

**A STUDY ON PREVALENCE OF THYROID DIOSDERS IN
PREGNANCY AND ITS IMPACT ON MATERNAL AND
FETAL OUTCOMES IN A TERTIARY CARE CENTRE IN
VILLUPURAM**

A Dissertation submitted to

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In partial fulfilment of the requirements for the award of the degree

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CHENNAI, TAMILNADU

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DECLARATION BY THE CANDIDATE

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PLAGIARISM CERTIFICATE

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LIST OF ABBREVIATIONS

Glossary	Abbreviations
APGAR	Appearance, pulse, grimace, activity, and respiration
ATA	American telemedicine association
CNS	Central nervous system
CVS	Cardiovascular system
HBsAg	Hepatitis B surface antigen
hCG	Human chorionic gonadotropin
HIV	Human immunodeficiency virus
ICU	Intensive care unit
IQR	Interquartile range
IU/L	International units per liter
IUD	Intrauterine device
IUGR	Intrauterine growth restriction
LBW	Low birth weight
LSCS	Lower segment cesarian section
NICU	Neonatal intensive care unit
POG	Period of gestation
RBS	Random blood sugar
T3	Triiodothyronine
T4	Thyroxine
TBG	Thyroxine binding globulin
TPO	Thyroid peroxidase
TRAb	TSH receptor autoantibodies
TSH	Thyroid stimulation hormone

ABSTRACT

BACKGROUND: Thyroid disease is one of the most prevalent endocrine abnormalities discovered during pregnancy. It has been linked to poor maternal and fetal outcomes. The most common obstetric consequences related with thyroid abnormalities are abortion, preeclampsia, abruptio placenta, premature labor, and fetal issues such as prematurity, low birth weight, still birth, and perinatal mortality.

AIM: To identify the prevalence of thyroid disorders in pregnancy and its impact in maternal and fetal outcomes.

MATERIALS & METHODS: Prospective study was conducted for a period of one year from January 2020 to December 2020. A total of 600 participants were enrolled in the study.

RESULTS: The mean age of participants in the case and control group were identified as 24.73 ± 3.72 years and 24.06 ± 3.31 years, respectively. TSH was between 4.21 - 10 mIU/ml in the majority of the participants in the case group with 35.14%, followed by 2.5 - 4.20 mIU/ml with 32.43%. Hyperthyroidism and hypothyroidism were identified with 1% and 5.17%, respectively. Preeclampsia, spontaneous miscarriage was the pregnancy outcomes identified in most of the participants in the case group with 13.51% and 8.11%.

CONCLUSION: The study reveals a significant prevalence of thyroid disorders, particularly hypothyroidism, underscoring the importance of including thyroid function testing in regular antenatal clinic screening. Thyroid dysfunction must be diagnosed and treated as soon as possible in order to minimize negative prenatal outcomes.

INTRODUCTION

INTRODUCTION:

One of the most common endocrine disorders identified in pregnancy is thyroid disorder. It is associated with adverse maternal and fetal outcomes. Abortion, preeclampsia, abruptio placenta, preterm labor, and fetal complications are prematurity, low birth weight; still birth and perinatal death are the common obstetric complications associated with thyroid disorders.^{1,2}

Attention deficit and hyperactivity syndrome are the prenatal and postnatal adverse effects reported in children born to hypothyroid mothers.³ Maternal hypothyroidism during the first trimester can be harmful for fetal brain development and can also lead to mental retardation and cretinism. It includes impairment of mental, physical growth and development.²

Western studies showed the prevalence of hypothyroidism in pregnancy as 2.5%, whereas for hyperthyroidism between 0.1 to 0.4%.⁴ Hyperthyroidism seen in 0.2%–0.4% of pregnant women and is commonly related with Grave's disease. The incidence of hypothyroidism in pregnancy is between 0.5%–3.5%.⁵

The prevalence of hypothyroidism was more in Asian countries as compared to western countries. The occurrence of hyperthyroidism is less as compared to hypothyroidism. It is reported in 0.5–2/1000 pregnancies. Sub-clinical hyperthyroidism is identified in 1.7% of pregnancies.⁶

Inappropriate weight gain, cold intolerance, dry skin, delayed relaxation of deep tendon reflexes, constipation, fatigue, and somnolence are the signs and symptoms associated with hypothyroidism during pregnancy.⁷

An increase in thyroglobulin due to increased estrogen and human chorionic gonadotrophin increased renal losses of iodine due to elevation in glomerular filtration rate, modifications in peripheral metabolism of maternal thyroid hormone, and modifications in iodine transfer to the placenta are the various factors that lead to changes in the maternal thyroid function.⁸

During pregnancy, the production of thyroid hormone and iodine requirement is increased by 50%.⁸ Also, the thyroid gland increases in size by 10% in iodine-sufficient countries and to a greater extent in iodine-deficient countries. Pregnancy is considered as a stress test for the thyroid gland and resulting in hypothyroidism in women with limited thyroidal reserve or iodine deficiency.⁹

NEED OF THE STUDY:

Evaluation of thyroid disease in pregnancy is essential for the gestational maternal health, obstetric outcome, and subsequent development of the child. The most common thyroid disorder in pregnancy is maternal hypothyroidism. It is related with fetal loss, placental abruptions, preeclampsia, preterm delivery, and reduced intellectual function in the offspring. There is a paucity of data in Indian pregnant women on the prevalence of thyroid disorders. This study was conducted to identify the prevalence of thyroid disorders in pregnancy and its impact in material and fetal outcomes.

AIMS & OBJECTIVES

AIMS AND OBJECTIVES:

To estimate the prevalence of thyroid disorders in pregnancy

Objective:

- To estimate the prevalence of thyroid disorders in pregnancy
- To estimate the impacts of thyroid disorder in maternal & fetal outcomes

**REVIEW OF
LITERATURE**

REVIEW OF LITERATURE:

1. Thyroid disorders in pregnancy

a) Definition, types

Maternal thyroid function changes during the period of pregnancy, and inadequate adaptation to these changes lead to thyroid dysfunction. Subclinical thyroid disease is defined by an abnormal TSH in the normal levels of the thyroid hormones. Symptoms with either subclinical hyperthyroidism or subclinical hypothyroidism are identified as mild. Whereas overt thyroid disease is the abnormal levels of both the TSH and thyroid hormones and many more symptoms.¹⁰

Thyroid dysfunction is classified into hyperthyroidism and hypothyroidism.

- Hyperthyroidism is a condition where the thyroid gland is overactive and produces excessive thyroid hormone. It can be managed with antithyroid medications (Methimazole, Propylthiouracil), radioactive iodine, or surgery.
- Subclinical Hyperthyroidism is a mild form of hyperthyroidism and is indicated by decreased level of TSH. Elderly and symptomatic patients are usually treated, while younger and asymptomatic patients can be monitored without treatment.
- Overt Hyperthyroidism is a form of hyperthyroidism that is characterized by a decreased level of TSH and an increased T4 level.
- Hypothyroidism is a condition where the thyroid gland is underactive and does not produce enough thyroid hormone. It can be managed by consuming thyroid hormone pills.
- Subclinical Hypothyroidism is a mild form of hypothyroidism and is indicated by an increased level of TSH.

- Overt Hypothyroidism is a form of hypothyroidism that is characterized by an increased level of TSH and a decreased T4 level. It is treated with thyroid hormone pills.

b) Epidemiology –

Prevalence of overt thyroid dysfunction is 2–3% in pregnant women, subclinical dysfunction is 10%, while the rate of autoimmunity is 5–10%.^{11,12} Hyperthyroidism occurs in 0.2%–0.4% of pregnant women and is mostly related with Grave’s disease. The incidence of hypothyroidism in pregnancy is between 0.5%–3.5%. The prevalence of thyroid disorders is identified as 11% in India whereas 2.5% in the western countries.^{13–16}

The prevalence of hypothyroidism was more in Asian countries as compared to western countries. The occurrence of hyperthyroidism is less as compared to hypothyroidism. It is reported in 0.5–2/1000 pregnancies. Sub-clinical hyperthyroidism is identified in 1.7% of pregnancies.^{6,17} The prevalence of overt hypothyroidism during pregnancy varies between 0.3–0.5% while 2–3% for subclinical hypothyroidism.⁷

c) Aetiology

Graves’ disease, Transient gestational hyperthyroidism, Toxic multinodular goitre, Single toxic adenoma, Subacute thyroiditis, Trophoblastic tumor, Iodide induced hyperthyroidism, Struma ovarii, and Thyrotrophin receptor activation are the causes of hyperthyroidism in pregnancy.¹⁸ Iodine deficiency is the leading cause of hypothyroidism worldwide. The most cause of hypothyroidism during pregnancy is autoimmune thyroiditis whereas, radioiodine ablation of the thyroid while treating hyperthyroidism or thyroid cancer and surgery of the thyroid tumors are the other causes. Central hypothyroidism, including lymphocytic hypophysitis or ectopic

thyroid and drugs like rifampicin and phenytoin, which accelerate thyroid metabolism, is the rare causes identified for hypothyroidism.¹⁹

d) risk factors

Risk factors identified for thyroid dysfunction during the pregnancy.²⁰

- Age >30 years.
- History of thyroid dysfunction or positive thyroid antibodies.
- Type 1 diabetes or other autoimmune disorders.
- Head or neck radiation.
- Use of drugs that affect thyroid function.
- Administration of iodinated contrast materials.
- Goiter or symptoms or signs of thyroid dysfunction.
- Residents in areas of moderate to severe iodine deficiency.
- Multiple prior pregnancies (> 2).
- Previous pregnancy loss, preterm delivery, or infertility.
- Family history of thyroid disease.
- Morbid obesity (BMI > 40 kg/m²).

e) pathophysiology

Thyroid physiology is modified during normal pregnancy. These alterations take place throughout the period of pregnancy and help to prepare the maternal thyroid gland to cope with the metabolic demands of pregnancy.

The increase in thyroxine-binding globulin is the most identified change. It starts early in the first trimester, plateaus during mid-gestation, and persists until shortly after delivery. This is due to the stimulation of TBG synthesis by increased maternal estrogen levels and also due to reduced hepatic clearance of TBG.²¹ This TBG concentration can lead to an expansion of the extra-thyroidal pool and results in increased total T3 and T4 levels due to an increase in maternal thyroid hormone synthesis. Maternal thyroid hormone synthesis can also increase due to accelerated renal clearance of iodide resulting from the increased maternal glomerular filtration rate.

Increased metabolism of T4 in the 2nd and 3rd trimesters due to an increase in placental type II and type III deiodinases, which convert T4 to T3 and T4 to reverse T3 and T2. Plasma iodide levels decline due to both increased thyroxine metabolism and renal iodide clearance. All these lead to an increase in the size of the thyroid gland in around 15% of pregnant women, which returns to normal during the post-partum period.

Serum hCG has an intrinsic thyrotropic activity which increases after fertilization and reaches peaks at 10 to 12 weeks. Hence, in the 1st trimester, free T3 and T4 levels enhance slightly, and TSH levels decline in the 1st trimester with a readjustment in the 2nd and 3rd trimesters, when hCG levels decline. As a consequence, cut-offs to determine hypothyroidism in pregnancy are different in the first trimester and the rest of the pregnancy.¹⁹

f) Diagnosis

Table 1: Changes in thyroid function test in pregnant women with thyroid disease.²²

Maternal condition	TSH	Free thyroxine	Free thyroxine index	Total thyroxine	Triiodothyronine	Resin triiodothyronine uptake
Hyperthyroidism	Decrease	Increase	Increase	Increase	Increase or no change	Increase
Hypothyroidism	Increase	Decrease	Decrease	Decrease	Decrease or no change	Decrease

Table 2: Trimester-specific reference ranges for common thyroid tests.²²

Test	First trimester	Second trimester	Third trimester
Thyroid-stimulating hormone (mIU per L)	0.1 to 2.5	0.2 to 3.0	0.3 to 3.0
Thyroxine-binding globulin (mg per dL)	1.8 to 3.2	2.8 to 4.0	2.6 to 4.2
Thyroxine, free (ng per dL)	0.8 to 1.2	0.6 to 1.0	0.5 to 0.8
Thyroxine, total (mcg per dL)	6.5 to 10.1	7.5 to 10.3	6.3 to 9.7
Triiodothyronine, free (pg per mL)	4.1 to 4.4	4.0 to 4.2	-
Triiodothyronine, total (ng per dL)	97 to 149	117 to 169	123 to 162

g) Management

The treatment of choice for maternal hypothyroidism is the administration of levothyroxine. Pregnant women require larger doses due to the sudden increase in TBG levels. It is caused due to the physiological rise in estrogen, increased placental transport and metabolism of maternal T4, and also increased distribution volume of thyroid hormones. During pregnancy, the full replacement thyroxine dose is 2–2.4 µg/kg/day.

In case of severe hypothyroidism, a thyroxine dose twice the estimated final replacement daily dose can be given for the first few days to rapidly normalize the extrathyroidal thyroxine pool before returning to the final replacement dose. Women who already on thyroxine prior to pregnancy need to increase their daily dosage by 30-50% above preconception dosage.

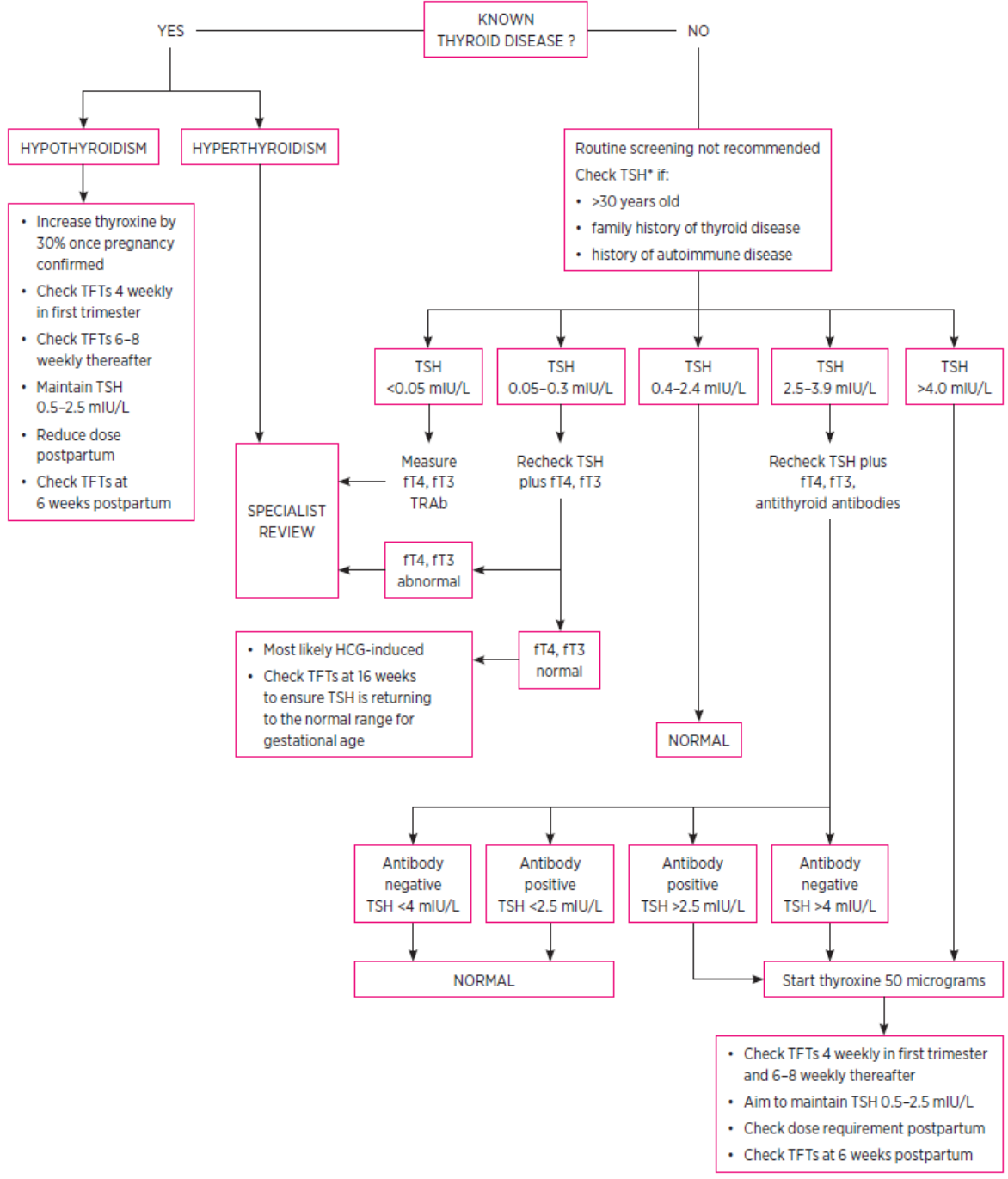
The thyroxine dose is titrated to reach a serum TSH value less than 2.5 mIU/liter while maintaining free T4 levels in the high normal range. A follow-up of every 4–6 weeks with free T4 and TSH value till delivery is preferred in order to facilitate periodic adjustment of LT4 supplementation.¹⁹

Antithyroid drugs are the preferred management at all stages of pregnancy. Propylthiouracil, Carbimazole, and Propranolol are the drugs used in hyperthyroidism.

Table 3: Drugs used in hyperthyroidism.²³

Drug	MOA	DOSE	Adverse effects
Propylthiouracil	Inhibits thyroxine synthesis; also inhibits peripheral conversion of thyroxine to triiodothyronine	Starting: 300-450 mg/day; maintenance: 50-100 mg/day	Rash, fever, agranulocytosis
Carbimazole	Inhibits thyroxine synthesis	Starting: 15-40 mg/day; maintenance: 5-15 mg/day	As above, plus aplasia cutis and methimazole embryopathy
Propranolol	Reduces adrenergic symptoms	10-40 mg, 3-4 times/day (short term use only)	Bronchospasm, intrauterine growth restriction, neonatal hypoglycemia

Figure 1: Thyroid management in pregnancy.²⁴



TFT thyroid function test TSH thyroid stimulating hormone fT4 free thyroxine
 fT3 free triiodothyronine TRAb thyrotropin receptor antibodies HCG human chorionic gonadotrophin
 * TSH concentration varies with gestational age

2. Impact of thyroid disorders in maternal and fetal outcomes

Table 4: Comparison of maternal-fetal outcomes in pregnant women with thyroid dysfunction between various studies.

Study	Maternal-fetal outcomes
Mahadik K, et al. ²⁵	Anaemia (26.3%) Preeclampsia (15.8%) Preterm (5.3%) Oligohydramnios (10.5%) Caesarean section (26.3%) Low birth weight (31.6%) Low apgar score (21.1%) NICU admission (42.1%)
Tudosa R, et al. ²⁶	Labour abnormalities (12.5%) Fetal suffering (30%) Respiratory distress, IA<8 (15%) Vicious pelvis (7.5%) Pelvic presentation (2.5%) Postpartum thyroiditis (2.5%) Postpartum haemorrhage (12%) Hypogalactia (5%) Postpartum depression (2.5%)

1. Maternal outcomes

Miscarriage, anemia, preeclampsia, gestational hypertension, placental abruption, preterm delivery, increased rate of caesarean section, and postpartum hemorrhage are the maternal complications associated with thyroid disorders in pregnancy.²⁷

Pre-eclampsia, heart failure, fetal loss, premature labour, and having a low birthweight baby are common in untreated or poorly controlled thyrotoxic women as compared to those receiving adequate treatment.²⁸ In a retrospective study, the incidence of fetal death in 249 pregnancies reported as 5.6% and another 5% as the incidence of fetal and neonatal abnormalities.²⁹

In another study of hyperthyroidism in pregnancy concluded that metabolic status at delivery is correlated with pregnancy outcome.³⁰ Preterm delivery, perinatal mortality, and maternal heart failure are common in women who remained thyrotoxic despite treatment or whose hyperthyroidism was first diagnosed during pregnancy. Women with thyroid hormone resistance also have a high rate of miscarriage thereby, indicating a direct toxic effect of thyroid hormones on the fetus.

Hypothyroidism in pregnancy is related with premature birth, fetal cardiac complications, low birth weight, increased frequency of cesarean delivery, placental complications, preeclampsia, and gestational hypertension, perinatal morbidity-mortality, and cognitive dysfunction. Complications such as stillbirth, abortion, premature birth, preeclampsia, heart failure, and thyroid storm are also identified in hyperthyroidism associated pregnancy,

2. Fetal outcomes

Preterm birth, neonatal respiratory distress syndrome, low birth weight, perinatal morbidity, and mortality, increased NICU admission; and neuropsychological and cognitive impairment are the adverse fetal outcomes resulting from thyroid dysfunction. Thyroid hormone is critical in the developing fetus for brain development. Children born with congenital hypothyroidism have severe cognitive, neurological, and development abnormalities if the condition is not recognized and managed promptly. In a study, it was concluded that children born to pregnant women with hypothyroidism had lower intelligence quotient scores as compared to children born to pregnant women without hypothyroidism.²⁷

Improvement of Graves' hyperthyroidism in pregnant women is associated with a reduction in the titre of maternal serum TRAb concentrations and a change from stimulatory to blocking antibodies. If antibodies do not decrease, they will cross the placenta and stimulate the fetal thyroid. It is evidenced by signs of fetal hyperthyroidism like tachycardia, intrauterine growth retardation, cardiac failure, and the development of fetal goitre.

Around 1-5% of neonates of mothers with Graves' disease have hyperthyroidism as a result of the transplacental passage of maternal TRAb concentrations.³¹ Presentation of neonatal hyperthyroidis can be delayed as antithyroid drugs administered to the mother are cleared more rapidly from the fetal circulation than maternal stimulating antibodies.

Mahadik K et al.²⁵ conducted a prospective observational study on 198 women. The purpose of the study was to determine the maternal and fetal outcomes in pregnant women with deranged thyroid profiles. The study results revealed 11% as the prevalence of thyroid disorder. Among them, subclinical hypothyroidism, overt hypothyroidism, and subclinical hyperthyroidism were identified with 5.6, 3.5, and 1.5%, respectively. Anemia was associated with hypothyroidism in women with subclinical and overt hypothyroidism. LBW, NICU admission, and low APGAR score were identified with 31.6%, 42.1%, and 21.1%, respectively. The risk of anemia, Low Birth weight, NICU admissions, and low APGAR score were higher in women with hypothyroidism as compared to women who are euthyroid. The study concluded that anemia, pre-eclampsia, high caesarean rates, and neonatal morbidities are associated with hypothyroidism.

Nambiar V et al.³² performed a study in 483 pregnant women. The purpose of the study was to identify the prevalence and the effect of thyroid dysfunction on pregnancy. The study results revealed 4.8%, 0.6%, 6.4%, and 12.4% as the prevalence of hypothyroidism, Graves' disease, gestational transient thyrotoxicosis, and thyroid autoimmunity. There was an association identified between hypothyroidism, TAI, and miscarriage. The study concluded the prevalence and effect of hypothyroidism on pregnancy.

Dülek H. et al.³³ conducted a study in 796 pregnant women. The aim of the study was to identify the prevalence of thyroid dysfunction in pregnant and their association with perinatal outcomes. The study results revealed 13.2% as the prevalence of thyroid dysfunction. Hypothyroidism, subclinical hypothyroidism, and hyperthyroidism were identified with 0.5%, 8.9%, and 2.8%, respectively. There was a correlation identified with TSH and maternal age. The study concluded that subclinical hypothyroidism and hyperthyroidism had no adverse effects on birth weight, cesarean section rates, and Apgar scores.

Ajmani SN et al.³⁴ performed a study in 400 pregnant women. The aim of the study was to determine the prevalence of thyroid dysfunction in normal pregnant women and also to assess the impact of thyroid dysfunction on maternal and fetal outcomes. The study results revealed 12% and 1.25% as the prevalence of hypothyroidism and hyperthyroidism. Preeclampsia and placental abruption are the adverse maternal effects in overt hypothyroidism. Spontaneous abortion, preterm birth, low birth weight, intrauterine growth retardation, and fetal death are adverse fetal outcomes. Whereas spontaneous abortion, preterm delivery, low birth weight, and intrauterine growth retardation were the adverse fetal outcomes in subclinical hypothyroidism. The study concludes that the presence of thyroid disorders is associated with adverse maternal and fetal outcomes.

Sahu MT et al.³⁵ performed a study in 633 pregnant women. The aim of the study was to identify the prevalence of thyroid dysfunction in pregnancy and its impact on the obstetrical outcome. Subclinical hypothyroidism and overt hypothyroidism were identified in 6.47% and 4.58% of the population. Cesarean section rate for fetal distress was identified high among the subclinical hypothyroid women. Neonatal complications and gestational diabetes were high in the overt hyperthyroidism group. The study concluded the importance of routine antenatal thyroid screening.

Sharmeen M et al.³⁶ conducted a study in 50 pregnant women. The purpose of the study was to identify thyroid dysfunction in pregnancy and its impact on the obstetrical outcome. Overt hypothyroidism was identified higher in the 25 to 44 years age group. Similarly, abortions were more in overt hypothyroidism. In sub-clinical hypothyroidism, 86.2% conceived firstly within 2 years, whereas 66.7% in overt hypothyroidism patients conceived firstly in between 3 to 5 years after marriage. Overt hypothyroids were prone to pregnancy-induced hypertension, intrauterine growth restriction, and gestational diabetes as compared to subclinical cases. Neonatal complications were high in the overt hypothyroidism group. Mean TSH level was more in overt hypothyroidism patients. Caesarean section was performed in the majority of the patients in both groups due to associated medical and obstetrical complications. None of the babies had hypothyroidism. The study concluded that overt hypothyroidism is associated with more maternal complications & adverse parental outcomes than subclinical hypothyroidism.

Dhanwal D et al.³⁷ performed a cross-sectional multicenter study. The purpose of the study was to identify the prevalence of hypothyroidism in pregnant women. The study results revealed 13.13% was the prevalence of hypothyroidism. Anti-TPO antibodies were identified as positive

in 20.74%, while 40% of hypothyroid women were positive for anti-TPO antibodies. The study concluded that sub-clinical hypothyroidism is high among the study population.

Sharma DV et al.¹ conducted a prospective study in 120 patients. The purpose of the study was to identify the prevalence of hypothyroidism in pregnancy and also to determine the fetomaternal outcome with hypothyroidism. The study results revealed 24.29% as the prevalence of hypothyroidism. The rate of still births, hyperbilirubinemia, and admission to neonatal ICU were identified higher in the hypothyroidism group. The study concluded the importance of timely diagnosis and initiation of treatment of hypothyroid disorders.

Pahwa S et al.³⁸ performed a study in 100 pregnant women. The objective of the study was to identify the prevalence of thyroid disorders in pregnant women. The study results revealed that the prevalence of thyroid dysfunction was high in first-trimester pregnant women. Subclinical hypothyroidism, overt hypothyroidism, and subclinical hyperthyroidism were identified with 6%, 2%, and 2%, respectively. The study concluded the importance of routine antenatal thyroid screening.

Mahajan K et al.³⁹ conducted an observational study in 514 women. The purpose of the study was to identify the fetal outcome in pregnancy with thyroid dysfunction. Subclinical hypothyroidism, overt hypothyroidism, and hyperthyroidism were identified with 9.54%, 2.34%, and 0.58%, respectively. Miscarriage, IUD/stillbirth, LBW, and intrauterine growth restriction were the fetal complications identified in hypothyroidism patients. NICU admissions were identified higher in patients with thyroid disorders. The study concluded the association between thyroid disorders and fetal adverse outcomes

Taha, I et al.⁴⁰ conducted a hospital-based prospective study. The aim of the study was to identify the prevalence and complications of overt and subclinical hypothyroidism among pregnant women. Overt hypothyroidism and subclinical hypothyroidism were identified in 9.3% and 14.9% of participants. The rate of caesarean section was high among women with overt hypothyroidism as compared with subclinical hypothyroidism. Intrauterine fetal deaths complicated 3.4% of overt hypothyroid pregnant women, whereas a low apgar score at delivery was identified in 16.1% of neonates of overt hypothyroid mothers and 10.1% of neonates of subclinical hypothyroid mothers. The study concluded the importance of early diagnosis in pregnant women with thyroid disorders.

Mahajan K et al.⁴¹ conducted a study in 514 pregnant women. The purpose of the study was to identify the maternal outcomes associated with thyroid disorders. Deranged thyroid function was identified in 12.45% of the study population. The prevalence of overt hypothyroidism and subclinical hypothyroidism were identified with 2.34% and 9.54% whereas, hyperthyroidism with 0.58%. Anemia and preterm delivery were the common maternal complications identified in women with hypothyroidism. The study concluded the need of routine antenatal screening and proper management for thyroid dysfunction.

Ramachandran R et al.⁴² conducted a prospective observational study in 451 pregnant women. The aim of the study was to identify the prevalence and the impact of thyroid disorders in pregnant women. The study results revealed 22.39% as the prevalence of thyroid dysfunction. The most common thyroid disorder identified was subclinical hypothyroidism with 20.63%. The study concluded the high prevalence of thyroid disorder in pregnancy.

Barse SP. et al.⁴³ performed a prospective study. The purpose of the study was to determine the prevalence of thyroid dysfunction in pregnancy and its effect on the mother and fetus. The study revealed 17.90% as the prevalence of thyroid dysfunction in pregnancy. Subclinical hypothyroidism, overt hypothyroidism, and hyperthyroidism were identified with 14.6%, 1.9%, and 1.4%, respectively. The study concluded the importance of early diagnosis and prevention of thyroid dysfunction in pregnancy.

Butt F. et al.⁴⁴ conducted a cross-sectional study in 260 pregnant women. The aim of the study was to evaluate the frequency of subclinical thyroid dysfunction among pregnant women. The study results revealed 30.31±3.11 as the mean age of the patients. Mean fT4 level, fT3, and TSH level were identified as 1.84±1.12ng/dl, 2.62±1.14ng/dl, and 4.32±0.91mIU/l, respectively. Thyroid dysfunction was identified in 45.4% of the study population. Subclinical hypothyroidism and hyperthyroidism were identified with 65.2% and 34.7%, respectively. The study concluded the need of control of thyroid disorders during pregnancy.

Saraladevi R et al.⁴⁵ conducted a prospective and comparative clinical study. The aim of the study was to identify the prevalence of thyroid disorder in pregnancy. The study results revealed 11.6% as the prevalence of thyroid disorders. Subclinical hypothyroidism and Overt hypothyroidism were identified with 6.4% and 2.8%, respectively. The rate of miscarriage was identified as high in overt hyperthyroidism. The study concluded the need of universal screening of pregnant women for thyroid disorder.

Singh A et al.⁴⁶ conducted a study in 400 pregnant women. The purpose of the study was to identify the prevalence of thyroid dysfunction and study its implications in pregnancy. The study results revealed the prevalence of hypothyroidism and hyperthyroidism as 7.5% and

0.75%, respectively. Preeclampsia and intrauterine growth restriction were the most common complications identified in pregnant women with hypothyroidism. The incidence of cesarean section was identified as 39.28%. The study concluded the significance of antenatal thyroid screening.

Rajput R et al.⁶ conducted a cross-sectional study in 461 pregnant women. The aim of the study was to determine the prevalence of thyroid dysfunction in pregnant women during the first trimester. The study results revealed 23.79 ± 3.47 years as the mean maternal age, whereas 8 weeks 5 days as the median gestational age. The median FT3, FT4, and TSH were identified as 3.3 pg/mL, 1.25 ng/dL, and 1.40 mIU/L. The level of anti-TPO was high in 27.8% of the study population. Subclinical hypothyroidism was identified in 21.5% of participants. Whereas overt hypothyroidism and subclinical hyperthyroidism were identified in 0.4% and 3.3% of participants. The study concluded the prevalence of thyroid dysfunction during pregnancy.

LACUNAE OF LITERATURE:

Thyroid disorders are the common endocrine problems that occur during pregnancy. It is now well established that not only overt but also subclinical thyroid dysfunction has adverse effects on maternal and fetal outcomes. There are limited studies from India regarding the prevalence of thyroid dysfunction in pregnancy. Maternal hypothyroidism can be associated with various adverse neonatal and obstetric outcomes. Whether these outcomes are affected by maternal thyroid status at initial presentation or in late gestation, specifically within a dedicated antenatal endocrine clinic, remains unclear.

MATERIALS & METHODS

MATERIALS AND METHODS:

Study site: This study was conducted in the Department of Obstetrics and Gynecology at Government Villupuram Medical College and Hospital, Villupuram-605601.

Study population: All the eligible patients undergoing Screening of pregnant women with thyroid disorders during 1st trimester in the Department of Obstetrics and Gynecology at Government Villupuram Medical College and Hospital were considered as the study population.

Study design: The current study was a prospective study

Sample size: Sample size was calculated assuming the major proportion of Hypothyroidism as 5.17% as per the study.⁴⁷ The other parameters considered for sample size calculation were 5% absolute precision and 95% confidence level. The following formula was used for sample size calculation. Based on the previous hospital records, the approximate number of potential Eligible subjects to be attending the study setting during the data collection period were considered as 65. Hence a finite population correction was applied for 65. The following formula was used for sample size as per the study by Daniel WW et al.⁴⁸

$$n' = \frac{NZ^2P(1 - P)}{d^2(N - 1) + Z^2P(1 - P)}$$

Where n = Sample size

N = Population Size = 65

Z = Z statistic for a level of confidence level = 1.960

P = Expected prevalence/proportion of outcome = 0.0517

d = Precision = 0.05

The required sample size as per the above-mentioned calculation was 35. To account for a non-participation rate/ loss to follow up rate of a about 5%, another 2, subjects will be added to the sample size. Hence the required sample size would be 37 for cases. For comparison all available controls into the study were 563 and then the total sample size in the study would be 600.

Sampling method: All the eligible subjects were recruited into the study consecutively by convenient sampling till the sample size is reached.

Study duration: The data collection for the study was done between January 2020 to December 2020 for a period of 1 year.

Inclusion Criteria:

- Pregnant women with thyroid disorders in 1st trimester
- Singleton pregnancy
- Primigravida or multigravida

Exclusion criteria:

- Multifetal gestation
- Known chronic disorders like diabetes, hypertension, liver disorders, renal disorders
- Previous bad obstetrics with known thyroid dysfunction.

Ethical considerations: The study was approved by the institutional human ethics committee. Informed written consent was obtained from all the study participants, and only those participants willing to sign the informed consent were included in the study. The risks and benefits involved in the study and the voluntary nature of participation were explained to the participants before obtaining consent. The confidentiality of the study participants was maintained.

Data collection tools: All the relevant parameters were documented in a structured study proforma.

Method of collection of data:

- This is a prospective study involving pregnant women attending AN OPD at Villupuram medical college.

Methodology: 600 pregnant women attending antenatal clinic in the first trimester who fulfilling inclusion criteria were enrolled in the study after institutional ethics approval and consent from study subjects. A detailed history was taken regarding the symptoms of thyroid disorders, menstrual history, obstetric history, past medical history, family history, personal and social history. General examination was done with reference to the general condition of the patient, body temperature: pulse rate, blood pressure, respiratory rate, and the finding were recorded. Systemic examination of the cardiovascular system (CVS), central nervous system (CNS), respiratory system, and thyroid gland was done, and findings were recorded.

Basic Investigations: Complete blood picture, clotting time, Bleeding time, Blood Grouping and Rh typing, RBS, Blood urea, Serum creatinine, HIV, HBsAg, and complete urine examination were done. Pregnancy <12 weeks was confirmed by clinical assessment, pregnancy test, and ultrasonography.

Specific Investigations: patients were sent for the testing of serum TSH level in fasting state. Blood was collected from the patients by venipuncture (2ml), allowed to clot, and serum was separated by centrifugation at room temperature. If serum TSH values were deranged, fT3 and fT4 levels were checked.

USG neck also included to screen the pregnant women:

The reference ranges of the values used in this study were as per the guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease during pregnancy and postpartum. As per regulation 14.2 of ATA guidelines, if trimester-specific ranges for TSH are not available in the laboratory, the following normal reference ranges are recommended: 1st trimester-0.1 to 2.5m IU/L, 2nd trimester-0.2 to 3.0m IU/L and 3rd trimester-0.3 to 3.0m IU/L.

The normal free T4 level is 0.7 to 1.8ng/ml, and the free T3 level is 1.7 to 4.2pg/ml. Depending on the hormonal values, patients were classified into

Subclinical Hypothyroidism: high serum TSH level with normal fT4, fT3 level,

Overt Hypothyroidism: high serum TSH level with fT4 and fT3 less than the normal range.

Subclinical Hyperthyroidism: Low serum TSH level with normal fT3, fT4 level,

Overt Hyperthyroidism: Low serum TSH Level with fT3and fT4 more than the normal range.

Subclinical/ Overt Hypothyroid cases were treated with Thyroxine.

Subclinical/ Overt Hyperthyroid cases were treated with propylthiouracil. Every 4 weeks, the TSH level was estimated, and the dose of the drug was adjusted. The outcome of the pregnancy was followed up and documented.

The following outcome variables of the pregnancy in relation to the thyroid disorders were studied: Preeclampsia, Abruption placenta, Preterm delivery, IUGR, low birth weight, stillbirth, Abortion.

STATISTICAL METHODS:

Thyroid disorders in pregnancy were considered as the primary outcome variable. Impacts of thyroid disorder in maternal and fetal outcome variables were considered as secondary outcome variables. The study group (Cases Vs. Controls) was considered as the primary explanatory variable.

Descriptive analysis was carried out by frequency and proportion for categorical variables. Non-normally distributed quantitative variables were summarized by the median and interquartile range (IQR). Data was also represented using appropriate diagrams like bar diagrams, pie diagrams.

All Quantitative variables were checked for normal distribution within each category of an explanatory variable by using visual inspection of histograms and normality Q-Q plots.

Shapiro- Wilk test was also conducted to assess normal distribution. Shapiro Wilk test p-value of >0.05 was considered as a normal distribution.

For normally distributed Quantitative parameters, the mean values were compared between study groups using an independent sample t-test (2 groups). For non-normally-distributed Quantitative parameters, medians and interquartile range (IQR) were compared between study groups using Mann Whitney u test (2 groups).

Categorical outcomes were compared between study groups using the Chi-square test /Fisher's Exact test (If the overall sample size was < 20 or if the expected number in any one of the cells is < 5 , Fisher's exact test was used.)

P-value < 0.05 was considered statistically significant. IBM SPSS version 22 was used for statistical analysis.⁴⁹

OBSERVATIONS AND RESULTS

RESULTS:

A total of 600 subjects were included in the final analysis.

Table 5: Descriptive analysis of study group in study population (N=600)

Study Group	Frequency	Percentages
Cases	37	6.17%
Control	563	93.83%

Among the study population, 37 (6.17%) were cases, and 563 (93.83%) were controls. (Table 5 & Figure 2)

Figure 2: Bar chart of the study group in the study population (N=600)

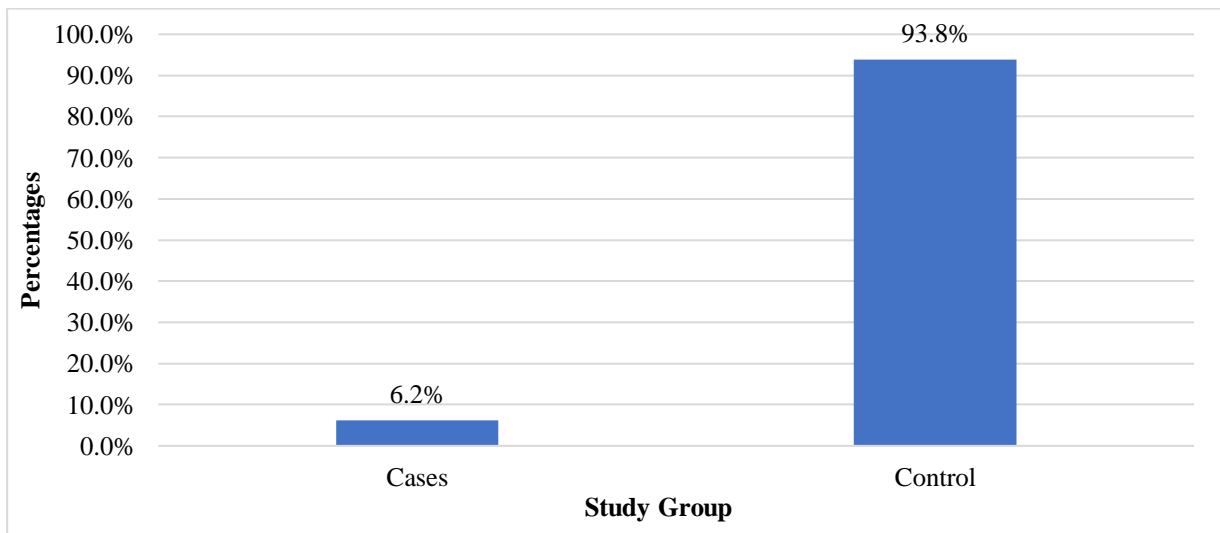


Table 6: Comparison of mean of age between study group (N=600)

Parameter	Study group (Mean± SD)		P-value
	Cases (N=37)	Control (N=563)	
Age	24.73 ± 3.72	24.06 ± 3.31	0.236

The mean age was 24.73 ± 3.72 years in cases, and it was 24.06 ± 3.31 years in controls; the mean difference between the two groups was statistically not significant (P-value 0.236). (Table 6)

Table 7: Comparison of obstetrics code between study group (N=600)

Obstetrics Code	Study Group		Chi-square	P-value
	Cases (N=37)	Control (N=563)		
Primigravida	17 (45.95%)	296 (52.58%)	1.706	0.426
Multi gravida with previous normal delivery	11 (29.73%)	176 (31.26%)		
Multi With Previous LSCS	9 (24.32%)	91 (16.16%)		

In cases, 17 (45.95%) were primi gravida, 11 (29.73%) were Multi gravida with previous normal delivery, and 9 (24.32%) were multi with previous LSCS. In controls, 296 (52.58%) were primi gravida, 176 (31.26%) were Multi gravida with previous normal delivery, and 91 (16.16%) were multi with previous LSCS. The difference in the proportion of obstetrics code between study groups was statistically not significant (P-value 0.426). (Table 7 & Figure 3)

Figure 3: Cluster bar chart of obstetrics code between study group (N=600)

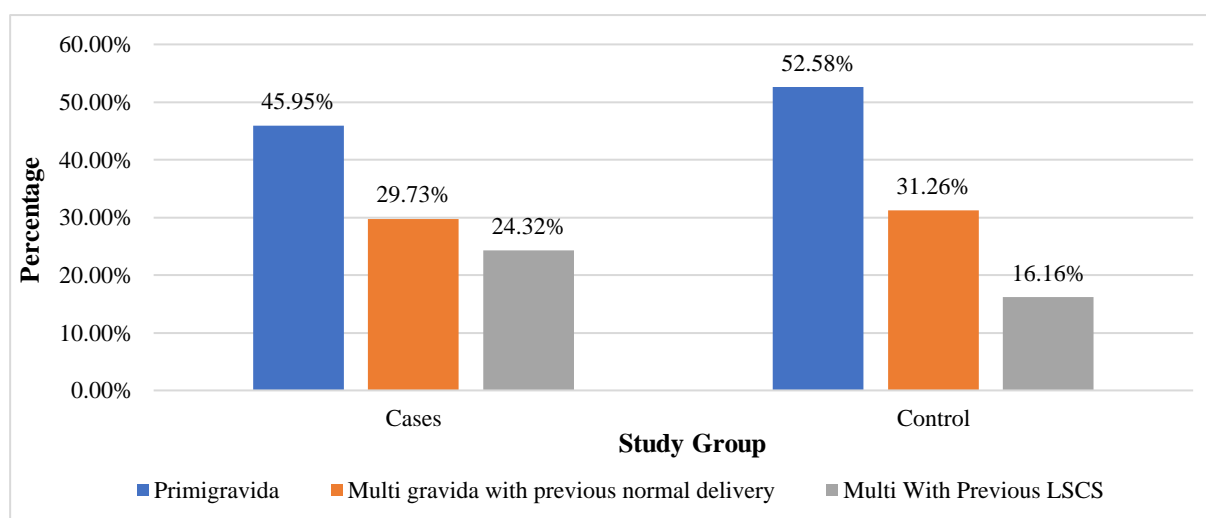


Table 8: Comparison of gestational age at diagnosis between study group (N=600)

Period gestational age at diagnosis	Study Group	
	Cases (N=37)	Control (N=563)
Preconceptionally	5 (13.51%)	0 (0%)
<10 Weeks	18 (48.65%)	401 (71.23%)
>10 Weeks	14 (37.84%)	162 (28.77%)

**No statistical test was applied- due to 0 subjects in the cells*

In cases, 5 (13.51%) were preconceptionally, 18 (48.65%) were POG at <10 weeks and 14 (37.84%) were POG at >10 weeks. In controls, 401 (71.23%) were POG at <10 weeks and 162 (28.77%) were POG at >10 weeks. (Table 8 & Figure 4)

Figure 4: Cluster bar chart of comparison of period gestational age at diagnosis between study group (N=600)

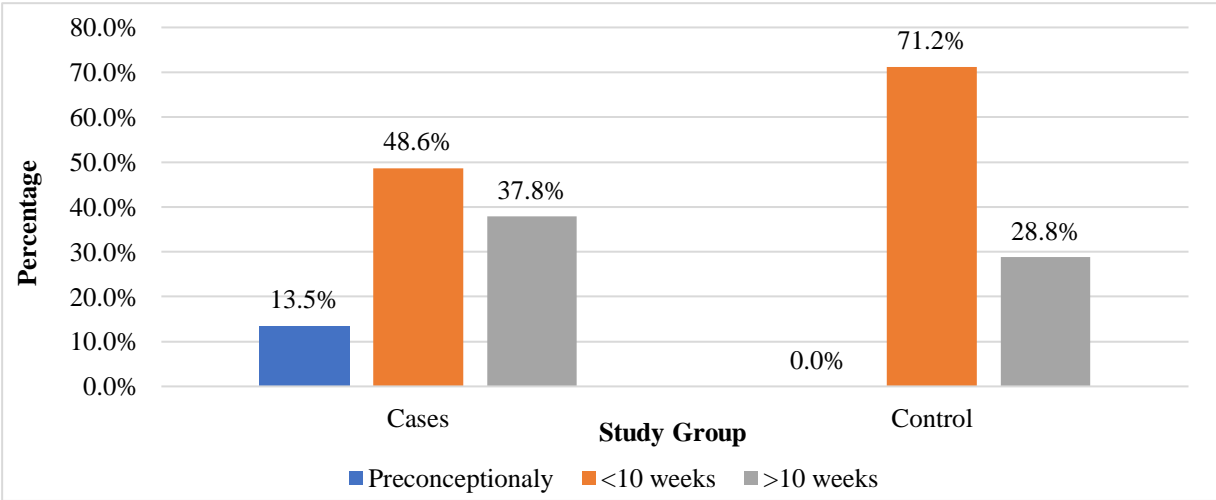


Table 9: Comparison of thyroid stimulation hormone (TSH) between study group (N=600)

Thyroid Stimulation Hormone (TSH)	Study Group	
	Cases (N=37)	Control (N=563)
<2.5 mIU/ml	1 (2.7%)	563 (100%)
2.5 To 4.20 mIU/ml	12 (32.43%)	0 (0%)
4.21 To 10 mIU/ml	13 (35.14%)	0 (0%)
>10 mIU/ml	6 (16.22%)	0 (0%)
< 1.0 mIU/ml	5 (13.51%)	0 (0%)

**No statistical test was applied- due to 0 subjects in the cells*

In cases, the majority of 13 (35.14%) were TSH 4.21 to 10, and 12 (32.43%) were TSH 2.5 to 4.20. In controls, all of them 100% were TSH <2.5. (Table 9 & Figure 5)

Figure 5: Cluster bar chart of comparison of thyroid stimulation hormone (TSH) between study group (N=600)

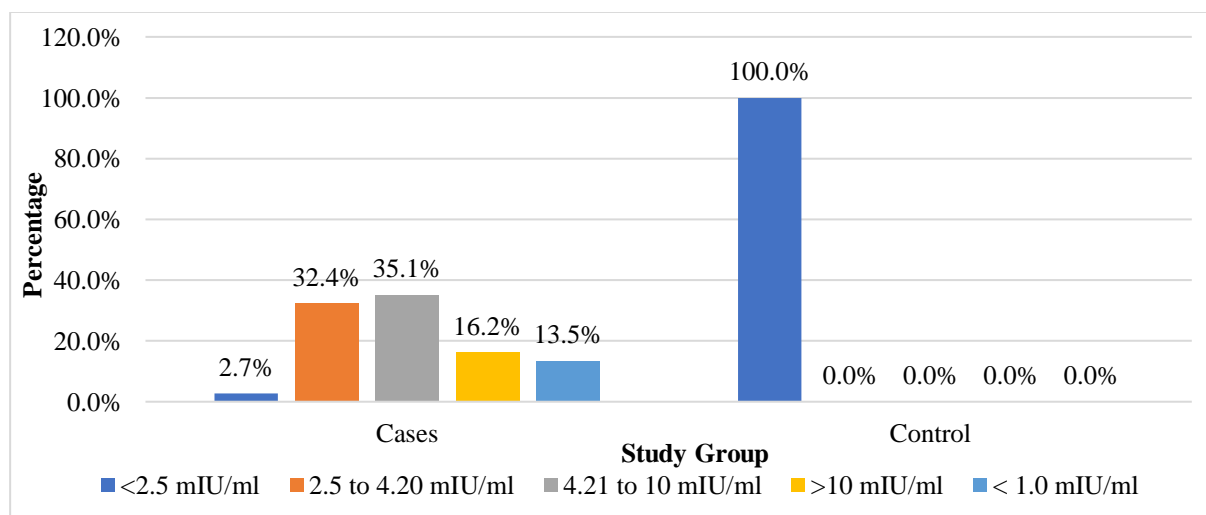


Table 10: Descriptive analysis of subgroup in the study population (N=600)

Sub Group	Frequency	Percentages
Hyperthyroidism	6	1.00%
Hypothyroidism	31	5.17%
Normal	563	93.83%

Overall, 6 (1%) participants had hyperthyroidism, 31 (5.17%) participants hypothyroidism, and 563 (93.83%) were normal. (Table 10 & Figure 6)

Figure 6: Bar chart of subgroup in the study population (N=600)

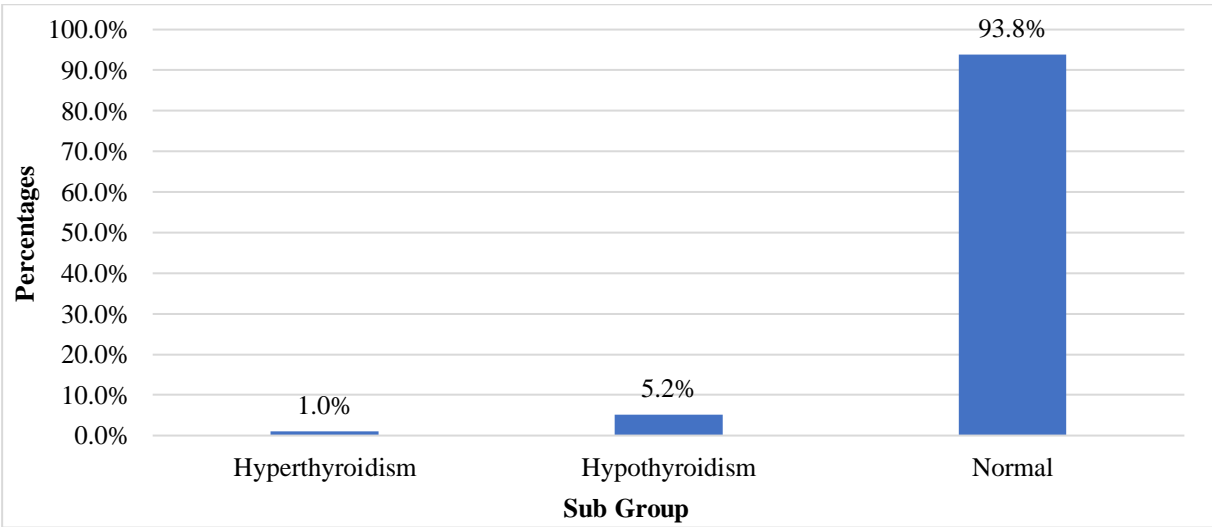


Table 11: Descriptive analysis of repeat TSH at different time periods in the study population (N=37)

Repeat TSH	Frequency	Percentages
16 Weeks		
<3.0 mIU/ml	19	51.35%
3.0-4.2 mIU/ml	11	29.73%
4.2-10 mIU/ml	4	10.81%
<1.0 mIU/ml	3	8.11%
20 Weeks (N=34)		
<3.0 mIU/ml	21	61.76%
3.0-4.2 mIU/ml	13	38.24%
32 Weeks (N=34)		
<3.0 mIU/ml	33	97.06%
3.0-4.2 mIU/ml	1	2.94%

Among the thyroid people, repeat TSH at 16th week, 19 (51.35%) participants were <3.0, 11 (29.73%) participants were 3.0 to 4.2, 4 (10.81%) participants were 4.2 to 10 and 3 (8.11%) participants were <1.0 mIU/ml. TSH at 20th week, 21 (61.76%) participants were <3.0, 13 (38.24%) participants were 3.0 to 4.2, TSH at 32-week, 33 (97.06%) participants were <3.0, only 1 (2.94%) participant were 3.0 to 4.2. (Table 11)

Table 12: Descriptive analysis of repeat t4 in the study population

Repeat T4	Frequency	Percentages
at 16 Weeks (N=6)		
Normal	3	50.00%
Increased	3	50.00%
at 20 Weeks (N=5)		
Normal	4	80.00%
Increased	1	20.00%
at 32 Weeks (N=5)		
Normal	5	100%

Out of 6 participants at 16th week, 3 (50%) were increased repeat t4. Out of 5 participants at the 20th week, only 1 (20%) had increased T4. (Table 12)

Table 13: Descriptive analysis of antibodies 16 weeks in the study population (N=6)

Antibodies 16 Weeks	Frequency	Percentages
Positive	1	16.67%
NIL	5	83.33%

Antibodies at 16th week, only 1 (16.67%) had positive. (Table 13 & Figure 7)

Figure 7: Bar chart of antibodies 16 weeks in the study population (N=6)

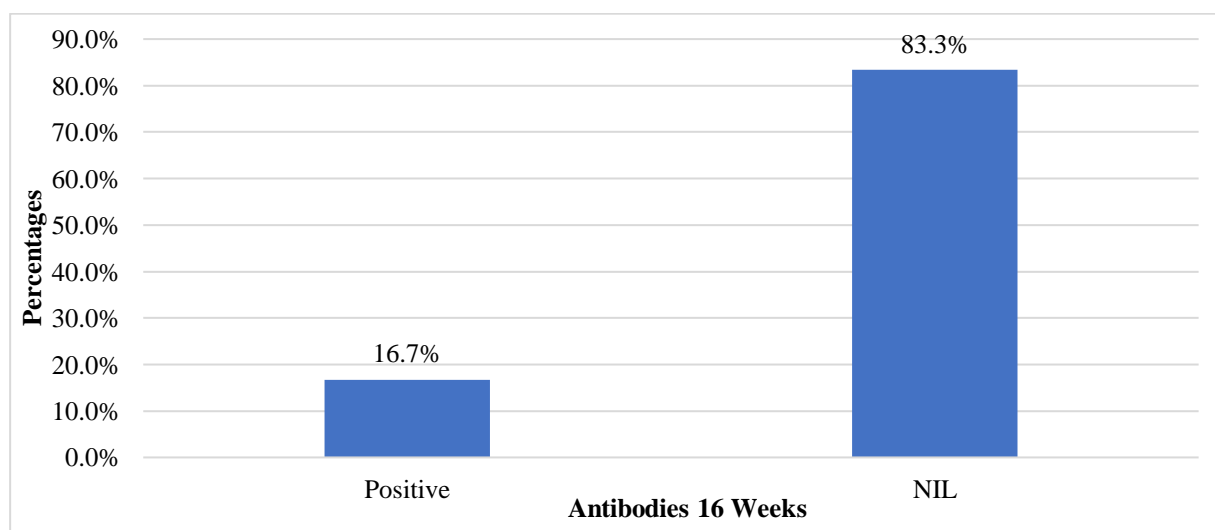
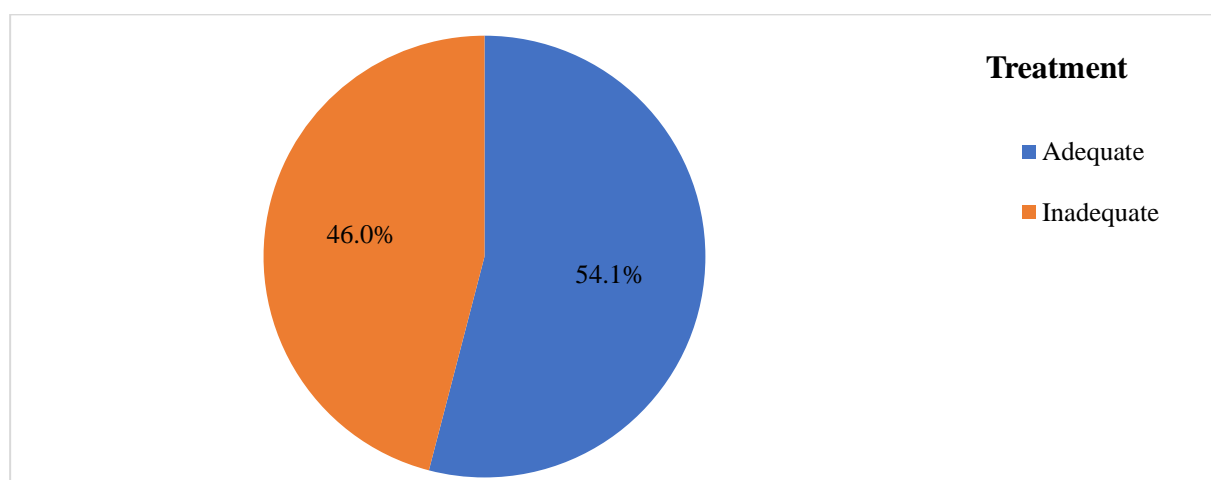


Table 14: Descriptive analysis of treatment in the study population (N=37)

Treatment	Frequency	Percentages
Adequate	20	54.05%
Inadequate	17	45.95%

Out of 37 thyroid people, 20 (54.05%) were in adequate treatment, and 17 (45.95%) participants were inadequate treatment. (Table 14 & Figure 8)

Figure 8: Pie chart of treatment in the study population (N=37)**Table 15: Comparison of the mode of delivery between study group (N=600)**

Mode of delivery	Study Group		Chi-square	P-value
	Cases (N=37)	Control (N=563)		
Normal Vaginal Delivery	12 (32.43%)	296 (52.58%)	6.390	0.172
LSCS	16 (43.24%)	187 (33.21%)		
Vacuum Delivery	5 (13.51%)	40 (7.1%)		
Forceps Delivery	1 (2.7%)	12 (2.13%)		
NA	3 (8.11%)	28 (4.97%)		

In cases, 12 (32.43%) women had a normal vaginal delivery, 16 (43.24%) women had LSCS, 5 (13.51%) women had vacuum delivery, and only one (2.7%) had a forceps delivery. In control, 296 (52.58%) women had a normal vaginal delivery, 187 (33.21%) women had LSCS, 40 (7.1%) women had vacuum delivery, and only one (2.7%) had a forceps delivery. The

difference in the mode of delivery between the study group was statistically not significant (P-Value 0.172) (Table 15 & Figure 9)

Figure 9: Cluster bar chart of comparison of mode of delivery between study group (N=600)

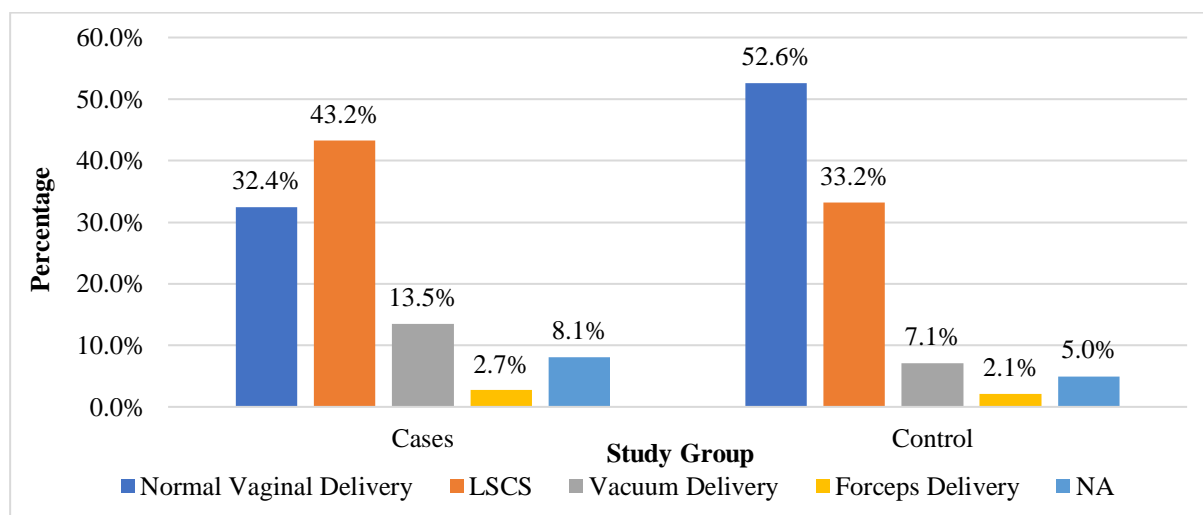


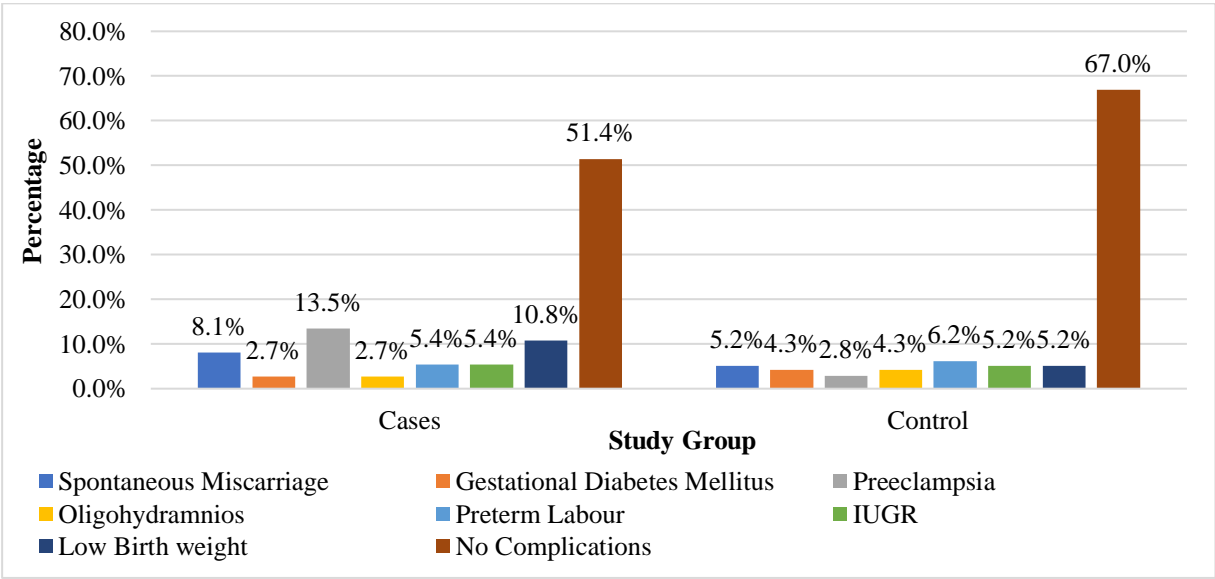
Table 16: Comparison of pregnancy outcome between study group (N=600)

Pregnancy Outcome	Study Group		Chi-square	P-value
	Cases (N=37)	Control (N=563)		
Spontaneous Miscarriage	3 (8.11%)	29 (5.15%)	15.617	0.029
Gestational Diabetes Mellitus	1 (2.7%)	24 (4.26%)		
Preeclampsia	5 (13.51%)	16 (2.84%)		
Oligohydramnios	1 (2.7%)	24 (4.26%)		
Preterm Labour	2 (5.41%)	35 (6.22%)		
IUGR	2 (5.41%)	29 (5.15%)		
Low Birth Weight	4 (10.81%)	29 (5.15%)		
No Complications	19 (51.35%)	377 (66.96%)		

The difference in pregnancy outcome between the study group is found to be significant, with a P-value of 0.029. (Table 16 & Figure 10)

Figure 10: Cluster bar chart of comparison of pregnancy outcome between study group

(N=600)



DISCUSSION

DISCUSSION:

Thyroid disease evaluation during pregnancy is critical for the mother's health during pregnancy, the obstetric outcome, and the child's future development. Maternal hypothyroidism is the most frequent thyroid condition during pregnancy. Fetal loss, placental abruptions, hypertension, preterm delivery, and impaired intellectual function in the offspring are all linked to this condition. There is a scarcity of information about thyroid issues in Indian pregnant women. This study was conducted to identify the prevalence of thyroid disorders in pregnancy and its impact in material and fetal outcomes. A total of 600 subjects were enrolled for the study.

STUDY POPULATION:

In the present study, 6.17% were cases, and 93.83% were controls. Sharin P. Barse et al.⁴³ performed a prospective study on 696 pregnant women in which 17.90% of the women were identified with thyroid disorders and 82.1% without thyroid disorders.

In another study by Kalyani Mahajan. et al.,³⁹, in which 12.45% of the study population had thyroid disorders while the remaining 87.55% had normal thyroid function.

Sharin P. Barse, et al.⁴³ Kalyani Mahajan.et al.³⁹ Reshmi Ramachandran.et al.⁴² Kalpana Mahadik. et al.²⁵ showed an increased prevalence as compared to the present study.

Table 17: Comparison of study groups between various studies.

Study	Population	Study groups (%)
Present study	600	Cases (6.17%) Control (93.83%)
Reshmi Ramachandran.et al. ⁴²	451	Abnormal thyroid function (22.4%) Normal thyroid function (77.60%)
Kalpana Mahadik. et al. ²⁵	198	Abnormal thyroid function (11%) Normal thyroid function (89%)
Alpana Singh. et al. ⁴⁶	400	Abnormal thyroid function (8.25%) Normal thyroid function (91.75%)

AGE:

In the current study, the mean of age in the case and control groups were identified as 24.73 ± 3.72 years and 24.06 ± 3.31 years, respectively.

Hatice Dulek et al.³³ conducted a retrospective study on 796 antenatal women in which the mean age of participants with normal thyroid function was 28.3 ± 5.7 years while 28.0 ± 5.2 and 27.7 ± 5.4 years were the mean of age in participants with hyperthyroidism and hypothyroidism, respectively which was an increased mean as compared to our study.

Alpana Singh. et al.⁴⁶ performed a prospective study on 400 pregnant women in which 23.04 ± 3.34 was the mean age of the euthyroid population while 24.83 ± 4.10 and 20.66 ± 1.52 years were the means of age in subjects with hypothyroidism and hyperthyroidism which resembles to the present study results.

PARITY:

In the present study, primigravida, multigravida with previous normal delivery, and multigravida with previous LSCS were identified with 45.95%, 29.73%, and 24.32% in cases while it was identified with 52.58%, 31.26%, and 16.16% in control.

Sreelatha S. et al.⁵⁰ conducted a prospective study on 100 women in which the majority of the participants were belonged to multigravida with 51% followed by primigravida with 49% in subjects with thyroid dysfunction. In another study by Alpana Singh. et al.⁴⁶ primigravida and multigravida in women with thyroid disorders were identified with 8.8% and 7.7% whereas, it was 91.2% and 92.23% in women without thyroid disorders.

GESTATIONAL AGE:

In the present study, the period of gestational age was <10 weeks in the majority of the women in the case group with 48.65%, followed by > 10 weeks with 37.84%. Similarly, in control with 71.23% and 28.77%.

Uma Kaimal Saikia. et al.⁵¹ conducted a prospective study on 542 pregnant women in which 16.97% of the participants were in the first trimester whereas 29.88% in the second trimester and 53.13% in the third trimester.

THYROID-STIMULATING HORMONE:

In the present study, TSH was between 4.21 - 10 mIU/ml in the majority of the participants in the case group with 35.14%, followed by 2.5 - 4.20 mIU/ml with 32.43%. Whereas, in the control group, TSH was <2.5 mIU/ml in all the participants. In Peter N. Taylor. et al.⁵² studies 62.8% of the pregnant women with thyroid disorders had a TSH level of greater than 2.5 mU/L while 7.4% of the women had a TSH level greater than 10 mU/L.

PREVALENCE OF THYROID DISORDERS:

In the current study, hyperthyroidism and hypothyroidism were identified with 1% and 5.17%, respectively. In Kalyani Mahajan. et al.³⁹ studies the prevalence of hyperthyroidism and

hypothyroidism were identified with 0.58% and 11.88%, respectively. In another study by Sharin P. Barse et al.⁴³ 1.4% and 16.5% were identified as the prevalence of hyperthyroidism and hypothyroidism, respectively.

The prevalence of hypothyroidism was more than that of hyperthyroidism in Alpana Singh. et al.⁴⁶ Kalyani Mahajan. et al.³⁹ Kalpana Mahadik, et al.²⁵ Sharin P. Barse, et al.⁴³ studies which resemble to the present study results.

Table 18: Comparison of prevalence of thyroid disorders between various studies.

Study	Population	Thyroid disorders (%)
Present study	600	Hypothyroidism (1%) Hyperthyroidism (5.17%)
Kalpana Mahadik, et al. ²⁵	198	Hypothyroidism (9.1%) Hyperthyroidism (1.5%)
Alpana Singh. et al. ⁴⁶	400	Hypothyroidism (7.5%) Hyperthyroidism (0.75%)

REPEAT TSH:

Among the case group, the majority of the participants had repeat TSH <3.0 mIU/ml with 51.35% at 16th week followed by 3.0-4.2 mIU/ml with 29.73%. Similarly, at the 20th week, 61.76% had repeat TSH <3.0 mIU/ml, and at 32nd week 97.06% had repeat TSH <3.0 mIU/ml. In Rodrigo Moreno-Reyes, et al.⁵³ studies, TSH in the first trimester was > 2.5 mU/L in 8.3% of the women with thyroid disorder while the TSH in the third trimester was > 3.0 mU/L in 6.1% of the women.

REPEAT T4:

In the case group, out of 6 participants at 16th week, repeat T4 was increased in 50% of participants. Whereas, out of 5 participants at the 20th week, only 20% had increased T4.

ANTIBODIES:

In the present study, 16.67% of the participants showed positive antibodies at the 16th week. Alpana Singh. et al.⁴⁶ performed a prospective study on 400 pregnant women in which antibody was positive in 36.6% of participants with thyroid dysfunction. In Reshmi Ramachandran. et al.⁴² studies 9.90% of the antenatal women had the presence of antibody.

Alpana Singh. et al.⁴⁶ Reshmi Ramachandran. et al.⁴² studies showed an increased rate of antibodies as compared to the present study.

TREATMENT:

Among the case group, 54.05% had adequate treatment, while 45.95% of participants had inadequate treatment.

MODE OF DELIVERY:

In the present study, the mode of delivery was LSCS in most of the participants in the case group with 43.24%, followed by normal vaginal delivery with 32.43%. Whereas most of the participants underwent normal vaginal delivery in the control group with 52.58%, followed by LSCS with 32.21%.

Kalyani Mahajan. et al.³⁹ conducted an observational study on 514 women in which the majority of the participants with thyroid disorders underwent cesarean section with 32.08% followed by vaginal delivery with 67.92%. Whereas 74.61% of participants with normal thyroid function had a vaginal delivery with 74.61%, followed by the cesarean section with 25.39%.

Varuni Sharma. et al.¹ performed a prospective study on 120 subjects in which vaginal delivery and cesarean section were observed with 57.89% and 42.11% in participants with thyroid disorder while it was observed as 80.24% and 19.76% in participants without thyroid disorders. Kalyani Mahajan. et al.³⁹ Varuni Sharma. et al.¹ showed similar results with the present study.

PREGNANCY OUTCOMES:

In the current study, spontaneous miscarriage, gestational diabetes mellitus, preeclampsia, oligohydramnios, preterm labor, IUGR and low birth weight were identified with 8.11%, 2.7%, 13.51%, 2.7%, 5.41%, 5.41% and 10.81% in cases whereas, it was identified with 5.15%, 4.26%, 2.84%, 4.26%, 6.22%, 5.15% and 5.15% in control group respectively.

Reshmi Ramachandran. et al.⁴² studies conducted a prospective observational study on 451 antenatal women in which miscarriage, GDM, preeclampsia, preterm birth, IUGR, and LBW were identified with 24.75%, 3.96%, 4.95%, 1.98%, 0%, and 1.98% in pregnant women with thyroid disorders while it was identified with 3.42%, 0.29%, 0.86%, 0%, 1.43% and 5.43% in pregnant women without thyroid dysfunction.

In another study by Kalyani Mahajan. et al.³⁹ study miscarriage, low birth weight, IUGR, and no complications were identified with 34.03%, 8.23%, 6.25%, and 54.86% in participants with thyroid disorders while, it was identified with 6.38%, 3.77%, 5.22% and 83.48% in participants with normal thyroid function.

Reshmi Ramachandran. et al.⁴² Kalyani Mahajan. et al.³⁹ Alpana Singh. et al.⁴⁶ showed similar results with the present study in terms of pregnancy outcomes.

Table 19: Comparison of pregnancy outcomes between various studies.

Study	Population	Pregnancy outcomes (%)	
Present study	600	<p style="text-align: center;">Cases</p> <p style="text-align: center;">Spontaneous Miscarriage (8.11%)</p> <p style="text-align: center;">GDM (2.7%)</p> <p style="text-align: center;">Preeclampsia (13.51%)</p> <p style="text-align: center;">Oligohydramnios (2.7%)</p> <p style="text-align: center;">Preterm Labor (5.41%)</p> <p style="text-align: center;">IUGR (5.41%)</p> <p style="text-align: center;">LBW (10.81%)</p>	<p style="text-align: center;">Cases</p> <p style="text-align: center;">Spontaneous Miscarriage (5.15%)</p> <p style="text-align: center;">GDM (4.26%)</p> <p style="text-align: center;">Preeclampsia (2.84%)</p> <p style="text-align: center;">Oligohydramnios (4.26%)</p> <p style="text-align: center;">Preterm Labor (6.22%)</p> <p style="text-align: center;">IUGR (5.15%)</p> <p style="text-align: center;">LBW (5.15%)</p>
Alpana Singh.et al. ⁴⁶	400	<p style="text-align: center;">Cases</p> <p style="text-align: center;">Miscarriage (9.09%)</p> <p style="text-align: center;">Preeclampsia (33.33%)</p> <p style="text-align: center;">Preterm labor (3.33%)</p> <p style="text-align: center;">IUGR (16.66%)</p> <p style="text-align: center;">GDM (6.66%)</p>	<p style="text-align: center;">Control</p> <p style="text-align: center;">Miscarriage (3.2%)</p> <p style="text-align: center;">Preeclampsia (7.3%)</p> <p style="text-align: center;">Preterm labor (4.6%)</p> <p style="text-align: center;">IUGR (5.7%)</p> <p style="text-align: center;">GDM (4.9%)</p>

SUMMARY:

One of the most common endocrine disorders identified in pregnancy is thyroid disorder. It is associated with adverse maternal and fetal outcomes. Abortion, preeclampsia, abruptio placenta, preterm labor, and fetal complications are prematurity, low birth weight; still birth and perinatal death are the common obstetric complications associated with thyroid disorders. Hyperthyroidism occurs in 0.2%–0.4% of pregnant women and is mostly related with Grave's disease. The incidence of hypothyroidism in pregnancy is between 0.5%–3.5%. The prevalence of hypothyroidism was more in Asian countries as compared to western countries. The occurrence of hyperthyroidism is less as compared to hypothyroidism.

Evaluation of thyroid disease in pregnancy is essential for the gestational maternal health, obstetric outcome, and subsequent development of the child. The most common thyroid disorder in pregnancy is maternal hypothyroidism. It is related with fetal loss, placental abruptions, preeclampsia, preterm delivery, and reduced intellectual function in the offspring. There is a paucity of data in Indian pregnant women on the prevalence of thyroid disorders. This study was conducted to identify the prevalence of thyroid disorders in pregnancy and its impact in material and fetal outcomes. A total of 600 participants were enrolled in the study.

- Among the study population, 6.17% were cases, and 93.83% were controls.
- The mean age of participants in the case and control group were identified as 24.73 ± 3.72 years and 24.06 ± 3.31 years, respectively.
- Primigravida, multigravida with previous normal delivery, and multigravida with previous LSCS were identified with 45.95%, 29.73%, and 24.32% in the case group, while it was identified with 52.58%, 31.26%, and 16.16% in the control group.
- The period of gestational age was <10 weeks in the majority of the women in the case group, followed by > 10 weeks with 37.84%. Similarly, in control with 71.23% and 28.77%.

- TSH was between 4.21 - 10 mIU/ml in the majority of the participants in the case group with 35.14%, followed by 2.5 - 4.20 mIU/ml with 32.43%. Whereas, in the control group, TSH was <2.5 mIU/ml in all the participants.
- Hyperthyroidism and hypothyroidism were identified with 1% and 5.17%, respectively.
- Among the case group, the majority of the participants had repeat TSH <3.0 mIU/ml with 51.35% at 16th week followed by 3.0-4.2 mIU/ml with 29.73%. Similarly, at the 20th week, 61.76% had repeat TSH <3.0 mIU/ml, and at 32nd week 97.06% had repeat TSH <3.0 mIU/ml.
- In the case group, out of 6 participants at 16th week, repeat T4 was increased in 50% of participants. Whereas, out of 5 participants at the 20th week, only 20% had increased T4.
- Around 16.67% of the participants showed positive antibodies at the 16th week.
- Among the case group, 54.05% had adequate treatment, while 45.95% of participants had inadequate treatment.
- Mode of delivery was LSCS in most of the participants in the case group with 43.24%, followed by normal vaginal delivery with 32.43%. Whereas most of the participants underwent normal vaginal delivery in the control group with 52.58%, followed by LSCS with 32.21%.
- In the current study, spontaneous miscarriage, gestational diabetes mellitus, preeclampsia, oligohydramnios, preterm labor, IUGR and low birth weight were identified with 8.11%, 2.7%, 13.51%, 2.7%, 5.41%, 5.41% and 10.81% in cases whereas, it was identified with 5.15%, 4.26%, 2.84%, 4.26%, 6.22%, 5.15% and 5.15% in control group respectively.
- To summarize, the current study reveals a significant prevalence of thyroid disorders, particularly hypothyroidism, underscoring the importance of including thyroid function

testing in regular antenatal clinic screening. Potential maternal and fetal problems should be made known to women with thyroid disorders. TSH in the blood is a sufficient and cost-effective biochemical diagnostic for thyroid dysfunction screening. Thyroid dysfunction must be diagnosed and treated as soon as possible in order to minimize negative prenatal outcomes.

CONCLUSIONS:

To summarize, the current study reveals a significant prevalence of thyroid disorders, particularly hypothyroidism, underscoring the importance of including thyroid function testing in regular antenatal clinic screening. Potential maternal and fetal problems should be made known to women with thyroid disorders. TSH in the blood is a sufficient and cost-effective biochemical diagnostic for thyroid dysfunction screening. Thyroid dysfunction must be diagnosed and treated as soon as possible in order to minimize negative prenatal outcomes.

LIMITATIONS:

The sample size of the cases is small in the present study. Follow-up of the study population is not performed. Demographic details such as family history not included.

RECOMMENDATIONS:

The present study can be conducted in a larger population size. Follow-up and treatment taken can also be included in a future study.

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ANNEXURES



INSTITUTIONAL ETHICAL COMMITTEE

Reg. No: ECR/774/INST/TN/2015

CHENGALPATTU MEDICAL COLLEGE, CHENGALPATTU

Title of Work : A study on prevalence of thyroid disorder in pregnancy & its impact on maternal & fetal outcomes in Tertiary Care Centre in Villupuram

Principal Investigator : Dr. R.Pradeepa

Designation : 1st year PG

Co-Investigators : Dr. M.Thangamani, MD.,
Associate Professor
Department of Obstetrics and Gynaecology
Dr. Poornadevi, MS.,
Assistant Professor
Got. Villupuram Medical College and Hospital
Villupuram


Department : Obstetrics and Gynaecology


The request for an approval from the Institutional Ethical Committee (IEC) was considered on the IEC meeting held on 21.11.2019 at the Medical Education Unit, Chengalpattu Government Medical College, Chengalpattu at 11.00 AM.

The Members of the committee, the Secretary and the Chairperson are pleased to inform you that your proposed project mentioned above is **Approved**.

You should inform the IEC in case of any changes in study procedure, methodology, sample size investigation, investigator or guide or any other changes.

1. You should not deviate from the area of work for which you had applied for ethical clearance.
2. You should inform the IEC immediately, in case of any adverse events or serious adverse reactions, if encountered during from study.
3. You should abide to the rules and regulations of the institution(s).
4. You should complete the work within the specific period and if any extension is required, you should apply for the permission again for extension period.
5. You should submit the summary of the work to the ethical committee on completion of the study.


CHAIRMAN
INSTITUTIONAL ETHICAL COMMITTEE
CMCH, CHENGALPATTU


MEMBER SECRETARY
INSTITUTIONAL ETHICAL COMMITTEE
CMCH, CHENGALPATTU

PATIENT INFORMATION SHEET

We are conducting " **A STUDY ON PREVALENCE OF THYROID DISORDERS IN PREGNANCY AND ITS MATERNAL FETAL OUTCOMES IN ATERTIARY CARE CENTRE IN VILLUPURAM**" at Government Villupuram medical college. We are selecting patients who satisfy our inclusion criteria and they are included in the study. The privacy of the patients will be maintained throughout the study, in the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

Participation depends on patient's decision. Their decision will not result in any loss of benefits to which you are otherwise entitled.

Signature of Investigator

Signature of the Participant

Dr.PRADEEPA R

Date:

Place: Villupuram—605601

INFORMED CONSENT FORM

Title of the study "" **A STUDY ON PREVALENCE OF THYROID DISORDERS IN PREGNANCY AND ITS MATERNAL FETAL OUTCOMES IN ATERTIARY CARE CENTRE IN VILLUPURAM** "at Government

Villupuram medical college

Name of the participant:

Name of the Investigator: Dr. R PRADEEPA

Name of the Institution: Government Villupuram medical college

Documentation of the informed consent.

I _____ have read the information in this form (or it has been read to me). I was free to ask any questions and they have been answered. I am over years of age and, exercising my free power of choice, hereby give my consent to be included as a participant in I have read and understood this consent form and the information provided to me.

1. I have had the consent document explained to me.
2. I have been explained about the nature of the study.

3. I have been explained about my rights and responsibilities by the investigator.
4. I have been informed the investigator of all the treatments I am taking or have taken in the past including any native (alternative) treatment.
5. I have been advised about the risks associated with my participation in this study.
6. I agree to cooperate with the investigator and I will inform him/her immediately if I suffer unusual symptoms.
7. I have not participated in any research study within the past_____.
8. I am aware of the fact that I can opt out of the study at any time without having to give any reason and this will not affect my future treatment in this hospital.
9. I hereby give permission to the investigators to use the data obtained from me to the sponsors, regulatory authorities, Govt. Agencies, and IEC.
10. I have understood that my identity will be kept confidential at all points of time.
11. I have had my questions answered to my satisfaction.
12. I have decided to take part in the research
13. I am aware that if I have any question during this study, I should contact the Investigator (8526874426). By signing this consent form I attest that the information given in this document has been clearly explained to me and

understood by me, I will be given a copy of this consent document.

Signature of the Participant

Signature of the Investigator

Date:

Place: Villupuram--605601

ஆராய்ச்சி ஒப்புதல் படிவம்

ஆராய்ச்சி தலைப்பு:

பிரசவதின் போது தைராய்டு நோயினால் தாய்க்கும் பிறக்கும் குழந்தைக்கும் ஏற்படும் பின் விளைவுகள் பற்றிய ஆய்வு.

பெயர் :	தேதி :
வயது :	உள்ளேநோயாளி எண் :
பாலினம் :	ஆய்வு சேர்க்கை எண் :

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கங்களும் எனக்கு முழுமையாக தெளிவாக விளக்கப்பட்டன. எனக்கு விளக்கப்பட்ட விவரங்களை புரிந்துகொண்டு நான் என் சம்மதத்தை தெரிவிக்கிறேன்.

இந்த ஆய்விலிருந்து எப்போது வேண்டுமானாலும் எக்காரணமும் கூறாமல் என்னை விடுவித்து கொள்ளலாம் என்பதை அறிவேன்.

என்னிடம் இருந்து பெறப்படும் தகவல்களை அரசு வரைமுறை அதிகாரிகள் ஆகியோர்களுடன் பகிர்ந்துகொள்ள ஆராய்ச்சியாளருக்கு அனுமதி அளிக்கிறேன். என்னுடைய சிகிச்சை கட்டுகளை பார்வையிட உரிமை உண்டு. என்னுடைய தகவல்களின் அடையாளம் ரகசியமாக வைக்கப்படும் என்பதை அறிவேன்.

இந்த ஆராய்ச்சியில் பங்கேற்க தன்னிச்சையாக முழு மனதுடன் சம்மதிக்கிறேன்.

பங்கேற்பவரின் கையொப்பம்/ரேகை

ஆய்வாளர் கையொப்பம்:

இடம்:

இடம்:

தேதி:

தேதி:

STUDY PROFORMA

Name:

Age:

Address:

Socioeconomic Class:

OP/IP No.:

Booked/Un booked:

Immunized:

Obstetric Formula:

LMP:

EDD:

Menstrual History:

Marital History:

Past History:

Treatment History:

Risk Factors:

H/o Miscarriage,

H/o Preeclampsia,

Family H/oThyroid disorder

Symptoms, & signs of Thyroid disorder,

Thyroid nodule

O/E Conscious

Afebrile

Height

Pallor

Weight

Pedaledema/nopedaledema,

Body Mass Index

Thyroid swelling

Breast

Spine

Pulse Rate

Blood Pressure Cardiovascular system:

Respiratory system:

Abdomen:

Vaginal

Investigation:

Urine: Albumin Sugar Deposit

Blood:

Hemoglobin

VDRL

HBSAg

HIV

Blood Sugar

Blood group Rh typing

Ultrasonogram

Specific Investigation:

Serum TSH

If TSH is abnormal,

FreeT4

Antibodies

[TPO/ATG]in

suspected cases

Treatment:

Physician Opinion:

Follow UP:

Maternal complication:

Fetal complication:

Mode of Delivery:

Baby details:

Birth weight-

APGAR-

MASTER SHEET

S.no	OP, NO	Study group	Sub group	Age	Body weight	OBSTETRIC CODE	Period gestational age at diagnosis	Thyroid Stimulation Hormone (TSH)	Mode of delivery	PREGNANCY OUTCOME
1	5123	Cases	Hypothyroidim	19.0	54.0	Primigravida	<10 weeks	2.5 to 4.20	Normal Vaginal Delivery	No Complications
2	5234	Cases	Hypothyroidim	21.0	52.0	Primigravida	Preconceptionally	4.21 to 10	NA	Spontaneous Miscarriage
3	6123	Cases	Hypothyroidim	21.0	58.0	Primigravida	<10 weeks	2.5 to 4.20	LSCS	No Complications
4	723	Cases	Hypothyroidim	23.0	62.0	Primigravida	<10 weeks	2.5 to 4.20	Normal Vaginal Delivery	No Complications
5	534	Cases	Hypothyroidim	22.0	53.0	Multi gravida with previous normal delivery	>10 weeks	>10	Normal Vaginal Delivery	Preeclampsia
6	623	Cases	Hypothyroidim	25.0	58.0	Primigravida	<10 weeks	2.5 to 4.20	Normal Vaginal Delivery	No Complications
7	745	Cases	Hypothyroidim	28.0	57.0	Multi with previous LSCS	>10 weeks	>10	LSCS	Gestational Diabetes Mellitus
8	556	Cases	Hypothyroidim	24.0	56.0	Primigravida	<10 weeks	4.21 to 10	Normal Vaginal Delivery	No Complications
9	634	Cases	Hypothyroidim	22.0	50.0	Multi gravida with previous normal delivery	>10 weeks	4.21 to 10	LSCS	Oligohydramnios
10	567	Cases	Hypothyroidim	21.0	61.0	Primigravida	<10 weeks	2.5 to 4.20	Normal Vaginal Delivery	No Complications
11	734	Cases	Hypothyroidim	26.0	58.0	Multi gravida with previous normal delivery	>10 weeks	2.5 to 4.20	Normal Vaginal Delivery	Low Birth weight
12	578	Cases	Hypothyroidim	27.0	63.0	Multi with previous LSCS	<10 weeks	2.5 to 4.20	LSCS	No Complications
13	645	Cases	Hypothyroidim	20.0	62.0	Primigravida	>10 weeks	>10	NA	Spontaneous Miscarriage
14	589	Cases	Hypothyroidim	24.0	56.0	Multi gravida with previous normal delivery	<10 weeks	4.21 to 10	Normal Vaginal Delivery	No Complications
15	745	Cases	Hypothyroidim	25.0	61.0	Multi with previous LSCS	Preconceptionally	4.21 to 10	LSCS	No Complications
16	656	Cases	Hypothyroidim	24.0	59.0	Multi gravida with previous normal delivery	>10 weeks	>10	Normal Vaginal Delivery	Low Birth weight
17	767	Cases	Hypothyroidim	26.0	54.0	Primigravida	<10 weeks	2.5 to 4.20	LSCS	No Complications
18	678	Cases	Hypothyroidim	22.0	58.0	Multi with previous LSCS	>10 weeks	4.21 to 10	LSCS	IUGR
19	812	Cases	Hypothyroidim	21.0	55.0	Primigravida	<10 weeks	4.21 to 10	Normal Vaginal Delivery	Low Birth weight
20	778	Cases	Hypothyroidim	23.0	61.0	Multi gravida with previous normal delivery	>10 weeks	2.5 to 4.20	Vacuum Delivery	No Complications
21	823	Cases	Hypothyroidim	30.0	63.0	Multi with previous LSCS	Preconceptionally	2.5 to 4.20	LSCS	No Complications
22	912	Cases	Hypothyroidim	21.0	56.0	Primigravida	>10 weeks	>10	Normal Vaginal Delivery	Preterm Labour
23	689	Cases	Hypothyroidim	25.0	59.0	Multi gravida with previous normal delivery	<10 weeks	2.5 to 4.20	Vacuum Delivery	No Complications
24	834	Cases	Hypothyroidim	27.0	62.0	Multi with previous LSCS	<10 weeks	4.21 to 10	LSCS	No Complications
25	789	Cases	Hypothyroidim	21.0	58.0	Primigravida	>10 weeks	4.21 to 10	Normal Vaginal Delivery	Preterm Labour
26	845	Cases	Hypothyroidim	27.0	59.0	Multi with previous LSCS	Preconceptionally	4.21 to 10	LSCS	No Complications
27	878	Cases	Hypothyroidim	23.0	63.0	Primigravida	>10 weeks	2.5 to 4.20	Vacuum Delivery	No Complications
28	856	Cases	Hypothyroidim	26.0	59.0	Primigravida	Preconceptionally	4.21 to 10	Forceps Delivery	No Complications
29	889	Cases	Hypothyroidim	23.0	58.0	Primigravida	>10 weeks	>10	LSCS	Preeclampsia
30	867	Cases	Hypothyroidim	24.0	60.0	Multi gravida with previous normal delivery	>10 weeks	4.21 to 10	Vacuum Delivery	No Complications
31	589	Cases	Hypothyroidim	27.0	58.0	Multi gravida with previous normal delivery	<10 weeks	4.21 to 10	LSCS	No Complications

32	54381	Cases	Hyperthyroidism	23.0	78.0	Primigravida	<10 weeks	< 1.0	LSCS	Preeclampsia
33	65781	Cases	Hyperthyroidism	25.0	92.0	Multi gravida with previous normal delivery	<10 weeks	< 1.0	LSCS	IUGR
34	47812	Cases	Hyperthyroidism	32.0	89.0	Multi with previous LSCS	<10 weeks	< 1.0	NA	Spontaneous Miscarriage
35	32675	Cases	Hyperthyroidism	28.0	93.0	Primigravida	<10 weeks	< 1.0	Vacuum Delivery	Low Birth weight
36	42687	Cases	Hyperthyroidism	34.0	79.0	Multi gravida with previous normal delivery	>10 weeks	< 1.0	LSCS	Preeclampsia
37	43812	Cases	Hyperthyroidism	35.0	87.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Preeclampsia
38	5012	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
39	5074	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
40	5089	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
41	5065	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Spontaneous Miscarriage
42	5118	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
43	5120	Control	Normal	31.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	Preeclampsia
44	5121	Control	Normal	27.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
45	5129	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
46	5134	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
47	5135	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
48	5156	Control	Normal	24.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
49	5167	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
50	5163	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	LSCS	IUGR
51	5169	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
52	5170	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	Preterm Labour
53	5172	Control	Normal	21.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
54	5178	Control	Normal	18.0		Primigravida	<10 weeks	<2.5	LSCS	Oligohydramnios
55	5174	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	No Complications
56	5235	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	Vacuum Delivery	No Complications
57	5179	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Forceps Delivery	No Complications
58	5184	Control	Normal	29.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
59	5187	Control	Normal	30.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
60	5196	Control	Normal	32.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
61	5212	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
62	5215	Control	Normal	24.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
63	5217	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
64	5218	Control	Normal	21.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
65	5230	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
66	5238	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
67	5242	Control	Normal	20.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
68	5246	Control	Normal	27.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
69	5254	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	IUGR

70	5257	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
71	5259	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
72	5281	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
73	5287	Control	Normal	25.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
74	5284	Control	Normal	29.0		Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour
75	5291	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
76	5296	Control	Normal	20.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
77	5299	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	LSCS	Oligohydramnios
78	5304	Control	Normal	29.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
79	5308	Control	Normal	33.0		Primigravida	>10 weeks	<2.5	Forceps Delivery	No Complications
80	5318	Control	Normal	26.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
81	5314	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	IUGR
82	5317	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
83	5324	Control	Normal	27.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
84	5329	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
85	5327	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
86	5331	Control	Normal	29.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
87	5335	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
88	5338	Control	Normal	21.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
89	5341	Control	Normal	24.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
90	5347	Control	Normal	30.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
91	5349	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
92	5352	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
93	5356	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
94	5359	Control	Normal	24.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
95	5362	Control	Normal	26.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	LSCS	No Complications
96	5364	Control	Normal	27.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
97	5367	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
98	5369	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
99	5371	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
100	5373	Control	Normal	28.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
101	5376	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	LSCS	Preterm Labour
102	5378	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
103	5382	Control	Normal	29.0		Primigravida	<10 weeks	<2.5	LSCS	IUGR
104	5384	Control	Normal	30.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
105	5389	Control	Normal	32.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
106	5391	Control	Normal	31.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
107	5396	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications

108	5394	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
109	5395	Control	Normal	28.0		Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
110	5405	Control	Normal	25.0		Primigravida	>10 weeks	<2.5	Vacuum Delivery	No Complications
111	5402	Control	Normal	33.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
112	5409	Control	Normal	31.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
113	5413	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
114	5417	Control	Normal	18.0		Primigravida	>10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
115	5418	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
116	5427	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
117	5421	Control	Normal	24.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
118	5424	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
119	5428	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	No Complications
120	5431	Control	Normal	26.0		Multi with previous LSCS	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
121	5438	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
122	5437	Control	Normal	29.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
123	5434	Control	Normal	22.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
124	5443	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
125	5446	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
126	5448	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	No Complications
127	5450	Control	Normal	26.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
128	5452	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
129	5454	Control	Normal	29.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
130	5458	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
131	5462	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
132	5464	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
133	5469	Control	Normal	22.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
134	5472	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
135	5477	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
136	5479	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
137	5482	Control	Normal	33.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
138	5491	Control	Normal	31.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
139	5494	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
140	5497	Control	Normal	20.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
141	5502	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
142	5509	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
143	5512	Control	Normal	26.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
144	5517	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
145	5519	Control	Normal	32.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus

146	5521	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
147	5524	Control	Normal	22.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	LSCS	No Complications
148	5526	Control	Normal	31.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
149	5532	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
150	5536	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
151	5538	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
152	5540	Control	Normal	28.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
153	5543	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	No Complications
154	5545	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
155	5547	Control	Normal	31.0		Primigravida	>10 weeks	<2.5	Forceps Delivery	No Complications
156	5561	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
157	5563	Control	Normal	23.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
158	5568	Control	Normal	24.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
159	5570	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
160	5572	Control	Normal	26.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
161	5575	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
162	5578	Control	Normal	21.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
163	5582	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
164	5584	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
165	5586	Control	Normal	31.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
166	5589	Control	Normal	26.0		Primigravida	>10 weeks	<2.5	LSCS	Preterm Labour
167	5592	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	IUGR
168	5593	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
169	5597	Control	Normal	23.0		Primigravida	>10 weeks	<2.5	Vacuum Delivery	No Complications
170	5602	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
171	5607	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
172	5609	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
173	5612	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
174	5616	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
175	5618	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
176	5619	Control	Normal	27.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
177	5624	Control	Normal	29.0		Primigravida	<10 weeks	<2.5	Forceps Delivery	Oligohydramnios
178	5626	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
179	5628	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
180	5630	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
181	5632	Control	Normal	23.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
182	5634	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
183	5637	Control	Normal	26.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications

184	5639	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
185	5641	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
186	5643	Control	Normal	27.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
187	5645	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Preterm Labour
188	5647	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
189	5649	Control	Normal	29.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
190	5651	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
191	5653	Control	Normal	21.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
192	5655	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
193	5658	Control	Normal	30.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
194	5661	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
195	5662	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
196	5664	Control	Normal	26.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
197	5666	Control	Normal	24.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
198	5668	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
199	5671	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	Low Birth weight
200	5672	Control	Normal	31.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
201	5674	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
202	5675	Control	Normal	28.0		Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
203	5677	Control	Normal	25.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	LSCS	No Complications
204	5679	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
205	5681	Control	Normal	24.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
206	5683	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
207	5685	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
208	5687	Control	Normal	28.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
209	5688	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
210	5692	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
211	5696	Control	Normal	18.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
212	5695	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
213	5697	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
214	5699	Control	Normal	23.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	Low Birth weight
215	5701	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
216	5703	Control	Normal	31.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	Oligohydramnios
217	5705	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
218	5707	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
219	5712	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
220	5714	Control	Normal	24.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
221	5719	Control	Normal	28.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications

222	5721	Control	Normal	25.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
223	5722	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
224	5724	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
225	5725	Control	Normal	23.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
226	5727	Control	Normal	21.0	Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
227	5730	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
228	5733	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
229	5734	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
230	5737	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
231	5739	Control	Normal	22.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
232	5742	Control	Normal	19.0	Primigravida	>10 weeks	<2.5	LSCS	Preterm Labour
233	5745	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
234	5747	Control	Normal	25.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Vacuum Delivery	Low Birth weight
235	5749	Control	Normal	23.0	Multi with previous LSCS	>10 weeks	<2.5	Vacuum Delivery	No Complications
236	5751	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
237	5753	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
238	5756	Control	Normal	23.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
239	5758	Control	Normal	22.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
240	5759	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
241	5761	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
242	5763	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
243	5765	Control	Normal	29.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
244	5767	Control	Normal	22.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	Preterm Labour
245	5769	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
246	5771	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
247	5773	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
248	5775	Control	Normal	26.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
249	5777	Control	Normal	28.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
250	5779	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
251	5781	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
252	5783	Control	Normal	26.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
253	5785	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	LSCS	IUGR
254	5786	Control	Normal	21.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
255	5787	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
256	5791	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
257	5793	Control	Normal	24.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Preterm Labour
258	5795	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Forceps Delivery	No Complications
259	5796	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications

260	5799	Control	Normal	29.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
261	5802	Control	Normal	28.0	Primigravida	>10 weeks	<2.5	LSCS	Oligohydramnios
262	585	Control	Normal	23.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
263	5807	Control	Normal	26.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Low Birth weight
264	589	Control	Normal	31.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
265	5813	Control	Normal	22.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
266	5815	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
267	5816	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
268	5817	Control	Normal	24.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
269	5819	Control	Normal	28.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
270	5822	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
271	5828	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
272	5824	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
273	5829	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
274	5833	Control	Normal	22.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
275	5835	Control	Normal	25.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
276	5837	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
277	5839	Control	Normal	23.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
278	5842	Control	Normal	24.0	Primigravida	>10 weeks	<2.5	LSCS	IUGR
279	5845	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
280	5847	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
281	5849	Control	Normal	18.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
282	5852	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
283	5855	Control	Normal	26.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
284	5857	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
285	5858	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour
286	5861	Control	Normal	22.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
287	5864	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Forceps Delivery	No Complications
288	5865	Control	Normal	25.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
289	5867	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	Oligohydramnios
290	5869	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
291	5871	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
292	5872	Control	Normal	28.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
293	5874	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
294	5878	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
295	5879	Control	Normal	28.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
296	5881	Control	Normal	25.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	IUGR
297	5883	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications

298	5884	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
299	5886	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
300	5888	Control	Normal	26.0	Primigravida	>10 weeks	<2.5	LSCS	Preterm Labour
301	5891	Control	Normal	28.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
302	5893	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
303	5894	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
304	5897	Control	Normal	18.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
305	5899	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
306	5911	Control	Normal	19.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
307	5914	Control	Normal	18.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
308	5916	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
309	5918	Control	Normal	24.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
310	5922	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
311	5924	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	LSCS	Oligohydramnios
312	5926	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
313	5927	Control	Normal	26.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	Low Birth weight
314	5929	Control	Normal	24.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
315	5931	Control	Normal	29.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
316	5932	Control	Normal	28.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
317	5934	Control	Normal	27.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
318	5936	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
319	5938	Control	Normal	28.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
320	5939	Control	Normal	29.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
321	5942	Control	Normal	22.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
322	6945	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
323	5946	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
324	5947	Control	Normal	30.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
325	5948	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
326	5951	Control	Normal	28.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
327	5953	Control	Normal	26.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Vacuum Delivery	No Complications
328	5955	Control	Normal	21.0	Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
329	5956	Control	Normal	25.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
330	5958	Control	Normal	23.0	Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
331	5963	Control	Normal	22.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	LSCS	No Complications
332	5961	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
333	5966	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
334	5969	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
335	5971	Control	Normal	27.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Low Birth weight

336	5972	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
337	5974	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
338	5976	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
339	5978	Control	Normal	18.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
340	5979	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
341	5981	Control	Normal	25.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
342	5983	Control	Normal	23.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Low Birth weight
343	5985	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
344	5987	Control	Normal	31.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	NA	Spontaneous Miscarriage
345	5989	Control	Normal	22.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
346	5991	Control	Normal	26.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
347	5993	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
348	5995	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
349	5997	Control	Normal	28.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
350	6003	Control	Normal	25.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
351	6008	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
352	6010	Control	Normal	22.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
353	6012	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	IUGR
354	6015	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
355	6017	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
356	6019	Control	Normal	20.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
357	6021	Control	Normal	23.0	Multi with previous LSCS	>10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
358	6023	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
359	6025	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
360	6027	Control	Normal	28.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
361	6029	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
362	6034	Control	Normal	22.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	IUGR
363	6036	Control	Normal	18.0	Primigravida	<10 weeks	<2.5	LSCS	Oligohydramnios
364	6038	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour
365	6041	Control	Normal	19.0	Primigravida	>10 weeks	<2.5	Vacuum Delivery	Gestational Diabetes Mellitus
366	6045	Control	Normal	24.0	Multi with previous LSCS	<10 weeks	<2.5	Vacuum Delivery	No Complications
367	6048	Control	Normal	22.0	Primigravida	>10 weeks	<2.5	Forceps Delivery	Low Birth weight
368	6052	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
369	6054	Control	Normal	28.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
370	6058	Control	Normal	26.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
371	6061	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
372	6063	Control	Normal	18.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
373	6065	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications

374	6067	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
375	6072	Control	Normal	21.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
376	6074	Control	Normal	20.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
377	6077	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
378	6079	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	LSCS	Low Birth weight
379	6082	Control	Normal	27.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	IUGR
380	6084	Control	Normal	21.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
381	6087	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
382	6089	Control	Normal	20.0	Primigravida	<10 weeks	<2.5	LSCS	Preeclampsia
383	6091	Control	Normal	26.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
384	6093	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour
385	6095	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
386	6097	Control	Normal	22.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
387	6104	Control	Normal	22.0	Primigravida	>10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
388	6108	Control	Normal	25.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
389	6112	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Forceps Delivery	No Complications
390	6114	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
391	6117	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
392	6119	Control	Normal	22.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
393	6122	Control	Normal	26.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
394	6125	Control	Normal	27.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
395	6127	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
396	6129	Control	Normal	28.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
397	6131	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
398	6133	Control	Normal	19.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
399	6135	Control	Normal	22.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
400	6137	Control	Normal	23.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
401	6139	Control	Normal	21.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
402	6141	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
403	6143	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
404	6145	Control	Normal	20.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
405	6149	Control	Normal	22.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
406	6152	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
407	6157	Control	Normal	25.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
408	6162	Control	Normal	27.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
409	6164	Control	Normal	25.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	IUGR
410	6165	Control	Normal	21.0	Primigravida	<10 weeks	<2.5	LSCS	Gestational Diabetes Mellitus
411	6168	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications

412	6173	Control	Normal	20.0		Primigravida	<10 weeks	<2.5	LSCS	Preeclampsia
413	6176	Control	Normal	21.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
414	6181	Control	Normal	28.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
415	6185	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
416	6189	Control	Normal	20.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
417	6192	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
418	6195	Control	Normal	24.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Low Birth weight
419	6197	Control	Normal	21.0		Primigravida	>10 weeks	<2.5	Vacuum Delivery	No Complications
420	6199	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
421	6202	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
422	6205	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
423	6210	Control	Normal	27.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
424	6213	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
425	6217	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
426	6221	Control	Normal	18.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
427	6225	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
428	6227	Control	Normal	25.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Vacuum Delivery	Preterm Labour
429	6229	Control	Normal	23.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
430	6232	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
431	6235	Control	Normal	26.0		Multi with previous LSCS	>10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
432	6237	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
433	6241	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
434	6244	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
435	6246	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	Oligohydramnios
436	6249	Control	Normal	21.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
437	6252	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
438	6255	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
439	6257	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
440	6259	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
441	6261	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
442	6263	Control	Normal	28.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	IUGR
443	6265	Control	Normal	29.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
444	6268	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
445	6271	Control	Normal	21.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	Preterm Labour
446	6273	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
447	6275	Control	Normal	30.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
448	6277	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
449	6281	Control	Normal	28.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Vacuum Delivery	No Complications

450	6285	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
451	6289	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
452	6292	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
453	6295	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
454	6297	Control	Normal	29.0		Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
455	6299	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
456	6302	Control	Normal	23.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
457	6305	Control	Normal	22.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
458	6307	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
459	6309	Control	Normal	18.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
460	6311	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
461	6315	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
462	6317	Control	Normal	22.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
463	6321	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
464	6327	Control	Normal	20.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
465	6329	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
466	6331	Control	Normal	18.0		Primigravida	<10 weeks	<2.5	LSCS	Oligohydramnios
467	6335	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	LSCS	IUGR
468	6338	Control	Normal	20.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
469	6342	Control	Normal	21.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
470	6347	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Forceps Delivery	Low Birth weight
471	6349	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	NA	Spontaneous Miscarriage
472	6355	Control	Normal	23.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
473	6358	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
474	6362	Control	Normal	20.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
475	6367	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
476	6371	Control	Normal	24.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
477	6374	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
478	6377	Control	Normal	28.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	Preeclampsia
479	6379	Control	Normal	31.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
480	6383	Control	Normal	27.0		Primigravida	>10 weeks	<2.5	LSCS	Low Birth weight
481	6385	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	IUGR
482	6389	Control	Normal	25.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
483	6391	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
484	6394	Control	Normal	24.0		Primigravida	>10 weeks	<2.5	Vacuum Delivery	Oligohydramnios
485	6397	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
486	6398	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
487	6401	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour

488	6408	Control	Normal	26.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
489	6412	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
490	6414	Control	Normal	18.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
491	6417	Control	Normal	22.0	Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
492	6421	Control	Normal	18.0	Primigravida	>10 weeks	<2.5	Forceps Delivery	No Complications
493	6423	Control	Normal	22.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
494	6426	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
495	6428	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	LSCS	Preeclampsia
496	6431	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
497	6433	Control	Normal	20.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	IUGR
498	6435	Control	Normal	19.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
499	6438	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
500	6439	Control	Normal	24.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
501	6441	Control	Normal	20.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
502	6446	Control	Normal	23.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	Preterm Labour
503	6449	Control	Normal	21.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
504	6451	Control	Normal	20.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Oligohydramnios
505	6455	Control	Normal	21.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
506	6458	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
507	6464	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
508	6468	Control	Normal	21.0	Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
509	6473	Control	Normal	18.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
510	6485	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
511	6487	Control	Normal	25.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
512	6492	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
513	6496	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
514	6511	Control	Normal	31.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
515	6516	Control	Normal	22.0	Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
516	6522	Control	Normal	26.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
517	6528	Control	Normal	27.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
518	6531	Control	Normal	24.0	Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
519	6539	Control	Normal	28.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
520	6545	Control	Normal	25.0	Primigravida	>10 weeks	<2.5	LSCS	No Complications
521	6548	Control	Normal	19.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
522	6554	Control	Normal	22.0	Primigravida	<10 weeks	<2.5	LSCS	No Complications
523	6561	Control	Normal	23.0	Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
524	6569	Control	Normal	20.0	Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
525	6574	Control	Normal	23.0	Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications

526	6578	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
527	6586	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
528	6591	Control	Normal	22.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
529	6598	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	Preeclampsia
530	6661	Control	Normal	18.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
531	6607	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
532	6611	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
533	6618	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
534	6623	Control	Normal	28.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
535	6627	Control	Normal	31.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
536	6631	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
537	6638	Control	Normal	28.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
538	6642	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
539	6647	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
540	6653	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
541	6659	Control	Normal	22.0		Multi with previous LSCS	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
542	6664	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
543	6667	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
544	6672	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
545	6679	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
546	6682	Control	Normal	18.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
547	6689	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
548	6691	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
549	6698	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
550	6712	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
551	6719	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	IUGR
552	6723	Control	Normal	20.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Gestational Diabetes Mellitus
553	6725	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
554	6731	Control	Normal	24.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
555	6738	Control	Normal	27.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
556	6742	Control	Normal	26.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
557	6747	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Low Birth weight
558	6753	Control	Normal	20.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
559	6758	Control	Normal	20.0		Primigravida	>10 weeks	<2.5	LSCS	No Complications
560	6762	Control	Normal	21.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
561	6763	Control	Normal	23.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
562	6765	Control	Normal	21.0		Multi with previous LSCS	<10 weeks	<2.5	LSCS	No Complications
563	6772	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	Forceps Delivery	No Complications

564	6777	Control	Normal	22.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	Preeclampsia
565	6781	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	Low Birth weight
566	6785	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	LSCS	Preterm Labour
567	6786	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
568	6792	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	IUGR
569	6798	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	NA	Spontaneous Miscarriage
570	6804	Control	Normal	22.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
571	6809	Control	Normal	20.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
572	6812	Control	Normal	27.0		Multi with previous LSCS	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
573	6814	Control	Normal	25.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
574	6817	Control	Normal	21.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
575	6825	Control	Normal	25.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
576	6828	Control	Normal	23.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
577	6834	Control	Normal	26.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
578	6837	Control	Normal	31.0		Multi with previous LSCS	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
579	6839	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
580	6841	Control	Normal	26.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	LSCS	No Complications
581	6845	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	LSCS	Oligohydramnios
582	6847	Control	Normal	24.0		Primigravida	>10 weeks	<2.5	LSCS	Low Birth weight
583	6852	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	IUGR
584	6857	Control	Normal	25.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
585	6863	Control	Normal	19.0		Primigravida	>10 weeks	<2.5	LSCS	Preterm Labour
586	6867	Control	Normal	22.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	LSCS	No Complications
587	6869	Control	Normal	23.0		Multi with previous LSCS	<10 weeks	<2.5	Vacuum Delivery	No Complications
588	6873	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Forceps Delivery	No Complications
589	6875	Control	Normal	28.0		Multi gravida with previous normal delivery	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
590	6879	Control	Normal	28.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications
591	6883	Control	Normal	27.0		Primigravida	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
592	6887	Control	Normal	28.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	No Complications
593	6892	Control	Normal	25.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
594	6895	Control	Normal	19.0		Primigravida	<10 weeks	<2.5	Vacuum Delivery	No Complications
595	6902	Control	Normal	24.0		Multi gravida with previous normal delivery	<10 weeks	<2.5	Normal Vaginal Delivery	Preterm Labour
596	6907	Control	Normal	22.0		Multi with previous LSCS	<10 weeks	<2.5	NA	Spontaneous Miscarriage
597	6913	Control	Normal	26.0		Primigravida	>10 weeks	<2.5	Normal Vaginal Delivery	No Complications
598	6918	Control	Normal	28.0		Primigravida	<10 weeks	<2.5	LSCS	Preeclampsia
599	6923	Control	Normal	26.0		Primigravida	<10 weeks	<2.5	LSCS	No Complications
600	6925	Control	Normal	21.0		Multi with previous LSCS	>10 weeks	<2.5	LSCS	No Complications

S.no	Sub group	T4	REPEAT TSH 16 WEEKS	REPEAT TSH 20 weeks	REPEAT TSH 32 weeks	REPEAT T4 16 WEEKS	REPEAT T4 20 weeks	REPEAT T4 32 weeks	ANTIBODIES2 16 WEEKS	ANTIBODIES2 20 WEEKS	ANTIBODIES2 32 WEEKS	TREATMENT
1	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
2	HYPOTHYROIDIM	Normal	3.0-4.2									2.0
3	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
4	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
5	HYPOTHYROIDIM	Increased	4.2-10	3.0-4.2	3.0-4.2							2.0
6	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
7	HYPOTHYROIDIM	Increased	4.2-10	3.0-4.2	<3.0							2.0
8	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
9	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
10	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							2.0
11	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
12	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
13	HYPOTHYROIDIM	Increased	3.0-4.2									2.0
14	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
15	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
16	HYPOTHYROIDIM	Increased	3.0-4.2	3.0-4.2	<3.0							2.0
17	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
18	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
19	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
20	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
21	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
22	HYPOTHYROIDIM	Increased	4.2-10	3.0-4.2	<3.0							2.0
23	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
24	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
25	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
26	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
27	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0
28	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
29	HYPOTHYROIDIM	Increased	4.2-10	3.0-4.2	<3.0							2.0
30	HYPOTHYROIDIM	Normal	3.0-4.2	3.0-4.2	<3.0							2.0

31	HYPOTHYROIDIM	Normal	<3.0	<3.0	<3.0							1.0
32	HYPERTHYROIDISM	Decreased	<3.0	<3.0	<3.0	1.0	1	1	NIL	NIL	NIL	1.0
33	HYPERTHYROIDISM	Decreased	<1.0	<3.0	<3.0	3.0	1	1	NIL	NIL	NIL	1.0
34	HYPERTHYROIDISM	Decreased	<1.0			3.0	NA	NA	NIL	NIL	NIL	2.0
35	HYPERTHYROIDISM	Decreased	<3.0	<3.0	<3.0	1.0	1	1	NIL	NIL	NIL	1.0
36	HYPERTHYROIDISM	Decreased	<1.0	<3.0	<3.0	3.0	3	1	NIL	NIL	NIL	1.0
37	HYPERTHYROIDISM	Increased	<3.0	<3.0	<3.0	1.0	1	1	POSITIVE			1.0

