



MATERNOFETAL OUTCOME IN HIGH RISK PREGNANCIES

Nanankala Swetha*

Final Year Post Graduate Department Of Obstetrics And Gynaecology, Kamineni Institute Of Medical Sciences, narketpally, Nalgonda, 508254.
*Corresponding Author

Sunitha Sudhir

Professor Department Of Obstetrics And Gynaecology, Kamineni Institute Of Medical Sciences, narketpally, Nalgonda, 508254.

ABSTRACT

Introduction: High risk pregnancies have been a major obstetric issue particularly in the era of modern development. This is because of the subjective, objective, social and economic factors. Early intervention would prevent the maternal mortality and morbidity as well as the unfavorable fetal outcomes. **Aim and objectives:** To determine the association of sociodemographic factors and obstetric indices in risk pregnancy, to assess maternal and fetal outcomes in various high risk pregnancies. **Materials and methods:** This is a prospective study done in the Department of obstetrics and gynaecology, Kamineni institute of medical sciences, Marketpally. This study was done by collecting details of pregnant women diagnosed with medical disorders, over a period of 6 months (1st October 2019 to March 31st 2020). **Results:** Among the socio-demographic factors and obstetric indices, gravida, parity and socioeconomic status were found to be significant factors. Hypertensive disorder of pregnancy was most common in the present study group with 50 cases (36%). Hypothyroidism contributed to the second most common disorder (26%). Most of the deliveries were term deliveries (58%), pre term deliveries being 42%. 66% deliveries were Emergency lscs and vaginal deliveries (16%). 57.6% are low birth weights and 1.8% are still births. **Conclusion:** The complications and threat to the health of the mother and fetus are immense during pregnancies particularly associated with medical disorders. Most factors pertaining to risks in pregnancy are preventable. Of particular concern, is the delay in diagnosis. The role of each medical professional in antenatal care is crucial

KEYWORDS : Caesarean Sections, High Risk Pregnancy, Hypertension, hypothyroidism, Younger Primi And Elderly Gravida, Low Birth Weight.

INTRODUCTION

Pregnancy is a state of physiological adaptation which may sometimes turn detrimental to the health of the mother and the newborn [1]. Childbirth sometimes leaves a woman with severe physical or psychological damage [1]. Though most of the pregnancies and child births are uneventful, 15% of them can develop potentially life threatening complications which require skilled care and intervention [1]. Maternal disorders are the ones which complicate the health status of the mother and the neonate [2]. Complications can occur during pregnancy or delivery, which further may affect the health status of mother and fetus [2]. Pre pregnancy life style, proper adolescent nutrition, menstrual hygiene are the basic factors to prevent the medical disorders in pregnancy [3]. These are the major parameters which serve health consequences to both mother and child [4].

High risk pregnancy is identified as a pregnancy in which there is risk of adverse outcome in a mother or baby that is greater than the incidence of that outcome in general population [4]. According to WHO, the global prevalence of high risk pregnancies is reported to be 20% and there is increase in perinatal mortality 28% & morbidity [5]. Identification, rapid assessment, follow up care, appropriate laboratory investigations are required to improve outcome of pregnancy [5].

AIM

- To study materno fetal outcome in high risk pregnancies

OBJECTIVES

- To determine the association of sociodemographic factors and obstetric indices in high risk pregnancy.
- To assess maternal and fetal outcomes in various high risk pregnancies

MATERIALS AND METHODS

- Study type: prospective observational study

- Sample size: 50
- Duration of study: 6 months (October 1st 2019-March 31st 2020)
- Place of study: department of Obstetrics and Gynaecology, Kamineni institute of medical science, Narketpally.

METHODOLOGY

- Had taken written and informed consent from the patient and approval from the Hospital ethics and the subjects with high risk pregnancies were short listed from all pregnant women in department of Obstetrics and Gynaecology, Kamineni institute of medical sciences, Narketpally.
- The criteria considered for the evaluation of high-risk pregnancies were defined as per the guidelines provided by Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)
- A) Severe anemia with hemoglobin level < 7g/dl
- B) Hypertensive disorder in pregnancy (blood pressure > 140/90mmHg)
- C) Hypothyroidism
- D) Gestational diabetes mellitus
- E) twin pregnancy or multiple pregnancy
- F) Younger primi (age < 20 years) or elderly gravida (age > 35 years)
- G) Malpresentations
- H) Low lying placenta or placenta previa
- Outcome of pregnancy was categorised as

Obstetric outcome (Gestational age, Mode of delivery), and neonatal outcome (Birth weight of the child, Status of birth)

INCLUSION CRITERIA

- All pregnant women with high risk pregnancies with gestational age more than 28 weeks.

EXCLUSION CRITERIA

- Pregnant women with less than 28 weeks of gestation.
- Pregnant women with lscs as a sole risk factor

OBSERVATION AND RESULTS

1.DISTRIBUTION OF CASES ACCORDING TO AGE GROUPS

AGE (YRS)	NO OF CASES N=50 (%)
<20	7 (14)
20-25	27 (54)
26-30	9 (18)
31-35	6 (12)
>35	1 (2)

In table no. 1 , majority of cases are within the age group of 20-25 years accounting for 54%. 18% of cases are between 26-30 years.

2.DISTRIBUTION OF CASES ACCORDING TO SOCIO-ECONOMIC STATUS

SOCIOECONOMIC STATUS	NO OF CASES N= 50 (%)	P VALUE
Below poverty line	38 (76)	<0.05
Above poverty line	12 (24)	

In the above table majority of cases are below poverty line i.e 76%, and 24% of cases are above poverty line.

3.DISTRIBUTION OF CASES BASED ON EDUCATIONAL QUALIFICATION

EDUCATIONAL QUALIFICATION	NO OF CASES N=50 (%)
Primary	12(24)
Secondary	18(36)
Post secondary	20(40)

In the above table 40% of cases are having educational qualification of post secondary, 36% are having educational qualification of secondary and 24% are having primary education qualification.

4. DISTRIBUTION OF CASES ACCORDING TO GRAVIDA

GRAVIDA	NO OF CASES N=50(%)	P VALUE
Primigravida	21 (42)	0.25
Multigravida	29 (58)	

In the present study 58% of cases are multigravida, and 42% of cases are primi gravida.

4. DISTRIBUTION OF CASES ACCORDING TO PARITY

PARITY	NO OF CASES N=50 (%)	P VALUE
Nulli parous	25 (50)	0.77
Multi parous	25(50)	

In the present study 50% of cases are nulliparous and 50% of cases are multiparous.

5.DISTRIBUTION OF CASES BASED ON RISK FACTORS

RISK FACTORS	NO OF CASES N=50 (%)
Hypothyroidism	13 (26)
Hypertensive disorder of pregnancy	18 (36)
Malpresentation	3 (6)
Gestational diabetes	7 (14)
Multiple pregnancy	3 (6)
Severe anemia	1 (2)
Younger primi	2 (4)
Elderly primi	2 (4)
Low lying placenta/ Placenta previa	1 (2)

In the above table most of the cases (36%) are having hypertensive disorder of pregnancy, second most common risk factor is hypothyroidism(26%) of cases, followed by gestational diabetes mellitus with 14% of cases.

6.DISTRIBUTION OF CASES ACCORDING TO GESTATIONAL AGE

GESTATIONAL AGE	NO OF CASES N=50 (%)
Pre term (<37wks)	21 (42)
Term (37-42wks)	29 (58)
Post term (> 42wks)	0

In the above table 58% of high risk pregnant women are at term (>37weeks) at the time of delivery and 42% of women delivered their babies preterm(< 37weeks).

7.DISTRIBUTION OF CASES BASED ON MODE OF DELIVERY

MODE OF DELIVERY	NO OF CASES N=50 (%)
Vaginal delivery	9 (18)
Elective lscs	8 (16)
Emergency lscs	33 (66)

66% of the cases with high risk pregnancy underwent emergency lscs, 18% of cases underwent vaginal delivery.

8. DISTRIBUTION OF CASES BASED ON FETAL OUTCOME

STATUS OF BIRTH	NO OF CASES N= 53 (%)
Live birth	52 (98.2)
Still birth	1 (1.8)

The present study shows 1.8% of cases had still birth.

9.DISTRIBUTION OF CASES BASED ON APGAR SCORE

APGAR SCORE	NO OF CASES N=53 (%)
≥7	48 (91.5)
<7	4 (8.5)

91% of the neonates had APGAR ≥7, and 8.5% of the neonates had APGAR <7.

10. DISTRIBUTION OF CASES BASED ON BIRTH WEIGHT OF THE BABY

BIRTH WEIGHT	NO OF CASES N= 52 (%)
Low birth weight (<2.5 kg)	30 (57.6)
Normal birth weight (≥2.5 kg)	23 (42.4)

57.6% of neonates had low birth weight in high risk group, 42.4% of neonates had birth weight of ≥2.5 kgs.

11. DISTRIBUTION OF CASES BASED ON NEONATAL COMPLICATIONS

NEONATAL COMPLICATIONS	NO OF CASES
Neonatal deaths	6 (12%)
Respiratory distress syndrome	5 (10%)
Sepsis	3 (6%)
Hypoglycemia	2 (4%)
Total	16 (32%)

In the above table 32% of cases associated with neonatal complications among them most common being neonatal death accounting for 12%.

12. DISTRIBUTION OF CASES BASED ON NEONATAL COMPLICATIONS,BIRTH WEIGHT & APGAR SCORE

NEONATAL COMPLICATIONS	NO OF CASES	BIRTH WEIGHT		APGAR SCORE	
		<2.5 KG	≥2.5KG	≤7	>7
Neonatal deaths	6 (11.3)	6	0	4	2
Respiratory distress stndrome	5 (9.4)	3	2	0	5

Sepsis	3 (5.6)	2	1	0	3
Hypoglycemia	2 (3.7)	0	2	0	2
No complications	36 (70)	18	18	0	36

Neonatal deaths only associated with neonates with low birth weight (<2.5kgs), other complications like RDS, sepsis, and hypoglycemia were common in neonates with low birth weight.

DISCUSSION:

The present study was done in 50 high risk women to determine the association of sociodemographic factors and obstetric indices in pregnancy and to assess maternal and fetal outcome in various high risk pregnancies. P value is <0.05 for socio economic status, which is significant and found to be independently associated with high risk pregnancies and outcome of pregnancy is unfavourable with, need for caesarean section and low birth weight babies with neonatal complications requiring NICU admissions. Gravida and Parity showed no significance.

In the present study, most of cases are in the age group of 20-25 years (54%), which is comparable to Ashritha Kovvuru et al study (66.2%) [1] and Majella Gilbert Marie et al (55.3%) [2]. In the present of the study population was in extreme age group younger primi and elderly gravida (16%) comparable to Ashritha Kovvuru et al (11.6%) [1].

Most of the cases are multigravida which constitutes 58%, which is similar to Ashritha Kovvuru et al study (59.8%) [1]. Majority of the cases belong to below poverty line constitutes 76% comparable to 84.6% in Ashritha Kovvuru et al study [1] and Majella Gilbert Marie et al (81.4%) [2]. Hypertensive disorder of pregnancy is the most common risk factor among the cases i.e 36% which is similar to Abu-Heija et al study (34%) [3].

Majority of them underwent emergency LSCS i.e 66%, followed by vaginal deliveries (18%), elective LSCS (16%), in contrast to Ashritha Kovvuru et al study with maximum vaginal deliveries (51%) and Majella Gilbert Marie et al (73.9%) [2]. Term deliveries contributed to 58%, preterm deliveries 42%, similar to Ashritha Kovvuru et al study [1]. In contrast to present study 81.9% of cases had term deliveries in Majella Gilbert Marie et al [2].

In the present study, majority are livebirths with 98.2%, stillbirth (1.8%), which is comparable to Ashritha Kovvuru et al [1] study with 94.6% livebirths and 98.3% live births and 1.7% still births in Majella Gilbert Marie et al [2].

57.6% babies had low birth weight in the present study in contrast to 10.4% in Majella Gilbert Marie et al [2]. 42.4% had normal birth weight in the present study in contrast to Ashritha Kovvuru et al study [1], where normal birth weight contributed to 69%.

Neonatal complications seen in 30.1% cases, comparable to Abu Heija et al study [3] (29%). Neonatal complications include 11.3% are neonatal deaths, 9.4% had respiratory distress syndrome, 5.6% had sepsis and hypoglycemia in 3.7% neonates.

CONCLUSION

The outcome for a particular pregnancy will depend on the type of the disorder, severity and progression of disorder and the quality of obstetric and medical management. The study portrays major complications and outcomes associated with high risk pregnancies.

REFERENCES

1. Ashritha Kovvuru, Sarvaganya Kalvakunta et al, High risk pregnancies – The maternal and fetal outcome in a tertiary care unit, International Archives of

Integrated Medicine, volume 7 issue 6.

2. Majella Gilbert Marie et al Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors. 2nd edition, Geneva: World Health Organization; 2017.
3. World Health Organization 10 Facts on Maternal Health. World Health Organization. [Last accessed on 2018 Apr 24].
4. Firozi S. The rate of the prevalence of high-risk pregnancy and the results on pregnant mothers and the effect on parameters after the birth. IJPSR, 2012; 3(10):3735-41.
5. Paudel IS, Singh SP, Jha N, Vaishya A, Mishra RN. High risk pregnancy and its correlates among the women of eastern Nepal. Indian J Prev Soc Med., 2008; 39: 3-4.
6. Singh R, Chauhan R, Nandan D, Singh H, Gupta HC, Bhatnagar M. Morbidity profile of women during pregnancy; A hospital record based study in western UP. International Journal of community health, 2012; 24(4).
7. Samar KH, Dorgham LS, Suheir AM. Profile of High Risk Pregnancy among Saudi Women in Taif KSA. World Journal of Medical Sciences, 2014; 11(1): 90-7.
8. Shapla NR, Islam MA, Shahida SM, Parveen Z, Lipe YS. Maternal and foetal outcome of 206 high risk pregnancy cases in border guard hospital, dhaka. Mymensingh Med J., 2015 Apr; 24(2): 366-72.
9. Sharmi S.H., Z. Zahiri, F. Myrblok, F.A. Faraji, A. Sobhani. The prenatal outcomes in high-risk pregnancy according to Biophysical profile scoring without Non stress test. Journal of Gilan University of Medical Sciences, 2004; 17(68): 27-33.
10. Jadhao AR, Gawade MD, Ughade SN. Outcome of pregnancy among high risk pregnancies in rural area of Nagpur, Maharashtra, Central India. Int J Community Med Public Health, 2017; 4: 628-33.
11. Zareen N, Naqvi S, Majid N, Fatima H. Perinatal outcome in high risk pregnancies. J Coll Physicians Surg Pak., 2009 Jul; 19(7): 432-5.