



PROPORTION OF HIGH RISK PREGNANCIES ATTENDING OBSTETRICS AND GYNAECOLOGY OPD IN A TERTIARY HEALTHCARE CENTRE IN TRIVANDRUM, KERALA

Obstetrics & Gynaecology

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ABSTRACT

High risk pregnancy is defined as pregnancy complicated by factors that caused risk to the mother or foetus. High risk complications occur in only 6% to 8% of all pregnancies. Study was conducted to estimate the proportion of high risk pregnancies attending Obstetrics and Gynaecology OPD in a tertiary health care centre in Trivandrum, Kerala and To classify pregnancy as high, moderate and low risk based on Modified Coopland's scoring system. The current study shows the proportion of high risk pregnancies attending the OBG OPD of a tertiary health care was found to be 9%. Even though the numbers are yet to be alarming it poses unfavourable obstetric and neonatal outcomes. Thus demonstrating the need of more intensive patient education and follow up.

KEYWORDS

High risk pregnancy, Modified Coopland's scoring system, Kerala

INTRODUCTION

All pregnancies carry risks. A high risk pregnancy is one that involves increased health risk for the pregnant person, foetus or both. Certain health conditions and age (being over 35 or under 17 when pregnant), lifestyle choices, maternal health problems like high blood pressure, obesity, diabetes, epilepsy, thyroid disease, heart or blood disorders, poorly controlled asthma, infections and multiple pregnancy can make a pregnancy high risk. (1) Some pregnancies become high risk as they progress while some women are at increased risk for complications even before they get pregnant for a variety of reasons. Majority of maternal deaths are due to high risk pregnancies. (3) Diabetes is the most common medical complication of pregnancy. Also gestational hypertension and its complications like pre eclampsia and eclampsia share equal risk. In 2019, almost 3 in 10 women were considered obese prior to becoming pregnant. Obese women and their foetuses are predisposed to numerous pregnancy-related complications and to long term morbidity and mortality. Other examples include an unusual placenta position, foetal growth less than the 10th percentile for gestational age (foetal growth restriction) and rhesus (Rh) sensitization - a potentially [9] serious condition that can occur when your blood group is Rh negative and your baby's blood group is Rh positive. (4) High risk complications occur in only 6% to 8% of all pregnancies. These complications can be serious and require special care to ensure the best possible outcome. Getting early and thorough prenatal care is critical. It's the best way to detect and diagnose a high-risk pregnancy. Many people who have high risk pregnancies don't experience any problems and deliver healthy babies. But they may be at a higher risk for health problems in the future, including: complications during future pregnancies, postpartum depression, high blood pressure, cardiovascular disease, type 2 diabetes, stroke. (1)

Modified Coopland's high risk scoring for pregnancy is a tool used to group the risk pregnancy according to its severity by adding the value of all the high risk factors. The predictor variables were reproductive history consisted of age, parity, and previous bad obstetric history, the medical and surgical conditions of the mother, and the present pregnancy complications. The numerical values were assigned to each of the high-risk factors based on their severity. The summed up total score determined whether the pregnancy was low risk, moderate risk or high risk, accordingly and was categorized as: Low risk with the score of 0 to 2, moderate risk with the score of 3 to 6 and high risk with the score ≥ 7 . (8)

Methods

A record based cross sectional study was conducted on all antenatal women attending OPD of Dr.SMCSI MCH Karakonam, Trivandrum district from August to September 2023 after getting approval from Institutional Ethics Committee. The average patient load in gynaecology OPD is 160 per day. Records with inadequate details required for our study were excluded. Sample size was 201. Non-probability sampling was done and details of every consecutive antenatal mothers were taken till the sample size was reached. Data

was collected after getting clearance from Human Ethics Committee, from the records of antenatal women who attended obstetrics and gynaecology OPD using a predesigned, pre tested, semi structured questionnaire. Data was collected from the Obstetrics & Gynaecology OPD only.

All collected data was entered into spread sheet of Microsoft office excel 2019. Data cleaning was done for any errors. Data was analysed using SPSS trial version 26.0. All qualitative data was expressed in frequencies and percentages. Chi square tests were applied where ever necessary

Sample size calculated $n = (Z\alpha/2)^2 pq/d^2$

Where n = sample size p = expected prevalence or proportion $q = 100 - p$

d = relative precision $Z\alpha/2 = 1.96$

$p = 45.9$ $q = 54.1$ $d = 15\%$ of $p = 6.885$ [18]

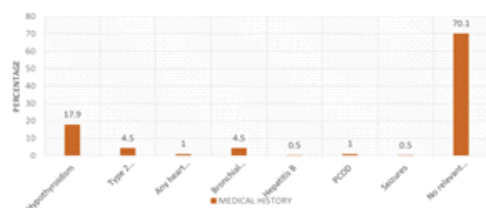
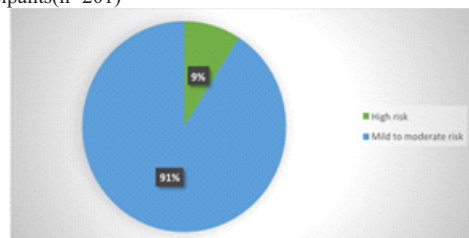
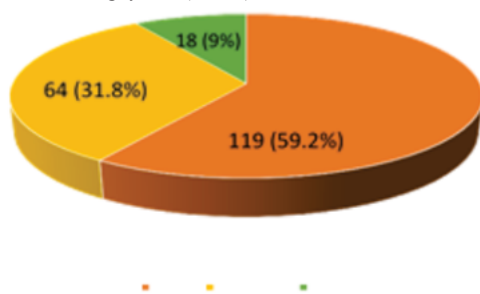
$n = [(1.96)^2 \times 45.9 \times 54.1] / (6.885)^2$

$= 201.1 \approx 201$ A total of 201 participants are included for the survey.

RESULTS

Among the 201 study participants, 43% were in the age group of 21-25 years, 40% were in the age group of 26 - 30 years. Almost half (47.3%) of the study participants were graduates. Majority (73.1%) of the study participants were unemployed and more than a quarter (35.3%) of their husbands were unskilled workers. Almost half (47%) of the study participants belonged to overweight category (BMI > 24.9) and 9% belonged to underweight category (BMI < 18.5). Among the study participants, 34% were of the blood group B+ve and 5% were O-ve. When medical history was enquired among the study participants, 70.1% had no relevant medical history. Among those with known medical history, 17.9% of them had hypothyroidism. Among the study participants, 43% had a family history of type II diabetes mellitus and 10% had a family history of systemic hypertension. Among the study participants, 9% of them belonged to high risk category and the rest of the antenatal mothers belonged to mild to moderate risk category.

Among the study participants, 96.5% were in the age group of 18 - 35 years and rest of them were above the age of 35 years. More than half of the study participants were primi gravida. 14.5% of the study participants had relevant medical or surgical conditions. More than half (69.6%) of the study participants had risk factors associated with their past obstetric history. Almost half (43.3%) of the study participants had risk factors in their present pregnancy in which 13.4% had anaemia, 6% had isoimmunization, 3.5% had systemic hypertension and 15.4% were known case of gestational diabetes mellitus. Among the antenatal mothers, 11.1% were in the high risk age category and this association was found to be statistically significant ($p = 0.004$). 33% of the high risk mothers belonged to B+ve blood group and this association was found to be statistically significant ($p = 0.049$).

Figure 1: Distribution of study participants based on medical history**Figure 2-** Proportion of high risk pregnancies among study participants(n=201)**Figure 3-** Distribution of study participants based on Modified Cooplund's scoring system (n=201)

DISCUSSION

In our study of high risk pregnancies, among 201 samples collected, 9% were in the high risk category, 31% were in the moderate risk category and 59% were in the low risk category according to Modified Cooplund's scoring system. The proportion of high risk pregnancies were slightly more in the study by Chate and Metgud, where 13.7% had high risk, 45.9% had moderate risk, 40.4% had low risk based on same scoring system.(8) In a similar study of high risk pregnancies by Kalaivani S, Saradhambal M & RevathyD,conducted in Chettinad Hospital and Research Institute Kanchipuram district among 100 pregnant women, 25% were high risk, 20% were moderate risk and 55% were low risk with their moderate risk percentage being lower than that of high risk.(9) In our study, 96% of the study participants were in the age group 18-35 years, compared to 81.6% in the study by Chate and Metgud.56%of the samples had normal BMI in our study, a higher value was observed (64.6%) in the study by Chate and Metgud.(8) 9% of the samples had Rh negative blood group which was lower as per the study by Chate and Metgud,13.6%.(8) 50 % of the participants were primi gravida which was higher than in the study by Chate and Metgud(35.4%) .(8) In our study the most prevalent risk factors in the past pregnancy were abortion(21.3%), history of previous LSCS (20.4%), gestational diabetes mellitus(11.4%), babies with birth weight less than 2.5 kg and more than 4 kg (6%), followed by gestational hypertension (5.5%).In a similar study conducted by O A Muhammad et al, the prevalent risk factors in the past pregnancies follows the order- history of previous LSCS(55%), abortion(35.4%), latepregnancy(16%).(7) In our study almost half (43.3 %) of the study participants had risk factors in their present pregnancy in which 15.4% of the participants have gestational diabetes mellitus, making it the most serious risk factor. It was followed by anaemia(13%), Rh isoimmunisation(6%)and systemic hypertension (3.5%). And when compared with the study by Chate and Metgud, a higher percentage of anaemia was observed(50.3%).(8) Common medical risk factors present were hypothyroidism(17.9%), type II diabetes mellitus(4.5%) and bronchial asthma(4.5%) in our study compared to anaemia(31.09%) and thyroid disorder(13.09%)in the study among antenatal women by Sonia Dahiya et al.(10)

worker to monitor the high risk mother more efficiently. And Psychological counselling and education of the mother can help them to know more about the situation and get aid early.

This study was confined to only one tertiary health centre and the study period was short

CONCLUSION

There is an increasing trend of high risk pregnancies in our country. The study of various factors leading to high risk pregnancy is relevant.Among 201 antenatal mothers, 9% were high risk pregnancies, 31% were moderate risk and 59% were low risk, according to Modified Cooplund's Scoring System. Many of the women were having multiple risk factors of pregnancy in current and previous pregnancies and major risk factors identified were helpful for a proactive antenatal care and safe motherhood and delivery.

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The scope of this study proved we could improve the screening, non invasive tests and diagnostic approach which can help the healthcare