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RESEARCH ARTICLE

HIGH RISK PREGNANCIES AND THEIR CLINICAL OUTCOMES

[1,*]Dr. Pooja Desai and [2]Dr. Bhavesh B. Airao

[1]2nd Year Resident, Obstetrics and Gynecology, CU Shah Medical College, Gujarat, India
[2]Professor, Obstetrics and Gynecology, C U Shah Medical College, Gujarat, India

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ABSTRACT

Introduction: A 'high risk' pregnancy (HRP) state has been associated with an adverse perinatal outcome. There is so much data on the occurrence of HRP in Gujarat. Such information is critical for planning interventions in the state to reduce the maternal mortality rate, infant mortality rate and the incidence of low birth weight babies. **Objective:** The objectives of the study were to investigate the incidence of HRP at a tertiary care referral hospital, and to study the short term in - hospital' outcomes of these HRP, using the *'normal risk'* pregnancies as a comparison group. We also examined the relations of select predictor variables to maternal and fetal outcomes. The objectives of the study were to:

- Determine the perinatal mortality and assess perinatal morbidity of the fetuses of high-risk mothers.
- Study the effect of current obstetrical intervention on perinatalmortality and morbidity on fetuses of high-risk pregnancies.
- Assess the admission to NICU among neonate delivered to high risk pregnancies.

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INTRODUCTION

The C.U. Shah Medical College and Hospital at Surendranagar is a tertiary care center for maternal and child health (MCH) care. It is the chief referral center for MCH services in this region. There were 1,250 deliveries in the hospital during 2018.

Sampling Strategy: From 1st December, 2017 to 30 november, 2018 (a period of 1 year), 1250 patients were admitted to the labour room with active labour pain. The data of surgical interventions were collected from the post-operative wards. From this group of 1250 cases, 500 patients were included in the study which formed the study sample.

MATERIAL AND METHODS

All the patients who were admitted in the labour room from 8 A.M. to 5 P.M. were personally interviewed by the investigator. Both the mother and the newborn were followed up for a period of 7 - 10 days and their health outcomes were recorded. The health outcomes included were:-

- Maternal mortality & morbidity (abnormal types of deliveries)
- Perinatal mortality & the incidence of low birth weight babies.

Inclusion criteria

Pregnancy was considered as high risk if any one of the following criterions was met.

- preterm birth
- previous one or more caesarian section
- hypertension in pregnancy
- history of chronic medical disorders like severe anaemia, diabetes, thyroid disorders
- Antipartum haemorrhage
- Twins
- Pregnancy with HIV/HBsAg

Exclusion criteria

- Pregnancy< 20 weeks of gestation
- Full term pregnancy without any complications

DISCUSSION

Pregnancy and childbirth constitute a set of important and specific risks to women's health.

Corresponding author: **Dr. Pooja Desai,**
2nd Year Resident, Obstetrics and Gynecology, CU Shah Medical College, Gujarat, India.

Table 1. Case distribution according to gestational age

MATERNALCO-MORBIDITIES	LIVE BIRTH		STILL BIRTH			ENDD	TOTAL	
		N	%	N	%		N	%
ANEMIA		300	60	13	2.6	1	333	66.6
G.HTN +PREECLAMPSIA	263	52.6	18	3.6	4	281		56.5
ECLAMPSIA		42	8.4	8	1.6	2	50	10
GDM		2	0.4	0	0	0	2	0.4
PRETERM		197	39.4	10	2	28	207	41.4
OLIGO/POLY		52	10.4	4	0.8	4	56	11.2
APH(PREVIA/ABRUPTIO)	63	12.6	5	1	3	68	13.6	
TWINS		26	5.2	0	0	2	26	8.2
HEART DISEASE IN PREG.	9	1.8	0	0	0	9	1.8	
HIV		54	10.8	0	0	0	54	10.8
HBSAG		72	14.4	0	0.00%	0	73	14.4

Table 2: case distribution according to maternal age

MATERNAL AGE	LIVE BIRTH		STILL BIRTH		ENDD	TOTAL		
	N	%	N	%	N	%	N	%
<20	62	12.4	9	1.8	4	0.8	71	14.2
21-25	191	38.2	27	5.4	1	0.2	218	43.6
26-30	99	19.8	25	5	2	0.4	124	24.8
>30	66	13.2	21	4.2	3	0.6	87	17.4

Table 3. Case distribution according to gestational age

GESTATIONAL AGE	N	%
PRETERM	207	41.4
FULLTERM	293	58.6

Table 4. Case distribution according to birth weight

BIRTH WEIGHT		N	%
<2		124	24.8
2-2.4		122	24.4
2.5-2.9		128	25.6
>3		126	25.2

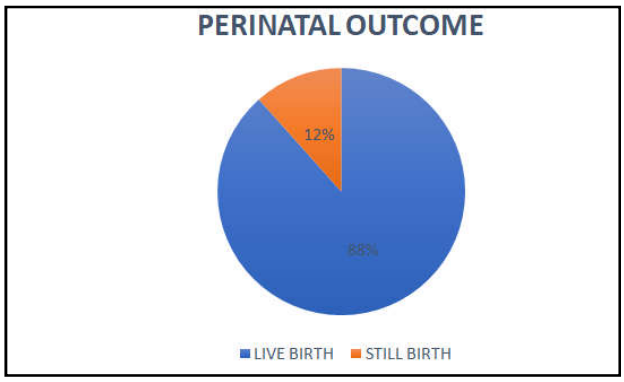

Figure 1. Case distribution according to perinatal outcome

In developing countries the poorly monitored pregnancies greatly jeopardise the health of the mother and the baby. There were 500 study subjects with high risk pregnancy having no known risk factors. Distribution of these risk factors was: Anemia 333(66.6%), history of caesarean section 100 (20%), malpresentation 17 (7.94%), teenage pregnancy 71 (14.2%); pregnancy induced hypertension 281(56.5%), oligohyramnios/ polyhydromnios 56(11.2%), GDM 2(0.4%), twins 26(8.2%) APH (previa/abruptio) 68(13.6%).

The occurrence of premature (PROM) rupture of membranes and preterm was high in our sample and this probably contributed much to the adverse foetal outcomes. The reasons attributed for this in the literature are cervico-vaginal infection and sexual contact during the last months of pregnancy`. Thefrequency of pregnancy induced hypertension(PIH) was also high in our study and this probably contributed to the adverse outcomes. This condition was found to be more often present among the lower socio-economic group. The results in this study may be explained to the fact that mothers' age 20-29 years were the predominater. In spite of these the relation between maternal age and the outcome of the last pregnancy was statistically in significant. The predominate stillbirths and ENND (9.9%) and (3.7%) were found among the age group 25-29 years, while the least percent of both stillbirths and ENND were found among the age group less than twenty and more than fourty.

Conclusion

- The majority of the mothers in this study were in high reproductive age (20-29 years).
- Maternal illness which affected more to the outcome were PIH, APH, anaemia, on the other hand, common maternal complication during labour were, abnormal lie and presentation (breech) and this to some degree cause the main factor in increasing the C/S rate among study group.
- PMR varies according to the risk factors, it increase with increasing maternal age and illness such as APH, PIH and abnormal lie of the foetus during pregnancy, while prematurity carried least perinatal losses.
- The type of delivery was selected according the risk factor also the outcome was affected by the obstetrical intervention as well as the availability of paediatrician or

skilled persons of the level of labour room, for assessment of the newborn.

- This study proved that, resuscitation is essential procedures that start at the level of labour room.
- Study concluded that, admissions to NICU were efficient and appropriate according to the causes.
- There was strong correlation between risk factors and the outcome, which included, alive birth (88.4%), stillbirth (11.6%) and ENND (2.3%) and this were comparable to the other studies.
- Maternal causes associated with perinatal deaths were APH, severe PIH, abnormal presentation and APH with PIH.
- Birth asphyxia was the major cause of death in our community and occurred in almost two third of the stillbirths and ENND in this study.

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