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Research Article

Association Between Risk Factors and Still Birth in Pregnancy in Tertiary Care Center

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ABSTRACT

Introduction: Stillbirth is a sensitive indicator of maternal care during the antepartum and intrapartum period. Globally around 2.6 million stillbirths occurred in 2019 out of which India accounting for 22%. Aims and **Objectives**: 1.To correlate the association between stillbirth in pregnancy and risk factor in tertiary care center.2.To assess the modifiable risk factors and propose preventable strategies. **Methods**: A Hospital based Retrospective clinical study carried out in Department of Obstetrics and Gynaecology of Sapthagiri Institute of Medical Sciences and Research Centre, Bengaluru for three years from October 2018-October 2021. **Results**: Young primigravida's were more at risk of having a stillbirth. Obesity and smoking did not play a major in this study. Majority of the cases were pre-term 78.18%. Hypertensive disorder in pregnancy 36.36% was the leading cause of fetal death. Antepartum hemorrhageand anemia accounted for 14.54%, Rh negative pregnancy and endocrine dysfunction accounted for 9% of still birth. None of the cases had any screening strategies done, example: pre-eclampsia, diabetes, or thyroid studies. **Conclusion**: Highest prevalent risk factors associated with stillbirths are hypertension and prematurity. There is a need to provide and assure access to specialized quality antenatal care to pregnant women to control and modify where feasible the risk factors associated with stillbirths. Implementation of available screening strategies especially for hypertensive disorder in pregnancy and gestational diabetes mellitus will help in modifying fetal and neonatal outcomes.

Key Words: *Still births, risk factors, fetal death.*

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INTRODUCTION

Stillbirth is defined as a baby born with no signs of life at or after 28 weeks of gestation (WHO). It also contributes to major part of perinatal death. Globally 2.6million stillbirth occur of which 98% occur in developing countries[1]. Recently Government of India has set a target to bring down the stillbirth rate to single digit by 2025[2]. In response to the commitment to the 67th world health assembly held in May 2014 new born action plan (INAP) has been launched in India to end preventable newborn deaths and stillbirths by 2030[3,4].

Globally India has been ranked first in absolute number of stillbirths[5]. Sample registration system (SRS) of India has estimated stillbirth rate to be only 5/1000 live births in 2013[6] but in Blencowe et al[7] has estimated it to be 23/1000 live births.

Most stillbirths are preventable and the interventions to reduce then are already well established. There is lack of studies to identify maternal risk factors for stillbirth. The problem of large number of stillbirths required urgent need of policy makers and researchers. The present study aims to identify modifiable maternal risk factors.

AIMS AND OBJECTIVES

1. To correlate the association between stillbirth in pregnancy and risk factor in tertiary care center.
2. To assess the modifiable risk factors and propose preventable strategies.

METHODS

A Hospital based Retrospective clinical study carried out in Department of Obstetrics and Gynecology of Sapthagiri Institute of Medical Sciences and Research Centre, Bengaluru for three years from October 2018-October 2021. All admitted pregnant women in OBG department with gestational age >28weeks (confirmed by LMP/USG) diagnosed of having stillbirth (confirmed by USG) was included in the study. Data was collected from the case records and notes

written by the obstetrician. All the data thus collected were entered into MS Excel sheet using SSPS version 20.0 software. Results were expressed as frequency, percentage, mean.

RESULTS

During my study period 55 still birth occurred in our hospital.

Table 1 – Age wise distribution of cases

	NUMBER	PERCENTAGE
20-25 years	29	52.7%
26-30 years	15	27.27%
31-35 years	7	12.7%
>35 years	4	7.27%

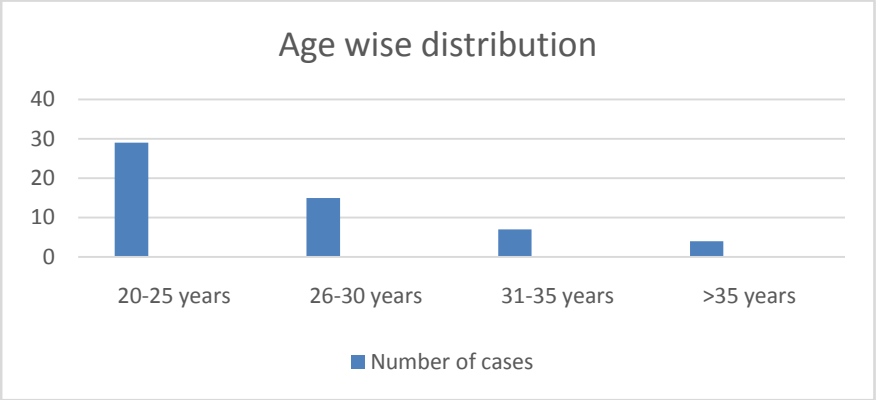

Figure 1 – Age wise distribution of cases

Majority of patients (79.97%) were in age group of 20 to 30 years, followed by 12.7% cases between 31-35 years age group.

Table 2 – Gravida wise distribution of cases

Gravida	NUMBER	PERCENTAGE
1	22	40%
2	20	36.36%
3	10	18.18%
4	3	5.4%

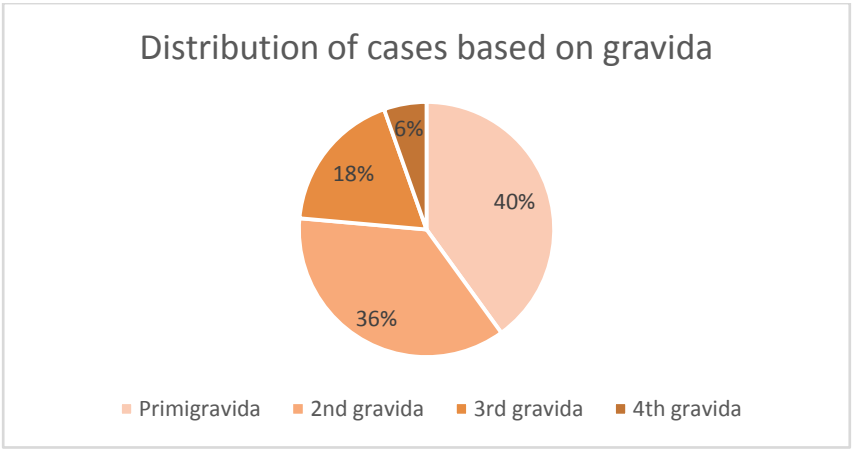

Figure 2 – Gravida wise distribution of cases

Majority of the women were primigravida (40%) followed by 2nd gravida (36.36%).

Table 3 – Distribution of cases based on weeks of gestation

PERIOD OF GESTATION	NUMBER	PERCENTAGE
Pre term	43	78.18%
Term	11	20%
Post-dated	1	1.81%

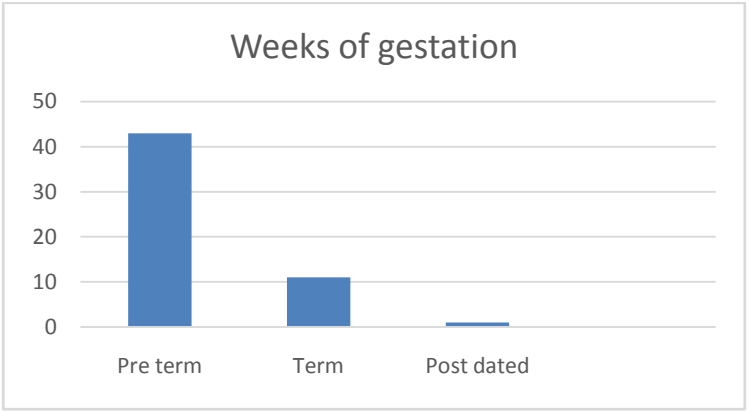

Figure 3 – Distribution of cases based on weeks of gestation

Majority of the stillbirth occurred in preterm accounting for 78.1%.

Table 4 – Distribution of cases based on mode of delivery

PERIOD OF GESTATION	NUMBER	PERCENTAGE
Vaginal delivery	45	81.81%
Caesarean section	8	14.54%
Instrumental delivery	2	3.6%

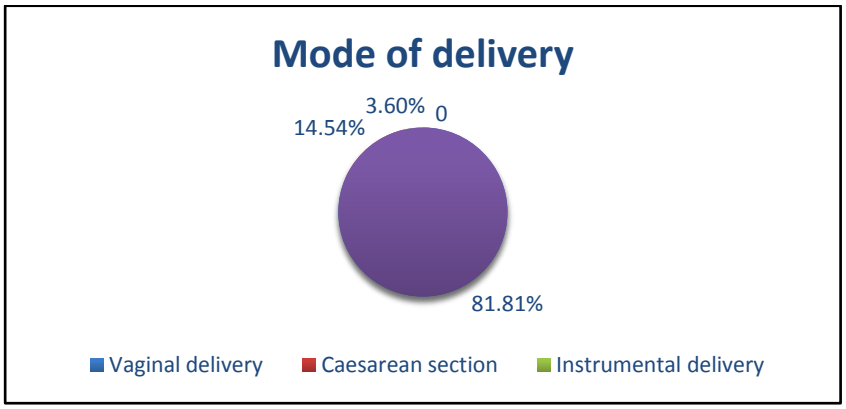

Figure 4 – Distribution of cases based on mode of delivery

Majority of the delivery occurred vaginally (81.81%) followed by caesarean section (14.54%).

Table 5 – Distribution of cases based on maternal risk factors

RISK FACTORS	NUMBER	PERCENTAGE
No risk factor	18	32.72%
Hypertensive disorder in pregnancy	20	36.36%
Antepartum haemorrhage	9	16.36%
Gestational/Overt diabetes mellitus	2	3.6%
Anaemia	4	7.27%
PPROM/PROM	3	5.45%
Rh negative	5	9%
Hypothyroidism	5	9%

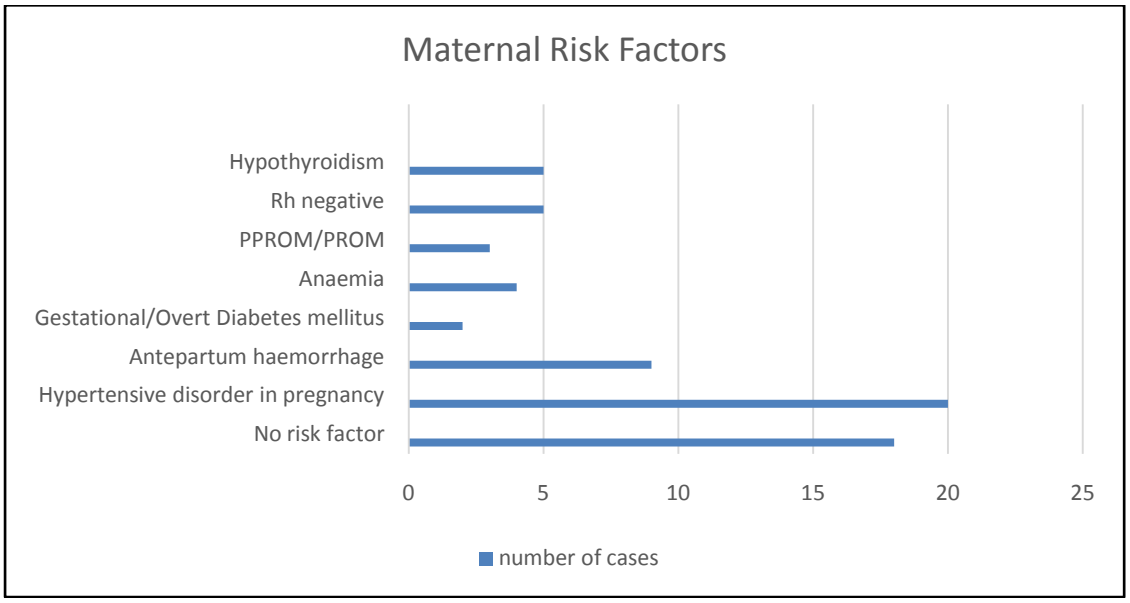

Figure5 – Distribution of cases based on maternal risk factors

Majority of the maternal risk factor for stillbirth in this was hypertensive disorder in pregnancy 36.36% followed by unknown etiology 32.72%.

Table 6 – Distribution of cases based on type of still birth

TYPE OF STILLBIRTH	NUMBER	PERCENTAGE
Fresh stillbirth	39	70.9%
Macerated stillbirth	16	29%

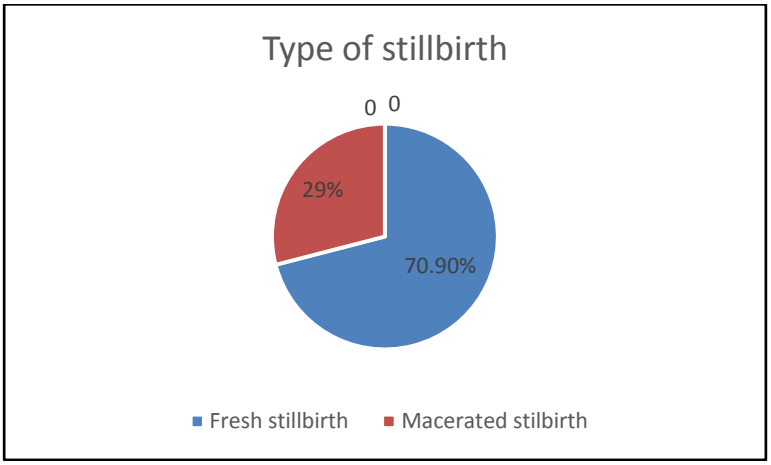

Figure 6 – Distribution of cases based on type of still birth

Majority were fresh stillbirth 70.9% followed by macerated stillbirth 29%.

DISCUSSION

Stillbirth is a sensitive indicator of maternal care during the antepartum and intrapartum period. Stillbirth may occur at any age from menarche to menopause. A study by Neogi et al[8] found maximum cases in age group of 20-30 years which corroborated with the present study (79.9%).

In this study majority of stillbirth were seen in primigravida women. According to Neogi et al[8] study stillbirth in primigravida was 43.5% and in multigravida was 56.5%.

Majority of stillbirth occurred before 37 weeks of gestation in my study(78.1%) which was similar to Neogi et al[8] study (75.3%) and Newtonraj et al[9] study(61.3%).

In this study majority of women underwent vaginal delivery (81.8). In this study major risk factor for stillbirth was hypertensive disorder in pregnancy followed by unknown etiology. Other important risk factor was antepartum haemorrhage hypothyroidism, Rh negative status and anemia. Fresh stillbirth was 70.9% in this study.

CONCLUSION

Highest prevalent risk factors associated with stillbirths are hypertension and prematurity. Antenatal stillbirths are more common than intrapartum stillbirths. Proper use of oxytocin during labour might reduce the risk of stillbirth.

There is a need to provide and assure access to specialized quality antenatal care to pregnant women to control and modify where feasible the risk factors associated with stillbirths so we can achieve the goal of single digit stillbirth rate by 2025. Implementation of available screening strategies especially for hypertensive disorder in pregnancy and gestational diabetes mellitus will help in modifying fetal and neonatal outcomes.

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