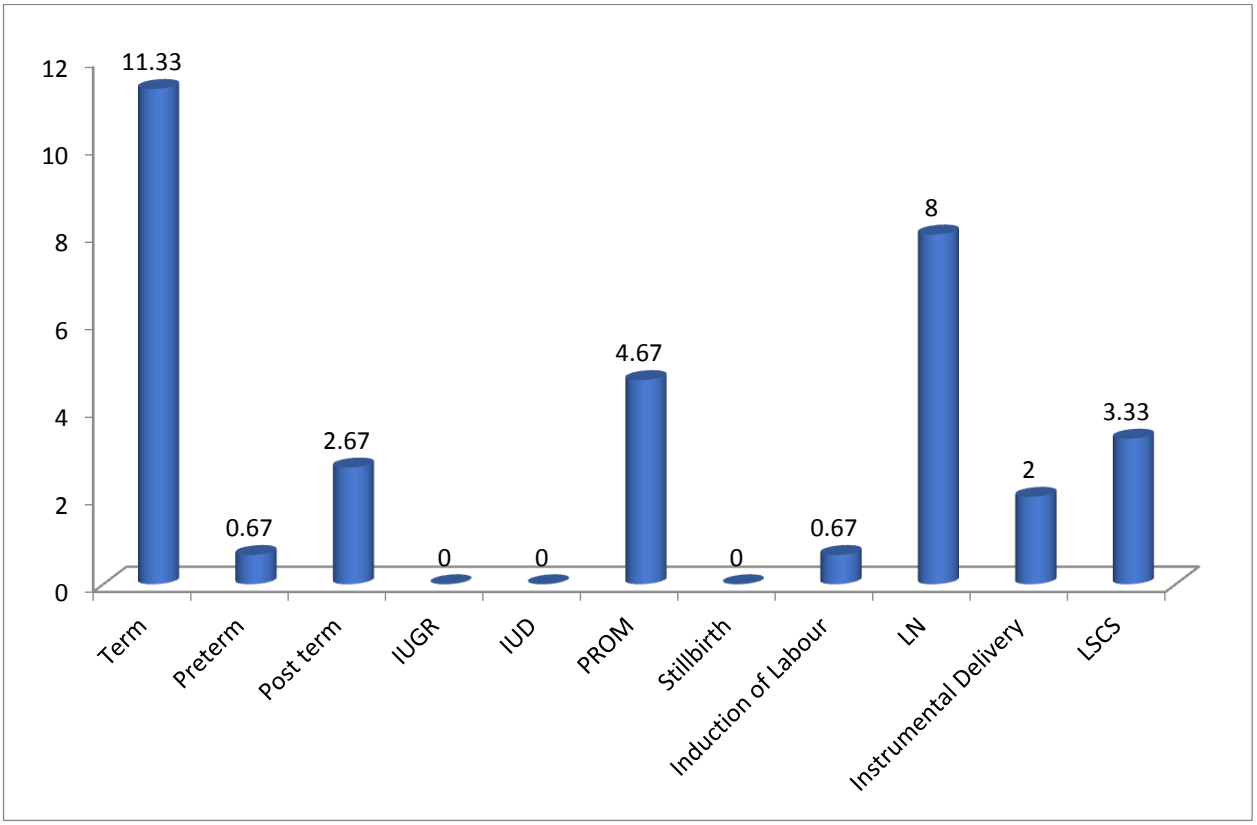


Table 5.11 G4A3

S.No		G4A3	%
1	Term	1	0.67
2	Preterm	0	0.00
3	Post term	0	0.00
4	IUGR	0	0.00
5	IUD	0	0.00
6	PROM	0	0.00
7	Stillbirth	0	0.00
8	Induction of Labour	1	0.67
9	LN	1	0.67
10	Instrumental Delivery	0	0.00
11	LSCS	0	0.00

Table 5.11 shows the outcome of pregnancy in G4A3 in various aspects. There was only 1 mother who is G4A3. And she was induced at term and delivered by labour natural.

Figure 5.11 G4A3

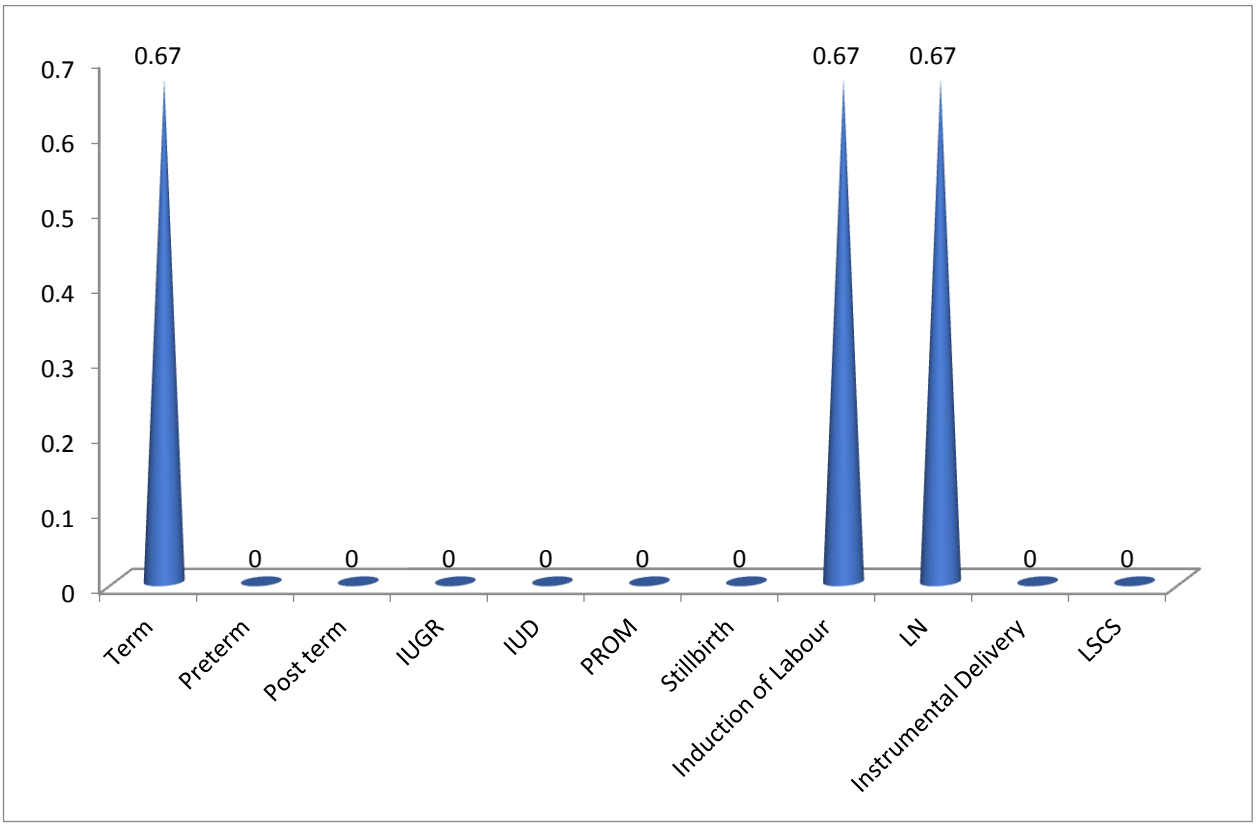


Table 5.12 Term

S.No		Term	%
1	G2A1	84	56.00
2	G3A2	17	11.33
3	G3P1L1A1	17	11.33
4	G4A3	1	0.67

Table 5.12 shows the percentage of study group who had term pregnancy with regard to obstetric code. Out of 150 study population, 119 mothers had term delivery out of which 56% were G2A1, 11.33% were G3A2, and 11.33% were G3P1L1A1 and 0.67% were G4A3 mothers.

Figure 5.12 Term

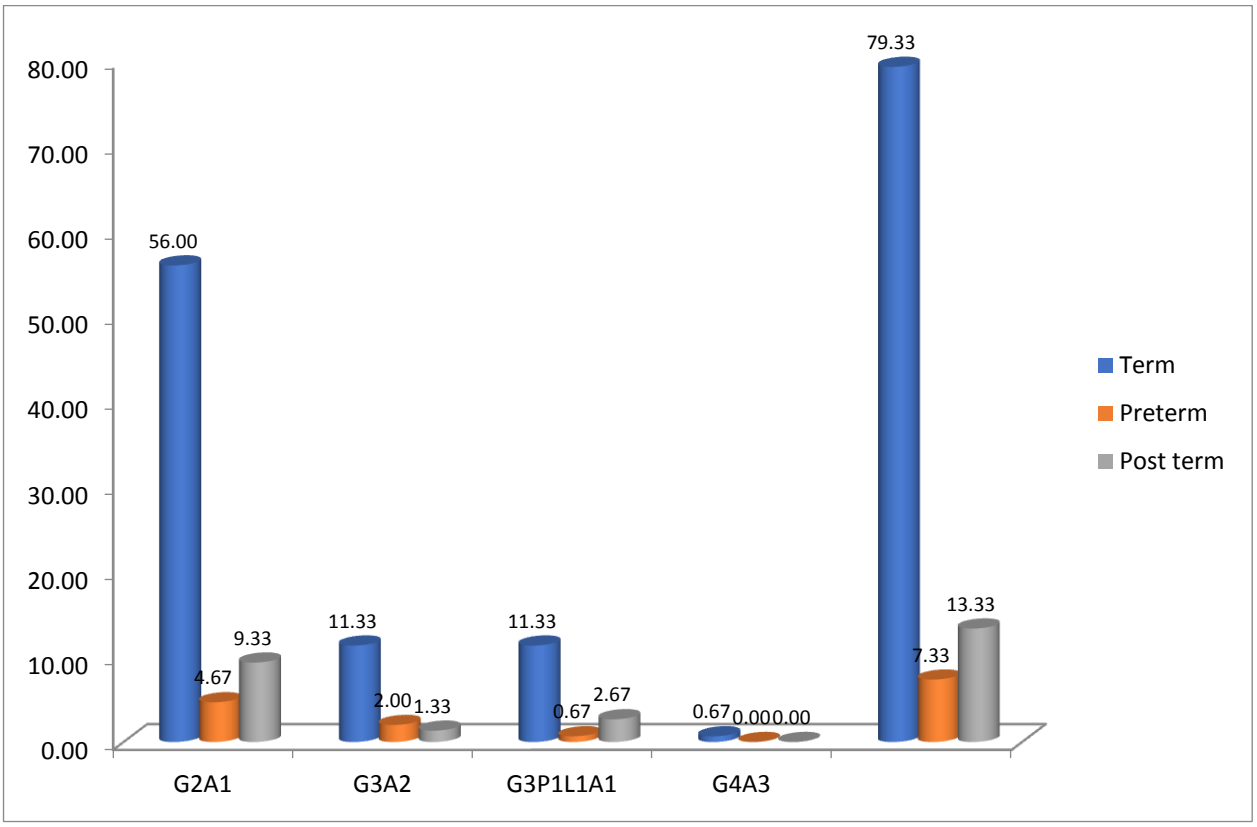


Table 5.13 Preterm delivery

S.No		Preterm	%
1	G2A1	7	4.67
2	G3A2	3	2.00
3	G3P1L1A1	1	1.33
4	G4A3	0	0.00

Table 5.13 shows percentage of study group who had preterm delivery with regard to obstetric code. From the study population of 150, 11 had preterm delivery. Out of 11 preterm deliveries, 4.67% were G2A1, 2% were G3A2, and 1.33% were G3P1L1A1.

Figure 5.13 Preterm delivery

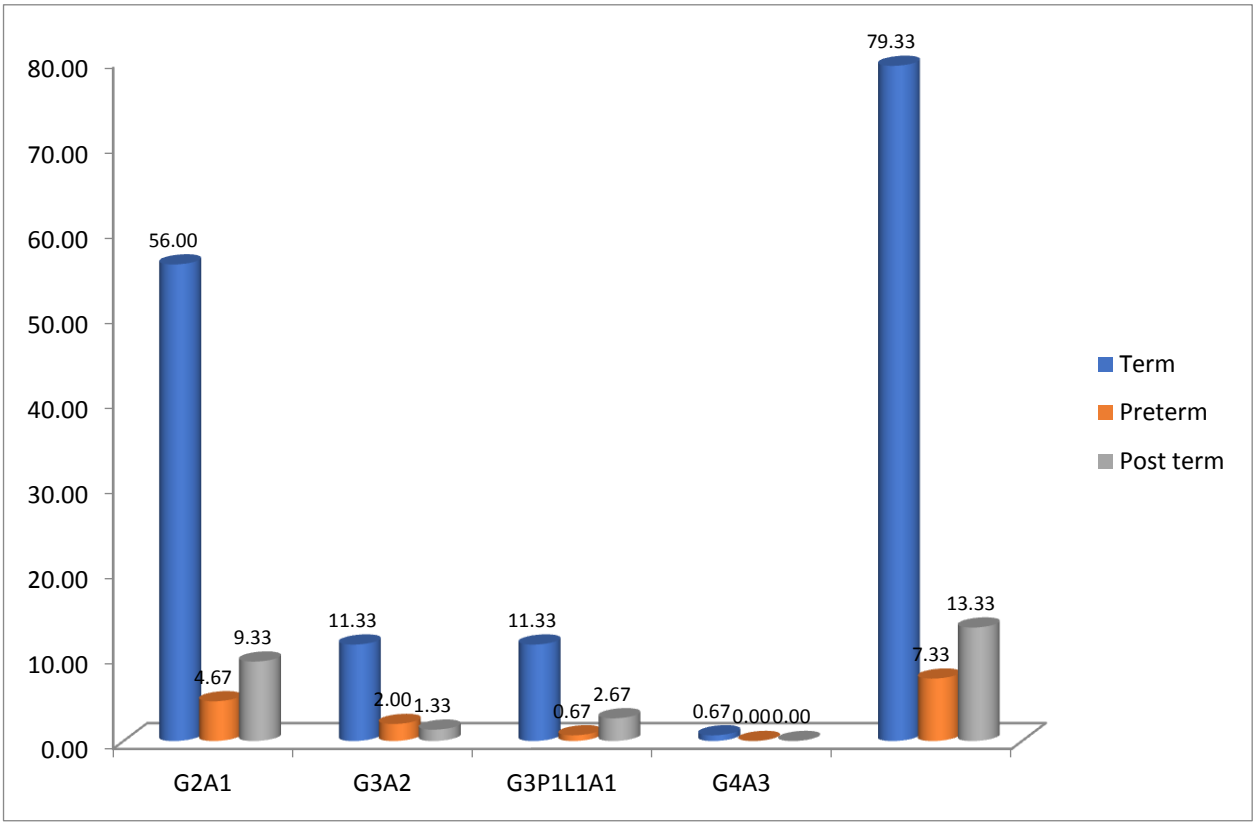


Table 5.14 Post-term delivery

S.No		Post Term	%
1	G2A1	14	9.33
2	G3A2	2	1.33
3	G3P1L1A1	4	2.66
4	G4A3	0	0.00

Table 5.14 shows the percentage of study group who had post term pregnancy with regard to obstetric code. Out of 150 deliveries, there were 20 post-term deliveries, out of which 9.33% were G2A1, 1.33% were G3A2, and 2.66% were G3P1L1A1.

Figure 5.14 Post-term delivery

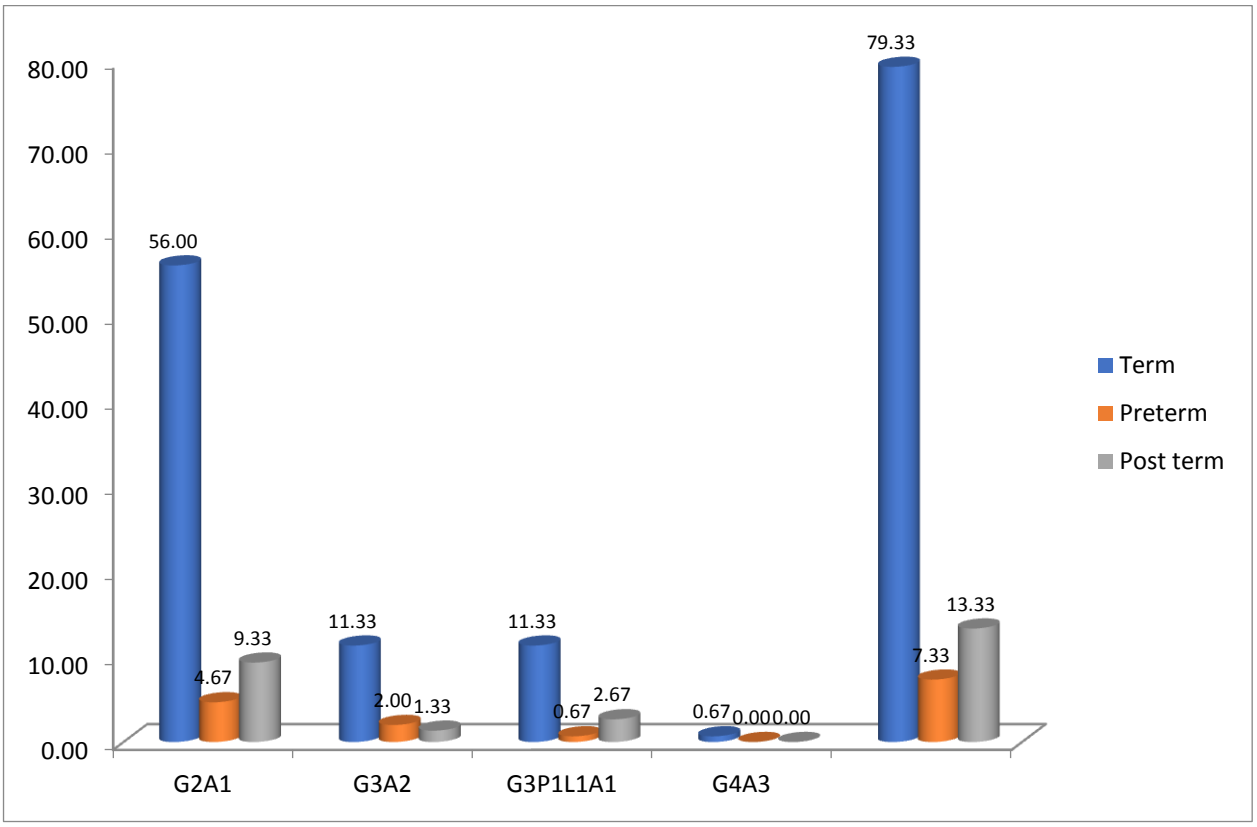


Table 5.15 IUGR

S.No		IUGR	%
1	G2A1	1	0.67
2	G3A2	0	0.00
3	G3P1L1A1	0	0.00
4	G4A3	0	0.00

Table 5.15 shows the IUGR distribution in the study population. There was only 1 IUGR. G2A1 constituted for 0.67% of the study sample.

Figure 5.15 IGUR

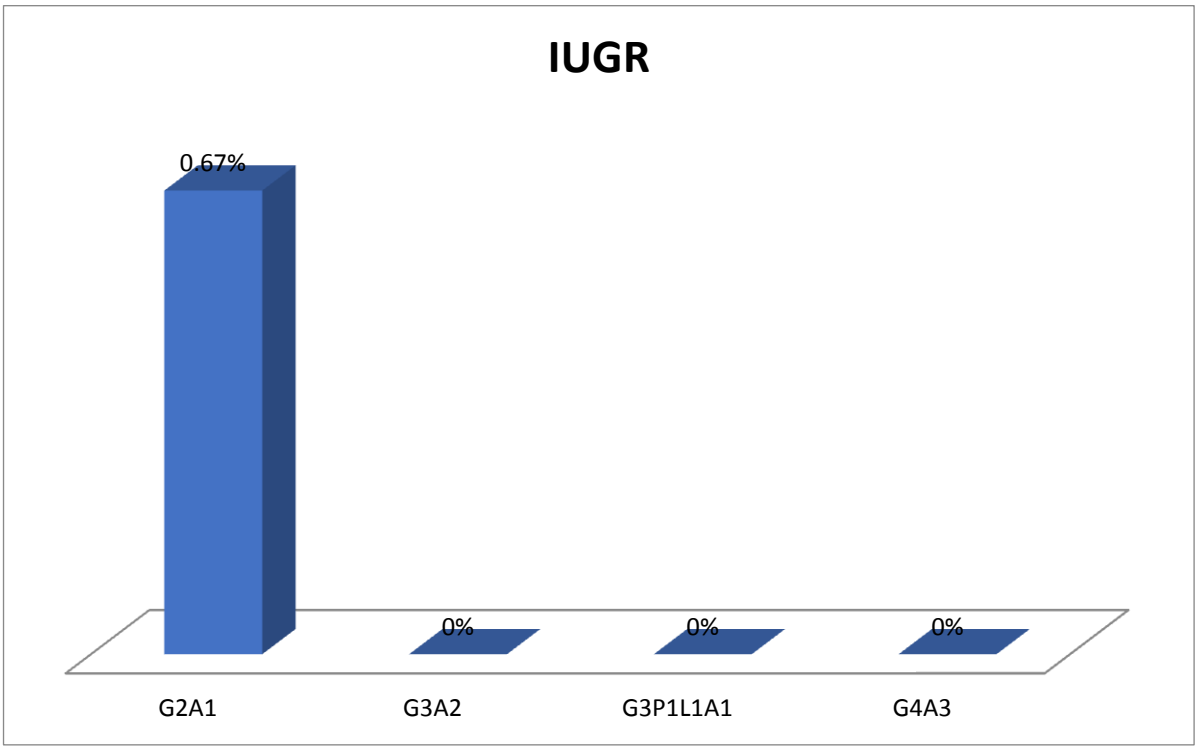


Table 5.16 IUD

S.No		IUD	%
1	G2A1	0	0.00
2	G3A2	0	0.00
3	G3P1L1A1	0	0.00
4	G4A3	0	0.00

Table 5.16 shows the number of IUD. There is no IUD in my study population.

Figure 5.16 IUD

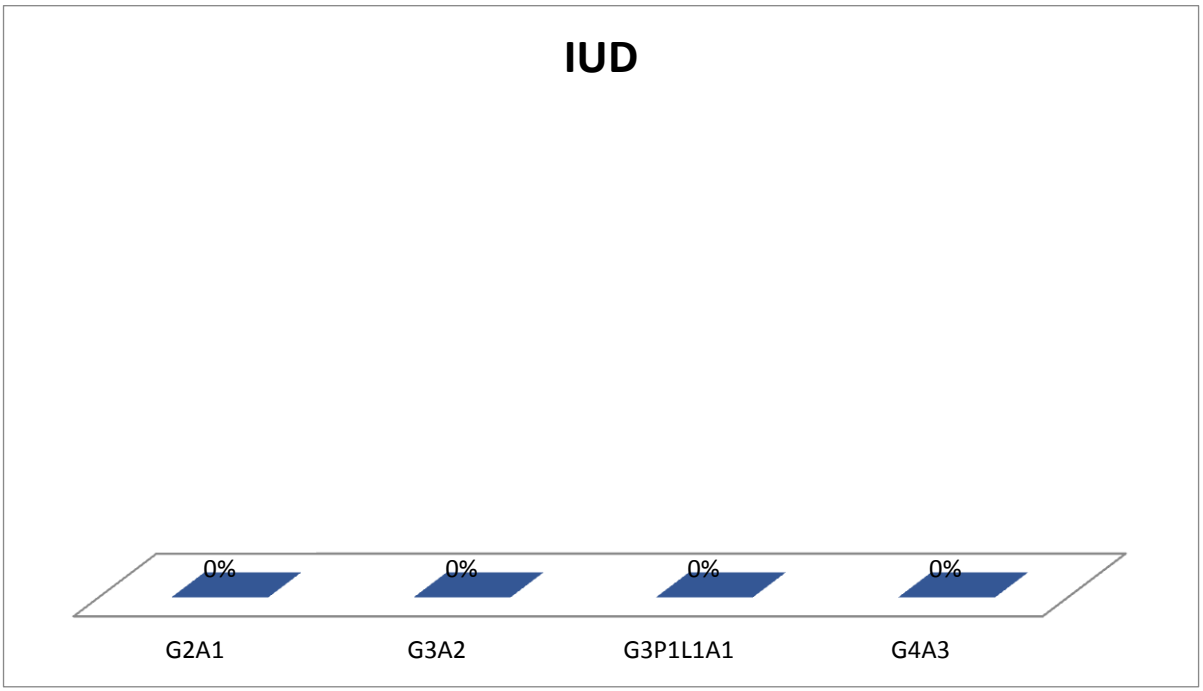


Table 5.17 PROM

S.No		PROM	%
1	G2A1	16	10.67
2	G3A2	0	0.00
3	G3P1L1A1	7	4.67
4	G4A3	0	0.00

Table 5.17 shows the PROM in the study population. Among 150 mothers, 23 mothers had PROM. Among them, 10.67% were G2A1 and 4.67% were G3P1L1A1.

Figure 5.17 PROM

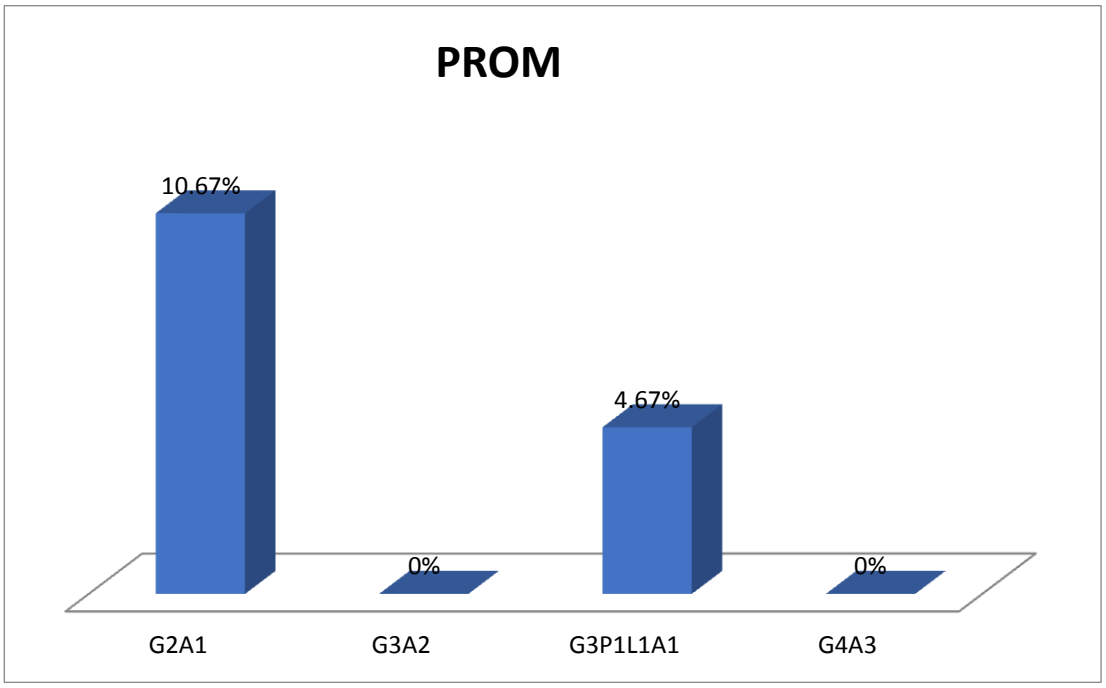


Table 5.18 Stillbirth

S.No		Stillbirth	%
1	G2A1	0	0.00
2	G3A2	0	0.00
3	G3P1L1A1	0	0.00
4	G4A3	0	0.00

Table 5.18 shows distribution of still birth. There is no stillbirth in my study population.

Figure 5.18 Stillbirth

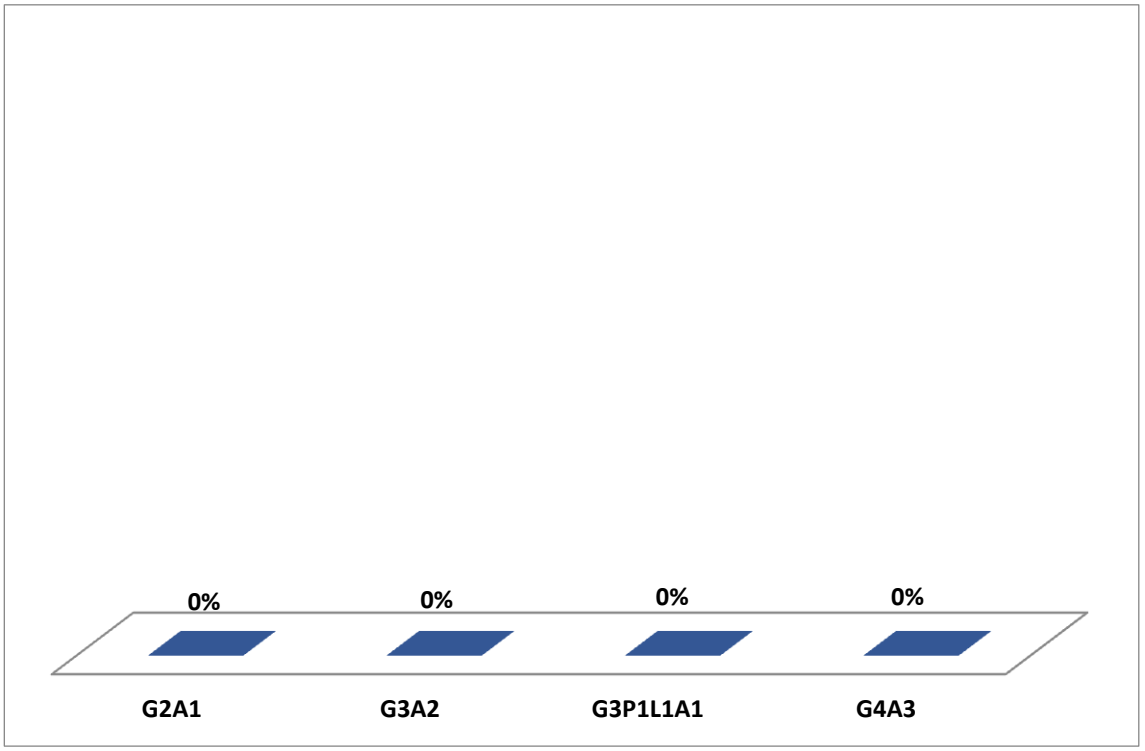


Table 5.19

Labour Natural

S.No		Labour Natural	%
1	G2A1	65	43.33
2	G3A2	11	7.33
3	G3P1L1A1	12	8.00
4	G4A3	1	0.66

Table 5.19 shows the distribution of labour natural. Out of 150 mothers, 89 had labour natural deliveries. Out of which 43.33% were G2A1, 7.33% were G3A2, 8.00% were G3P1L1A1, and 0.66% were G4A3.

Figure 5.19 Labour Natural

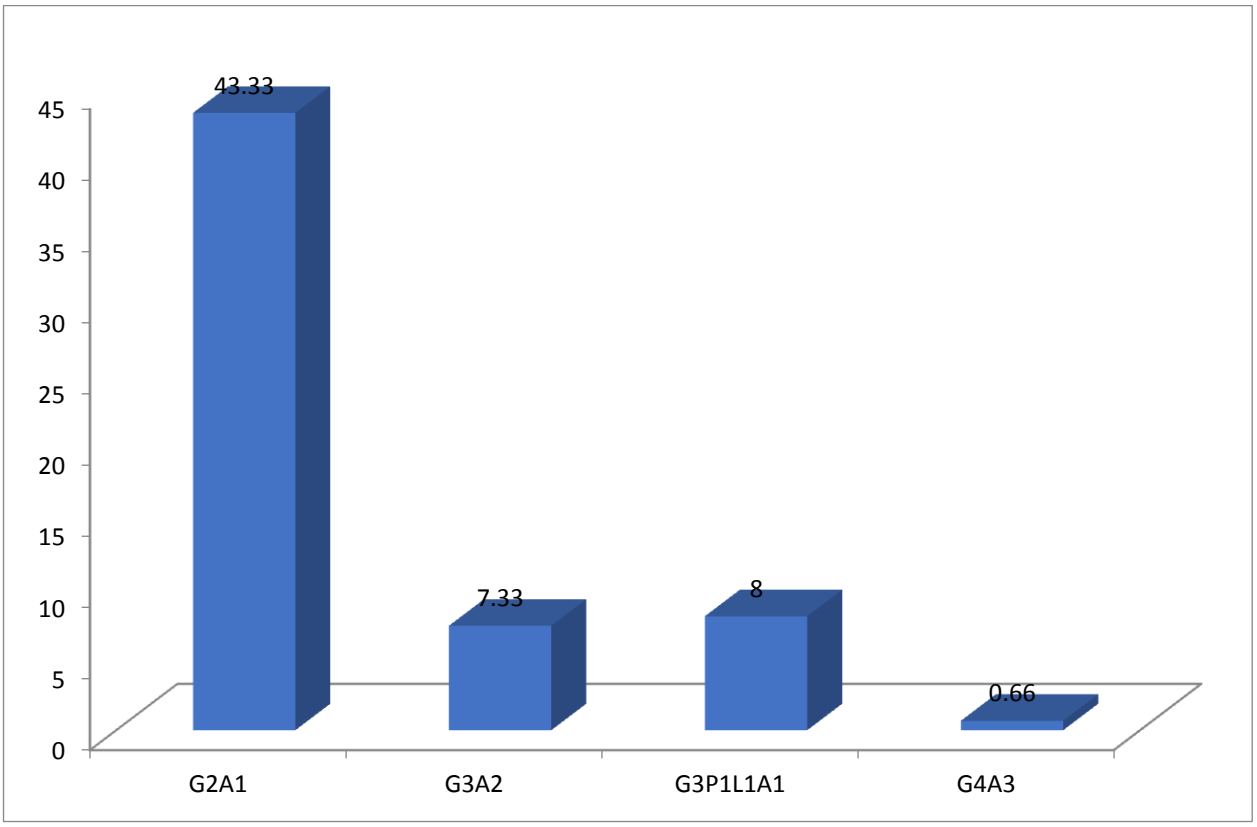


Table 5.20 Instrumental Delivery

S.No		Instrumental Delivery	%
1	G2A1	11	7.33
2	G3A2	3	2.00
3	G3P1L1A1	3	2.00
4	G4A3	0	0.00

Table 5.20 shows the distribution of instrumental delivery. Out of 150 mothers, 17 mothers had instrumental delivery. Out of which 7.33% were G2A1, 2% were G3A2, and 2% were G3P1L1A1.

Figure 5.20 Instrumental Delivery

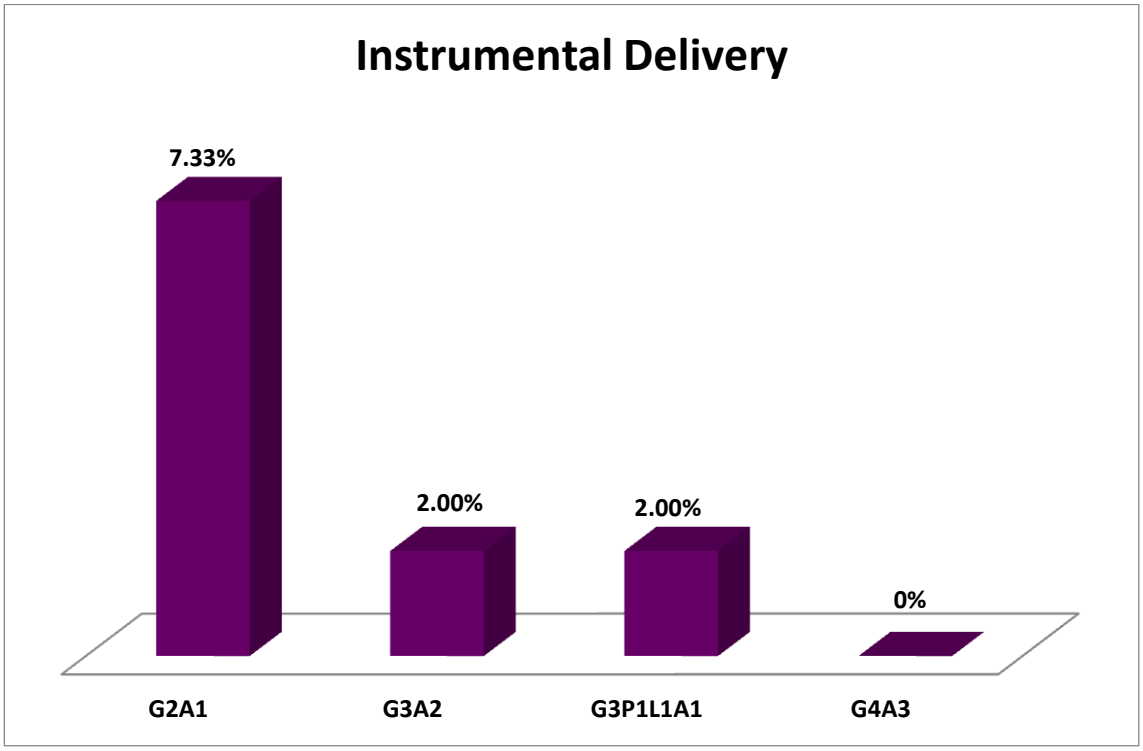
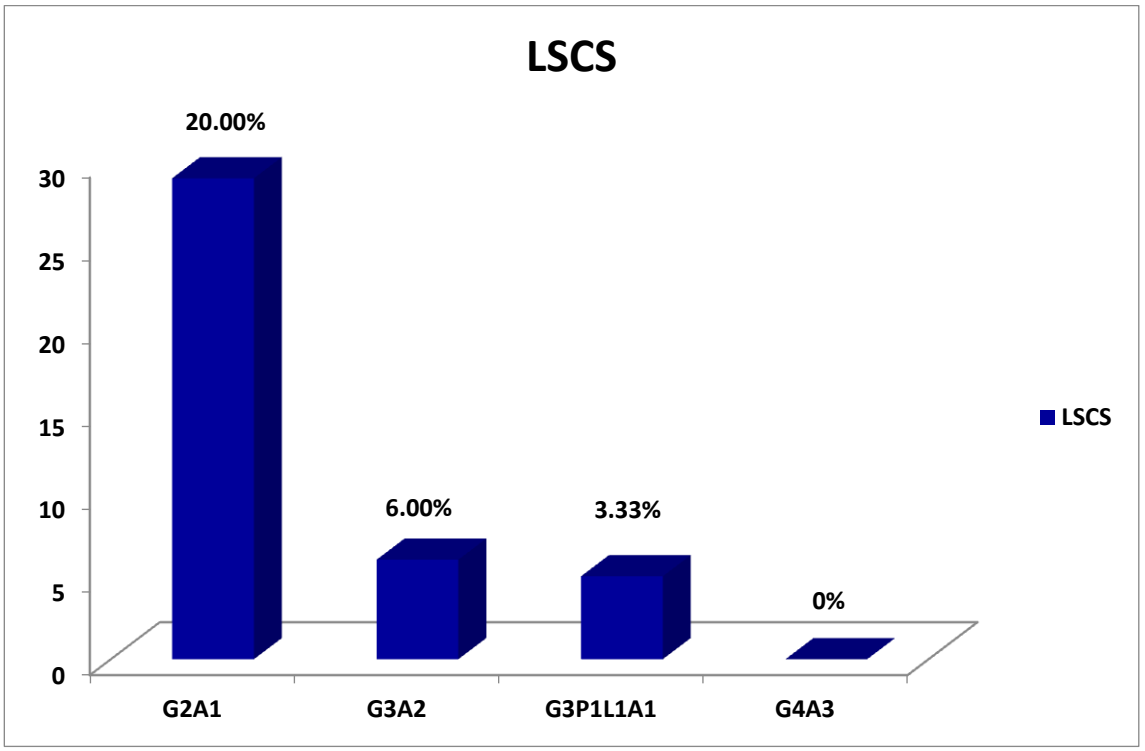


Table 5.21 LSCS

S.No		LSCS	%
1	G2A1	30	20.00
2	G3A2	9	6.00
3	G3P1L1A1	5	3.33
4	G4A3	0	0.00

Table 5.21 shows the distribution of LSCS in the study group. Out of 150 mothers, 42 mothers had LSCS. Out of which 20.00% were G2A1 6.00% were G3A2, and 3.33% were G3P1L1A1.

Figure 5.21 LSCS



5. DISCUSSION

- In our study, we have studied a total of 150 mothers with the history of previous spontaneous first trimester abortion over a period of 2 years at the Government Thoothukudi Medical College Hospital. Most of the mothers in the study group fall under 21 to 25 years of age who had a mean age of 25.2 ± 4.3 years, which is similar to the study of Sahu[25] which was 27- 34 years.
- In a study conducted by Knudsen[22] showed no association between age of the patient and spontaneous abortion outcomes
- In our study, 58.67% of mothers had normal delivery, 28% had LSCS, and 13.33% had instrumental delivery similar to the reports of the study conducted by Kashanian[26] and Upudhay[27] which was 28.1%.
- The percentage of patient who had preterm delivery in my study group was 7.33%. In the study by Basso[28], 3% had preterm delivery, and in a study conducted by Reginald[19] showed 28% of preterm delivery. These studies show an increased risk of preterm labour after abortion in previous pregnancies.
- In our study among 150 mothers, 17.14% low birth weight babies were in G2A1, 13.64% in G3A2, 4.35% in G3P1L1A1, and 0% in G4A3. In a study by Basso[18] had 7.5% of low birth weight babies.

- Bhattacharya[29] stated that the miscarriage group faced a higher risk of pre-eclampsia (44%), threatened abortion (27%), and caesarean section (4.2%), preterm delivery (9.2%), and low birth weight babies (8.5%).
- Percentage of patients who had IUGR was 0.6% in our study. Thom[13] in their study showed an increased risk of IUGR and LBW as number of abortion increase. There was no IUD in my study.
- Percentage of patients who had intrauterine growth restriction was 0.6% in our study. Thom et al., in their study showed an increased risk of intrauterine growth restriction and low birth weight as number of abortion increase.[13] There was no IUD in my study. In a study conducted by Jing Yang[31] showed increased risk of caesarean section, intrauterine growth restriction and stillbirth in patients with history of recurrent pregnancy loss. Swathi agarwal[32] conducted a study called "pregnancy outcome following spontaneous abortion" showed a stillbirth rate of 2.8%, preterm delivery risk (8.7%). Preterm delivery risk following spontaneous abortion was similar to my study.
- Among 150 mothers, 23 mothers had PROM constituting 15.33% of the study population. Among them, 10.67% were G2A1 and 4.67% were G3P1L1A1.

6. SUMMARY

- Previous unfavourable pregnancy outcome increases the risk of adverse outcome in the future pregnancies.
- There is association between previous spontaneous abortion and increased risk of preterm delivery (7.33%), PROM (15.33%), and low birth weight (14.67%) in the subsequent pregnancies.
- There is no statistically significant increase in the rate of IUGR, stillbirth and IUD in the subsequent pregnancies.
- As the number of previous abortions increase the incidence of successful outcome decreases. A striking feature of this study is that the incidence of PROM (15.33%), and preterm (7.33%) were significantly higher in women who had history of previous one abortion.
- As the number of previous abortions increase the incidence of low birth weight (14.67%) increases.

7. CONCLUSION

Miscarriage is the most common complication of pregnancy. There is no currently definitive predictive test or treatment currently available that can prevent spontaneous miscarriage. About 50% of miscarriage is associated with chromosomal anamolies. Remaining cases are likely to be euploid fetuses that have failed due to implantation problem. Patients with previous history of spontaneous abortion are associated with adverse pregnancy outcome in their future pregnancy. The complication and fetal loss can be reduced by early booking of the patient and giving good antenatal care. It has been established that supportive care and frequent antenatal check-up and scan will improve the pregnancy outcome. Women with previous history of miscarriage should be reassured and sonography should be done at the earliest for next pregnancy.

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PROFORMA

Name: Age: Ip.no DOA:

LMP: EDD: GA on admission:

GA on delivery:

Address:

Contact No:

Socioeconomic Status: Class I/ II/ III/ IV/ V

Educational Status:

Obstetric Code: Primi/G P L A

Menstrual Cycles: Regular/ Irregular

Marital History: Married Since

Consanguinity: Consanguinous/ Nonconsanguinous

Past History:

Associated Risk Factors: GDM/ GHT/ Breech/ Prev Lscs/

Postdated/ Anaemia

Family History: Mother/ Father/ Both/ None If Yes,

Specify Condition: DM/ HT/ TB/ BA

General Examination:

Anemia / Pedal Edema /Icterus/ Clubbing /Cyanosis/ Generalized

Lymphadenopathy

Breast: Spine: Thyroid:

CVS:

RS:

BP:

PR:

Obstetricexamination

Fundal Height: Presentation:

FHR:

Liquor Clinically: Adequate/ Not Adequate

Per Vagina: Intact Membranes/ Ruptured Membranes

Investigations:

Urine albumin: Sugar: Deposits:

Hemoglobin:

Blood Group: Blood Sugar: Urea:

Serum Creatinine:

Ultrasound: Gestational

Age: Placenta:

FH:

AFI:

Nst: Reactive/ Nonreactive

Mode Of Delivery:

Spontaneous:

Induction:

Vaginal:Instrumental:

Lscs: Emergency/ Elective

Indication ForLscs:

Induction Delivery Interval:

Oxytocin Drip: Yes/ No

FHR Variation: Yes/ No

Duration of Labour:

Rupture of Membrane:

Colour Of Liquor: Clear/ Thin Meconium/ Thick Meconium If Meconium

Stained Liquor, Amnioinfusion:Yes/No

Baby Details:

Cried After Birth: Yes/ No

Sex:

Birth Weight:

Apgar Score: 1 Min: 5 Min:

Baby Admission In NICU: Yes/No

IUGR: Yes/No

LGA/SGA/AGA

Survival: Yes/No

MASTER CHART

SL.NO	NAME	AGE	OBS CODE	LMP	EDD	GA ON ADMISSION	GA ON DELIVERY	PRETERM	TERM	POST TERM	B.WT	LBW	IUGR	IUD	PROM	STILL BIRTH	RECURRENCE OF ABORTION	INDUCTION OF LABOUR	LN	INSTRUMENTAL	LSCS	INDICATION FOR LSCS
1	SANTHANA THAI	27	G2A1	16-03-2020	23-12-2021	39+0	39+1	0	1	0	2.915	0	0	0	1	0	0	1	1	0	0	
2	JEYANTHI	28	G2A1	12-03-2020	19-12-2020	39+2	39+3	0	1	0	3.66	0	0	0	0	0	0	0	0	1	0	
3	KANAGAVALLI	27	G3P1L1A1	11-03-2020	18-12-2020	39+4	39+4	0	1	0	2.92	0	0	0	1	0	0	0	0	0	0	
4	GOMATHI	37	G2A1	06-04-2020	13-01-2021	39+1	39+2	0	1	0	2.415	1	0	0	0	0	0	0	1	1	0	
5	KALAIVANI	22	G2A1	21-03-2021	28-12-2020	39+6	39+6	0	1	0	2.955	0	0	0	0	0	0	1	1	0	0	
6	MARIYA ANTHONY ROSI	25	G3P1L1A1	20-06-2020	27-06-2020	39+3	39+6	0	1	0	2.72	0	0	0	0	0	0	0	0	0	1	PREV LSCS IN LABOUR
7	NAGESHWARI	20	G2A1	13-09-2020	20-06-2020	38+6	39+2	0	1	0	2.82	0	0	0	1	0	0	0	1	0	0	
8	VIJAYALAKSHMI	28	G3P1L1A1	29-03-2020	05-01-2021	36+6	37+1	0	1	0	3.22	0	0	0	0	0	0	0	0	0	1	ELECTIVE LSCS
9	SWETHA	19	G2A1	17-03-2020	24-12-2020	38+4	38+6	0	1	0	2.66	0	0	0	0	0	0	1	1	0	0	
10	MAHESHWARI	26	G2A1	12-03-2020	19-12-2020	39+6	39+6	0	1	0	3.265	0	0	0	0	0	0	0	1	0	0	
11	MAHALAKSHMI	23	G3P1L1A1	13-03-2020	20-12-2020	40+2	40+3	0	0	1	2.99	0	0	0	0	0	0	1	1	0	0	
12	AADHIRA	21	G2A1	22-02-2020	21-12-2020	39+6	39+6	0	1	0	2.97	0	0	0	0	0	0	0	0	0	0	
13	SUBBULAKSHMI	32	G2A1	04-04-2020	11-01-2021	36+5	36+6	0	1	0	3.415	0	0	0	0	0	0	0	1	0	0	
14	MARI SELVI	27	G2A1	02-04-2020	09-01-2021	38+6	38+6	0	1	0	2.788	0	0	0	0	0	0	0	0	0	1	BREECH IN LABOUR
15	ANBUMALATHI	26	G2A1	04-04-2020	11-01-2021	38+0	38+1	0	1	0	2.97	0	0	0	0	0	0	0	1	0	0	
16	MARI	20	G2A1	26-10-2020	02-08-2021	38+0	38+1	0	1	0	2.84	0	0	0	0	0	0	0	0	0	1	CPD IN LABOUR
17	SWEETLIN CHITRA	26	G2A1	11-10-2020	18-07-2021	40+0	40+1	0	0	1	2.255	1	0	0	0	0	0	0	0	0	1	FETAL DISTRESS
18	SEETHALAKSHMI	22	G2A1	10-10-2020	17-07-2021	40+0	40+1	0	0	1	3.196	0	0	0	0	0	0	0	1	0	0	
19	ANISTA	24	G3A2	15-10-2020	22-07-2021	39+1	39+2	0	1	0	3.13	0	0	0	0	0	0	0	1	0	0	
20	JEYALAKSHMI	24	G2A1	11-10-2020	18-07-2021	39+5	39+6	0	1	0	2.73	0	0	0	0	0	0	0	0	1	0	
21	LINGAJOTHI	23	G2A1	28-08-2021	04-06-2021	38+3	38+5	0	1	0	2.52	0	0	0	0	0	0	0	1	0	0	
22	MUTHUMARI	21	G3A2	16-09-2020	23-06-2021	38+3	38+4	0	1	0	2.93	0	0	0	0	0	0	0	1	0	0	
23	PODHUMPONNU	39	G2A1	22-09-2020	29-06-2021	39+2	40+0	0	1	0	1.84	1	1	0	0	0	0	0	0	0	1	IUGR/OLIGO

24	CHITTIHAJIRA	26	G2A1	04-09-2020	11-06-2021	39+4	39+6	0	1	0	2.39	1	0	0	0	0	0	1	0	0	1	THICK MSL
25	RAJATHI	20	G2A1	NOT KNOWN	25-06-2021	37+3	37+6	0	1	0	2.67	0	0	0	0	0	0	0	1	0	0	
26	PUSHPA DEVI	29	G3P1L1A1	09-09-2020	16-06-2021	38+5	38+5	0	1	0	2.9	0	0	0	0	0	0	0	1	0	0	
27	MAREESHWARI	19	G2A1	01-09-2020	08-06-2021	39+2	39+4	0	1	0	2.99	0	0	0	0	0	0	0	1	0	0	
28	JOTHILAKSHMI	24	G2A1	02-10-2020	09-07-2021	35+3	35+5	0	1	0	1.865	1	0	0	0	0	0	0	0	0	1	MSL/FETAL DISTRESS
29	JERIN VICTORIA	24	G2A1	11-09-2020	18-06-2021	37+0	37+3	0	1	0	3.14	0	0	0	0	0	0	0	1	0	0	
30	ESTHER SANGEETHA	28	G2A1	22-08-2020	29-05-2021	39+6	40+0	0	1	0	3.605	0	0	0	0	0	0	0	0	0	1	CPD IN LABOUR
31	PADMA	30	G2A1	31-08-2020	07-06-2021	38+4	38+5	0	1	0	3.395	0	0	0	0	0	0	0	0	0	1	FETAL DISTRESS
32	MARIYA SELVI	23	G2A1	15-08-2020	22-05-2021	39+6	40+1	0	0	1	3.41	0	0	0	0	0	0	0	0	0	1	MSL/FETAL DISTRESS
33	KARTHIKA	23	G2A1	15-08-2020	22-05-2021	39+4	39+6	0	1	0	2.306	1	0	0	0	0	0	0	1	0	0	
34	VINITHA	21	G2A1	13-08-2020	20-05-2021	39+3	39+5	0	1	0	3.26	0	0	0	0	0	0	0	1	0	0	
35	MALLIGAI LAKSHMI	24	G3P1L1A1	30-07-2020	07-05-2021	40+3	40+5	0	0	1	2.69	0	0	0	0	0	0	0	1	0	0	
36	KANAGA JAMUNA	29	G2A1	19-10-2020	26-07-2021	31+5	32+1	1	0	0	1.355	1	0	0	1	0	0	0	1	0	0	
37	RAJA LAKSHMI	23	G3P1L1A1	18-08-2020	25-05-2021	40+0	40+0	0	1	0	3	0	0	0	1	0	0	0	1	0	0	
38	SHANMUGA LAKSHMI	27	G3P1L1A1	31-08-2020	06-06-2021	38+2	38+2	0	1	0	3.7	0	0	0	1	0	0	0	1	0	0	
39	MAHESHWARI	25	G2A1	13-10-2020	16-06-2021	39+4	40+0	0	1	0	2.28	1	0	0	1	0	0	0	0	0	1	FETAL DISTRESS
40	KRISHNAVENI	28	G2A1	17-08-2020	24-05-2021	39+4	39+5	0	1	0	3	0	0	0	1	0	0	0	1	0	0	
41	ROSELIN	25	G3P1L1A1	10-08-2020	17-05-2021	40+1	40+2	0	0	1	3.3	0	0	0	1	0	0	0	0	0	1	MSL
42	MUTHULAKSHMI	32	G2A1	24-08-2020	31-05-2021	38+0	38+0	0	1	0	3.055	0	0	0	0	0	0	0	0	0	1	CPD/FETAL DISTRESS
43	KAVITHA	34	G3P1L1A1	21-08-2020	28-05-2021	38+1	38+3	0	1	0	3	0	0	0	0	0	0	0	1	0	0	
44	MAHALAKSHMI	25	G2A1	04-07-2020	11-04-2021	40+0	40+1	0	1	0	3.245	0	0	0	1	0	0	0	0	0	1	PROM/FETAL DISTRESS
45	KARPAGAVALLI	26	G2A1	19-11-2020	26-08-2021	38+1	38+3	0	1	0	2.9	0	0	0	0	0	0	1	1	0	0	
46	SANTHANA ESWARI	21	G2A1	15-11-2020	22-08-2021	39+1	39+1	0	1	0	2.7	0	0	0	0	0	0	0	1	0	0	
47	SAMSHUNISHA	22	G2A1	29-11-2020	05-09-2021	37+0	37+5	0	1	0	2.185	1	0	0	0	0	0	0	0	0	1	CPD IN LABOUR
48	NAGADEVI	20	G2A1	10-11-2020	17-08-2021	39+5	39+5	0	1	0	3.09	1	0	0	0	0	0	1	1	0	0	
49	SANGEETHA	25	G2A1	28-11-2020	04-09-2021	37+6	37+6	0	1	0	3.275	0	0	0	0	0	0	0	0	0	1	UNENGAGED HEAD/FETAL DISTRESS
50	MARI RABONI	26	G3P1L1A1	17-11-2020	24-08-2021	39+4	39+4	0	1	0	3.236	0	0	0	1	0	0	0	1	0	0	
51	VALLIAMMAL	39	G3A2	22-11-2020	29-08-2021	37+0	39+0	0	1	0	2.73	0	0	0	0	0	0	0	0	0	1	OLIGO/NONR EACTIVE CTG

52	MARIYA SUSAI PAVITHRA	24	G2A1	23-11-2020	30-08-2021	38+6	38+6	0	1	0	3.55	0	0	0	1	0	0	0	0	1	0	
53	ANANDHI MALA	21	G2A1	06-11-2020	13-08-2021	37+5	37+5	0	1	0	2.89	0	0	0	1	0	0	0	1	0	0	
54	DIVYA BHARATHI	22	G2A1	24-10-2020	31-07-2021	38+2	38+2	0	1	0	2.75	0	0	0	0	0	0	0	1	0	0	
55	KUPPAMAL SUMATHI	25	G2A1	15-11-2020	22-08-2021	40+0	40+2	0	0	1	2.85	0	0	0	0	0	0	0	0	0	1	FETAL DISTRESS
56	MUTHU NACHIYAR	20	G2A1	03-12-2020	10-09-2021	37+5	37+5	0	1	0	2.73	0	0	0	0	0	0	0	0	0	1	MSL/FETAL DISTRESS
57	SHANTHA	19	G2A1	20-11-2020	27-08-2021	39+1	39+4	0	1	0	2.9	0	0	0	0	0	0	0	1	0	0	
58	KARTHIGA	22	G3P1L1A1	28-11-2020	05-09-2021	38+4	38+4	0	1	0	3.78	0	0	0	0	0	0	0	0	0	1	PREVIOUS LSCS IN LABOUR
59	UCHIMAKALI	25	G2A1	15-12-2020	21-09-2021	35+5	36+1	1	0	0	2.48	1	0	0	0	0	0	0	0	0	1	SEVERE OLGO/FETAL DISTRESS
60	NANCY PRIYA	27	G3A2	13-12-2020	20-09-2021	34+0	36+2	1	0	0	1.975	1	0	0	0	0	0	0	0	1	1	SEVERE OLGO/FETAL DISTRESS
61	MARIAMMAL	24	G2A1	17-01-2021	24-10-2021	31+0	31+3	1	0	0	1.496	1	0	0	0	0	0	0	1	0	0	
62	FATHIMA SHIFANA	28	G2A1	13-11-2020	20-08-2021	38+5	38+5	0	1	0	2.8	0	0	0	0	0	0	0	1	0	0	
63	JEYALAKSHMI	24	G2A1	11-10-2020	18-07-2021	39+5	39+6	0	1	0	2.73	0	0	0	0	0	0	0	0	1	0	
64	KOWSALYA	24	G3P1L1A1	07-10-2020	14-07-2021	39+5	40+2	0	0	1	2.62	0	0	0	0	0	0	0	1	0	0	
65	FATHIMA KANI	30	G3P1L1A1	25-10-2020	02-08-2021	36+6	36+6	1	0	0	2.29	1	0	0	0	0	0	0	0	0	1	PREVIOUS LSCS IN LABOUR
66	MUNIS KAVITHA	25	G2A1	07-09-2020	04-07-2021	40+2	40+4	0	0	1	3.556	0	0	0	0	0	0	0	1	0	0	
67	GURUVAMMAL	24	G3P1L1A1	16-10-2020	23-07-2021	37+4	37+5	0	1	0	3.08	0	0	0	0	0	0	0	1	0	0	
68	AGANA	25	G2A1	11-10-2020	08-07-2021	39+2	39+4	0	1	0	3.25	0	0	0	0	0	0	0	1	0	0	
69	MARIYA PUNITHA	25	G2A1	26-10-2020	02-08-2021	35+6	36+0	1	0	0	2.54	1	0	0	0	0	0	0	1	0	0	
70	RAMALAKSHMI	24	G3P1L1A1	16-10-2020	12-07-2021	38+5	38+5	0	1	0	3.618	0	0	0	1	0	0	0	0	0	0	
71	MUTHUMARI	32	G2A1	16-10-2020	23-07-2021	37+0	37+0	0	1	0	2.4	1	0	0	0	0	0	0	0	0	1	FETAL DISTRESS
72	MAHALAKSHMI	25	G2A1	04-07-2020	11-04-2021	39+6	39+6	0	1	0	3.245	0	0	0	1	0	0	0	0	0	1	PROM/FETAL DISTRESS
73	KAVITHA	34	G3P1L1A1	21-08-2020	28-05-2021	38+2	38+4	0	1	0	3	0	0	0	0	0	0	0	1	0	0	
74	MADHUBALA	20	G2A1	13-12-2020	20-09-2021	38+0	38+1	0	1	0	2.7	0	0	0	0	0	0	0	1	0	0	
75	ARUNA DEVI	21	G2A1	01-12-2020	08-09-2021	40+1	40+2	0	0	1	3.2	0	0	0	0	0	0	1	1	0	0	
76	HEMA RAMBALA	34	G3A2	10-12-2020	12-09-2021	39+3	39+5	0	1	0	2.62	0	0	0	0	0	0	0	0	0	1	LONG PERIOD OF INFERTILITY
77	SUGUNA	25	G4A3	13-12-2020	20-09-2021	38+1	38+2	0	1	0	2.7	0	0	0	0	0	0	1	1	0	0	

78	NANDHINI	23	G3A2	09-12-2020	16-09-2021	38+5	38+6	0	1	0	2.7	0	0	0	0	0	0	1	1	0	0	
79	JOTHI LAKSHMI	20	G2A1	11-12-2020	18-09-2021	37+5	38+4	0	1	0	2.475	1	0	0	0	0	0	1	1	0	0	
80	THANGESWARI	19	G2A1	13-12-2020	20-09-2021	38+1	38+3	0	1	0	2.75	0	0	0	0	0	0	1	1	0	0	
81	DHANALAKSHMI	27	G2A1	NOT KNOWN	20-09-2021	38+0	38+0	0	1	0	2.905	0	0	0	0	0	0	0	1	0	0	
82	AJITHRA	21	G3A2	27-11-2020	03-09-2021	40+1	40+2	0	0	1	3	0	0	0	0	0	0	1	1	0	0	
83	MUTHUMARI	19	G2A1	06-12-2020	13-09-2021	38+6	39+0	0	1	0	3.25	0	0	0	0	0	0	1	1	0	0	
84	MURUGAJOTHI	22	G2A1	NOT KNOWN	05-09-2021	39+6	40+0	0	1	0	3.1	0	0	0	0	0	0	1	0	0	0	
85	MADHURA KANI	32	G3A2	05-12-2020	12-09-2021	37+0	38+3	0	1	0	3.25	0	0	0	0	0	0	0	0	0	0	FETAL DISTRESS
86	MUTHUKUMARI	26	G2A1	29-11-2020	05-09-2021	39+1	39+2	0	1	0	3.116	0	0	0	0	0	0	0	1	0	0	
87	MURUGAVENI	31	G2A1	22-11-2020	29-08-2021	39+5	39+5	0	1	0	2.95	0	0	0	0	0	0	0	0	1	1	FETAL DISTRESS
88	RAJESHWARI	28	G3A2	24-11-2020	31-08-2021	39+5	39+5	0	1	0	2.97	0	0	0	0	0	0	0	1	0	0	
89	ISAKI DEVI	25	G3A2	13-12-2020	20-09-2021	38+5	38+6	0	1	0	3.205	0	0	0	0	0	0	0	1	0	0	
90	SERMATHANGAM	28	G2A1	27-11-2020	03-09-2021	38+6	39+0	0	1	0	2.6	0	0	0	0	0	0	0	1	0	0	
91	ANITHA	23	G3A2	29-11-2020	05-09-2021	39+2	39+3	0	1	0	2.915	0	0	0	0	0	0	0	0	0	1	BREECH IN LABOUR
92	PARIMALA	21	G3A2	30-11-2020	06-09-2021	38+2	38+3	0	1	0	2.88	0	0	0	0	0	0	0	0	0	1	OLGO
93	MITHRA	29	G2A1	08-12-2020	15-09-2021	38+4	38+6	0	1	0	3.21	0	0	0	0	0	0	0	0	0	1	MSL
94	LINGAPUSHPAM	34	G2A1	22-11-2020	29-08-2021	37+1	37+3	0	1	0	2.22	1	0	0	0	0	0	0	0	0	1	FETAL DISTRESS
95	JEYASELVI	18	G2A1	10-12-2020	17-09-2021	38+1	38+4	0	1	0	3.08	0	0	0	0	0	0	0	1	0	0	
96	MICHEAL JENITA	20	G2A1	14-01-2021	21-10-2021	39+0	39+0	0	1	0	3.03	0	0	0	1	0	0	0	1	0	0	
97	JOTHIKA	20	G2A1	05-01-2021	12-10-2021	39+4	39+5	0	1	0	3.255	0	0	0	1	0	0	0	1	0	0	
98	BHAVANI JULIET	22	G2A1	05-02-2021	12-11-2021	35+1	35+2	1	0	0	2.1	1	0	0	1	0	0	0	1	0	0	
99	KAVITHA	22	G2A1	02-01-2021	09-10-2021	39+2	39+2	0	1	0	3.5	0	0	0	1	0	0	0	0	0	1	THICK MSL
100	SERMATHANGAM	28	G2A1	25-12-2020	01-10-2021	38+0	38+1	0	1	0	2.6	0	0	0	1	0	0	0	1	0	0	
101	VENILLA	23	G2A1	28-12-2002	05-10-2021	37+2	37+3	0	1	0	2.55	0	0	0	1	0	0	0	1	0	0	
102	KAVITHA	23	G3A2	17-01-2021	24-10-2021	38+5	39	0	1	0	2.82	0	0	0	0	0	0	0	1	0	0	
103	NARAYANA SELVI	37	G3A2	13-02-2021	20-11-2021	34+2	34+4	1	0	0	1.685	1	0	0	0	0	0	0	0	0	1	FETAL ALARM SIGNAL
104	SUDHA	23	G2A1	05-01-2021	12-10-2021	40+0	40+3	0	0	1	3.115	0	0	0	0	0	0	0	0	1	0	FAILED INDUCTION
105	THANGESWARI	23	G2A1	04-01-2021	11-10-2021	40+5	40+5	0	0	1	2.71	0	0	0	0	0	0	0	1	0	0	
106	MAREESHWARI	20	G2A1	04-01-2021	11-10-2021	40+2	40+2	0	0	1	2.975	0	0	0	0	0	0	0	1	0	0	
107	PADMINI	26	G2A1	14-01-2021	21-10-2021	38+0	38+2	0	1	0	3.01	0	0	0	0	0	0	0	1	0	0	

108	BELSY GNANAMALAR	22	G2A1	08-01-2021	15-10-2021	38+6	38+6	0	1	0	2.55	0	0	0	0	0	0	0	1	0	0	
109	MISBA	23	G2A1	02-01-2021	09-10-2021	39+0	39+5	0	1	0	2.75	0	0	0	0	0	0	0	1	0	0	
110	KEERTHANA	19	G2A1	09-01-2021	16-10-2021	38+4	38+5	0	1	0	3.4	0	0	0	0	0	0	0	1	0	0	
111	YUMITHA THERAS	20	G2A1	28-12-2021	05-10-2021	39+6	40+1	0	0	1	2.58	0	0	0	0	0	0	0	1	0	0	
112	KANAGAVALLI	30	G2A1	17-01-2021	24-10-2021	37+2	37+3	0	1	0	2.665	0	0	0	0	0	0	0	1	0	0	
113	GANDHARI	27	G2A1	01-01-2021	08-10-2021	39+2	39+3	0	1	0	2.45	0	0	0	0	0	0	0	1	0	0	
114	MURUGALAKSHMI0	35	G2A1	27-01-2021	03-11-2021	36+1	36+2	1	0	0	2.41	1	0	0	0	0	0	0	0	0	1	LONG PERIOD OF INFERTILITY
115	ANTHONY BLESSING	28	G2A1	24-12-2020	30-09-2021	40+0	40+2	0	0	1	3.585	0	0	0	0	0	0	0	0	1	0	
116	RAJI	23	G2A1	10-04-2020	11-01-2021	36+5	36+6	0	1	0	2.76	0	0	0	0	0	0	0	1	0	0	
117	VIJAYAKUMARI	28	G2A1	02-04-2020	09-01-2021	38+6	38+6	0	1	0	2.85	0	0	0	0	0	0	0	1	0	0	
118	KAMALA	31	G3A2	04-04-2020	11-01-2021	38+0	38+1	1	0	0	1.77	1	0	0	0	0	0	0	1	0	0	
119	FATHIMA BEGAM	24	G2A1	26-10-2020	02-08-2021	38+0	38+1	0	1	0	2.17	1	0	0	0	0	0	0	1	0	0	
120	SUNDARI	26	G2A1	11-10-2020	18-07-2021	40+0	40+1	0	0	1	2.95	0	0	0	0	0	0	0	0	1	0	
121	SASIKALA	20	G2A1	10-10-2020	17-07-2021	40+0	40+1	0	0	1	3.256	0	0	0	1	0	0	0	0	0	1	LONG PERIOD OF INFERTILITY
122	NIVEETHA	29	G3A2	15-10-2020	22-07-2021	39+1	39+2	0	1	0	2.99	0	0	0	0	0	0	0	0	0	1	PREVIOUS LSCS IN LABOUR
123	LALITHA	27	G3P1L1A1	11-10-2020	18-07-2021	39+5	39+6	0	1	0	2.678	0	0	0	0	0	0	0	0	1	0	
124	UMADEVI	22	G2A1	28-08-2021	04-06-2021	38+3	38+5	0	1	0	2.97	0	0	0	0	0	0	0	0	0	1	THICK MSL
125	PREMA	24	G2A1	16-09-2020	23-06-2021	38+3	38+4	0	1	0	2.66	0	0	0	0	0	0	0	1	0	0	
126	KALAIMAGAL	25	G2A1	29-11-2020	05-09-2021	39+2	39+3	0	1	0	3.02	0	0	0	0	0	0	0	0	0	1	FETAL ALARM SIGNAL
127	RANI	30	G2A1	30-11-2020	06-09-2021	38+2	38+3	1	0	0	2.78	0	0	0	0	0	0	0	0	1	0	
128	SOPHIA	20	G2A1	08-12-2020	15-09-2021	38+4	38+6	0	1	0	3.11	0	0	0	0	0	0	0	0	0	1	OLGO
129	Madhavi	24	G2A1	22-11-2020	29-08-2021	37+1	37+3	0	1	0	3.04	0	0	0	0	0	0	0	1	0	0	
130	DEVI	26	G2A1	10-12-2020	17-09-2021	38+1	38+4	0	1	0	2.86	0	0	0	0	0	0	0	1	0	0	
131	SULTANA BEGAM	21	G2A1	14-01-2021	21-10-2021	39+0	39+0	0	1	0	2.88	0	0	0	0	0	0	0	1	0	0	
132	ANITHA	27	G3P1L1A1	05-01-2021	12-10-2021	39+4	39+5	0	1	0	2.85	0	0	0	0	0	0	0	0	1	0	
133	FLORA	23	G2A1	05-02-2021	12-11-2021	35+1	35+2	0	1	0	3.12	0	0	0	0	0	0	0	0	0	1	BREECH IN LABOUR
134	ABITHA	29	G3A2	02-01-2021	09-10-2021	39+2	39+2	0	1	0	3.05	0	0	0	0	0	0	0	1	0	0	
135	ISWARYA	32	G3A2	25-12-2020	01-10-2021	38+0	38+1	0	1	0	2.96	0	0	0	0	0	0	0	0	1	0	
136	RUBY THERASA	26	G3P1L1A1	24-08-2020	31-05-2021	38+0	38+0	0	1	0	2.84	0	0	0	0	0	0	0	1	0	0	

137	SENTHAMIL	20	G2A1	21-08-2020	28-05-2021	38+1	38+3	0	1	0	2.78	0	0	0	0	0	0	0	1	0	0	
138	SUDAR	25	G2A1	04-07-2020	11-04-2021	40+0	40+1	0	0	1	2.89	0	0	0	0	0	0	0	1	0	0	
139	HELAN	28	G3P1L1A1	19-11-2020	26-08-2021	38+1	38+3	0	1	0	3.11	0	0	0	1	0	0	0	0	1	0	
140	JEEVAKUMARI	20	G2A1	15-11-2020	22-08-2021	39+1	39+1	0	1	0	2.849	0	0	0	0	0	0	0	1	0	0	
141	KAYAL	24	G2A1	29-11-2020	05-09-2021	37+0	37+5	0	1	0	2.98	0	0	0	0	0	0	0	1	0	0	
142	BHUVANESWARI	29	G3A2	10-11-2020	17-08-2021	39+5	39+5	0	1	0	2.68	0	0	0	0	0	0	0	0	1	0	
143	SRIVIDHYA	20	G2A1	28-11-2020	04-09-2021	37+6	37+6	0	1	0	2.82	0	0	0	0	0	0	0	0	1	0	
144	RAMYA	30	G3A2	17-11-2020	24-08-2021	39+4	39+4	0	1	0	2.95	0	0	0	0	0	0	0	0	0	1	FETAL ALARM SIGNAL
145	SHRIDEVI	26	G3P1L1A1	22-11-2020	29-08-2021	37+0	39+0	0	1	0	2.75	0	0	0	0	0	0	0	1	0	0	
146	VICTORIA	24	G2A1	15-08-2020	22-05-2021	39+4	39+6	0	1	0	2.88	0	0	0	0	0	0	0	1	0	0	
147	KAVIYA	29	G3A2	13-08-2020	20-05-2021	39+3	39+5	0	1	0	2.66	0	0	0	0	0	0	0	1	0	0	
148	RUBY THERASA	30	G3A2	30-07-2020	07-05-2021	40+3	40+5	0	0	1	2.91	0	0	0	0	0	0	0	1	0	0	
149	MANGAI	25	G2A1	19-10-2020	26-07-2021	31+5	32+1	0	1	0	2.621	0	0	0	0	0	0	0	1	0	0	
150	HALEEMA BEEVI	22	G2A1	18-08-2020	25-05-2021	40+0	40+0	0	1	0	2.87	0	0	0	0	0	0	0	1	0	0	