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Original Research Article

Profile of High Risk Pregnancies Attending Antenatal Clinic in a Rural Area of Belgaum District

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ABSTRACT

Introduction: It is estimated that 15.0% of pregnancy may develop complications, which cannot be predicted. About 289,000 women died in 2013 of complications during pregnancy or childbirth and most of these deaths could be avoided as the necessary medical interventions exist and are well known.
Objectives: To study the profile of high risk pregnant women and their pregnancy outcome in a rural field practice area.
Methodology: 138 high risk pregnant women detected during September- December 2013 were included in the study. Their socio-demographic profile, obstetric history, haemoglobin levels in pregnancy and outcome of the pregnancy were recorded.
Results: Among the total 138 participants included for the study, majority (37.7%) were in the age group of 21-25 years, belonged to lower socio-economic class (63.8%), were less educated and were multigravidae (79.7%). The common reasons noted for considering them as high risk were previous LSCS, anemia and preceding bad obstetric history. There were significant associations observed between various socio-demographic variables and the pregnancy outcomes like low birth weight and still births.
Conclusion: High risk due to complications in pregnancy leads to adverse outcomes and this is influenced by various socio-demographic factors and obstetric conditions of pregnancy. Hence strengthening of existing antenatal services and regular educational activities regarding adequate utilization of health services are recommended.

Key Words: High Risk pregnancy, Profile, Ante natal Clinic

INTRODUCTION

Pregnancy - the nine months or so, for which a lady carries a budding foetus in her womb, is for nearly every woman a time of great joy and accomplishment. However, during pregnancy, both the woman and her developing child are subject to various health risks. There are many medical and obstetrical problems, which place the mother and foetus potentially at risk.

Women die as a result of complications during and following pregnancy and childbirth, most of which develop during pregnancy. Other complications may exist before pregnancy but are worsened during the period. The major complications that account for nearly 75% of all maternal deaths are: severe

bleeding (mostly bleeding after childbirth), infections (usually after childbirth), high blood pressure during pregnancy (pre-eclampsia and eclampsia), complications from delivery and unsafe abortion. [1]

Pregnancy is defined as high risk when it is complicated by one or more medical or obstetric problems and there is a likelihood of adverse outcome to the women or her baby that is greater than the incidence of that outcome in the general population. The conditions which make the women at risk in pregnancy are- anaemia, multiple gestation, previous bad obstetric history among many others. [2] The various social and biological factors of pregnancy determine the outcome and it is more important in the cases of high risk women. One target of the Millennium Development Goals (MDGs) is to reduce the maternal mortality ratio by three quarters between 1990 and 2015. [3] The strategy to achieve this would be to emphasize on high risk women, in who if we can prevent any untoward outcomes would largely result in decline in maternal mortality and improvement in maternal health. Thus, to achieve this, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system.

This study outlines the various socio-demographic factors of high risk pregnant women and their outcomes to make an attempt of understanding the factors relating to high risk pregnancy.

MATERIALS AND METHODS

The study was conducted in the field practice area of Jawaharlal Nehru Medical College, Belgaum. A total of 138 high risk pregnant women detected during September - December 2013 were included in the study. Their socio-demographic profile, obstetric history, weight gain in pregnancy, blood pressure and outcome of the pregnancy were recorded by following them up to the end of their pregnancy. Participants were visited 4 times during their entire pregnancy term at regular intervals with first visit being for enrollment where the information on their socio-demography and obstetric history was obtained. Their blood groups were also checked. Subsequent visits included physical examination of participants and laboratory blood testing for hemoglobin levels by Sahlis method and they were classified as anemic as per the World Health Organisation (WHO) standards. [4]

Statistical Analysis: Numerical socio-demographic variables were analyzed by means and standard deviations and categorical data were summarized using percentages. Chi square test was used to find the association between various socio demographic variables and high risk pregnancy outcomes. SPSS version 18.0 software was used for data analysis.

RESULTS

In the present study, majority (37.7%) of them were in the age group of 21-25 years with the mean age being 27+1.2 years. A large number of participants were Hindu by religion (43.5%) and belonged to below poverty line families (63.8%). Most of the participants and their husbands were educated up to secondary level (42.8% and 45.6% respectively) and majority of participants were housewives (82.6%) while their husbands were laborers (60.2%). A great number of participants were second gravida (44.9%) and about 4.4% were of the order of gravida 6 (Table 1). The most common reason for high risk in the current study was previous caesarean section (31.9%), followed by anemia (26.1%) (Figure 1). The other reasons included Rh incompatibility, multiple pregnancies; Pregnancy induced hypertension and Short stature.

Table 1: Socio-Demographic Profile of High Risk Pregnant Women

Characteristics	Number (N =138)	Percentage (%)
Age		
<20	31	22.4
21-25	52	37.7
26-30	47	34.1
31-35	7	5.1
>36	1	0.7
Education		
Illiterate	39	28.2
Primary	27	19.6
Secondary	59	42.8
PUC / Diploma	10	7.2
Graduate	3	2.2
Occupation		
Housewife	114	82.6
Agriculture	11	8.0
Others	13	9.4
Caste		
Hindu	60	43.5
Muslim	24	17.4
Scheduled Caste	15	10.9
Scheduled Tribe	39	28.2
APL/BPL		
APL	50	36.2
BPL	88	63.8
Gravida		
1	28	20.3
2	62	44.9
3	25	18.1
4	10	7.2
5	7	5.1
>6	6	4.4

Pregnancy Outcome: The pregnancy ended in still birth in 8.7% of participants and almost half of them delivered by vaginal route while 41.3% had to undergo caesarean section. Most of the children born were of normal birth weight i.e. more than 2.5 kgs but a large number (45.1%) weighed between 2.0-2.5 kgs. (Table 2). The high risk cases were more in women between 20-30 years and this association was found to be statistically significant (p=0.008). There were significant associations found between education (p=0.048), occupation (p=0.019), pregnancy score (p<0.001) and reason for high risk pregnancy. Lower caste women were more likely to have previous caesarean section as a reason for high risk (p=0.009) and deliver low birth weight babies (p=0.043). (Table 3, 4 & 5)

Table 2: High Risk Pregnancy Outcomes

Characteristics	Number (N = 138)	Percentage (%)
Delivery		
Vaginal	69	50.0
LSCS	57	41.3
Still Birth	12	8.7
B.wt (Kgs)		
<2.0	5	3.7
2.0-2.5	60	45.1
>2.5	68	51.2
Gender		
Male	72	54.1
Female	61	45.9

*Out of 138 women, 12 had still birth and 7 women delivered twins, hence total children born were 133

Table 3: Association between reason of delivery and age, caste and gravid status.

	Reason for High Risk							P value
Age	Prev LSCS	Grand multi	Anemia	BOH	Others	Multiple causes	Total	
<20	3	0	15	7	5	1	31	0.008
21-25	24	0	11	9	8	0	52	
26-30	13	8	9	9	8	0	47	
31-35	3	0	1	1	2	0	7	
>36	1	0	0	0	0	0	1	
Caste								
Hindu	19	1	10	17	13	0	60	0.009
Muslim	9	5	5	4	1	0	24	
Scheduled Caste	4	0	6	3	2	0	15	
Scheduled Tribe	12	2	15	2	7	1	39	
Gravida								
1	0	0	19	0	8	1	28	<0.001
2	33	0	13	10	6	0	62	
3	8	0	2	9	6	0	25	
4	3	0	2	3	2	0	10	
5	0	3	0	3	1	0	7	
>6	0	5	0	1	0	0	6	
Total	44	8	36	26	23	1	138	

Table 4: Association between mode of delivery and age, reason for high risk

Age	Mode of Delivery				P value
	Vaginal	LSCS	Still birth	Total	
<20	14	10	7	31	0.044
21-25	31	20	1	52	
26-30	22	21	4	47	
31-35	2	5	0	7	
>36	0	1	0	1	
Reason					
Previous LSCS	12	30	2	44	0.002
Grand Multipara	6	1	1	8	
Anemia	23	12	1	36	
BOH	14	7	5	26	
Others	14	6	3	23	
Multiple	0	1	0	1	
Total	69	57	12	138	

Table 5: Association between birth weight and age, caste and poverty

Caste	Birth weight (Kgs)				P Value
	<2.0	2.0-2.5	>2.5	Total	
Hindu	0	29	25	54	0.043
Muslim	2	5	17	24	
Scheduled Caste	0	3	10	13	
Scheduled Tribe	2	17	16	35	
APL/BPL					
APL	1	27	20	48	0.046
BPL	3	27	48	78	
Total	4	54	68	126	

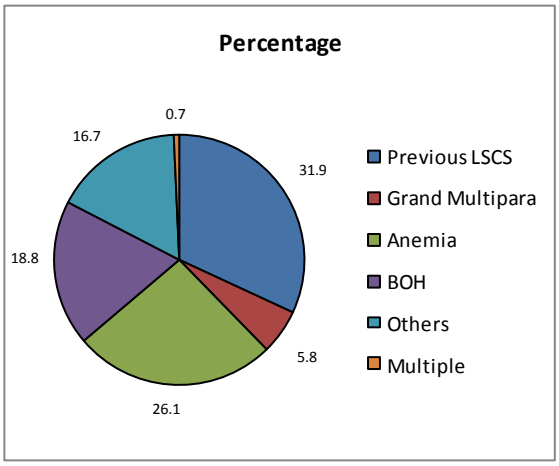

Figure 1: Reasons for "high risk"

DISCUSSION

In the present study, majority of high risk pregnant women were between 20-30 years and with a mean age of 27 years which differed to the findings of a study conducted by Zareen et al. [5] which showed that mean age of high risk women was 33 years. As the area of study is a settlement area with poor resources for living, the educational status and socio-economic status of the participants were low. This is similar to study conducted by Samina et al. [6] at a rural area of Srinagar. According to a study carried at Jalandhar by Kaur et al. [7] showed that the high risk pregnancy was equally distributed among both primigravidae and multigravidae whereas in opposition our study showed that most (79.7%) of them were multigravidae.

Anemia was present in 21.0% of the participants in studies conducted by Alem et al. [8] which is almost similar to our study but the National Family Health Survey-3 (NFHS-3) [9] shows the prevalence of anemia to be 58.0% which is much higher than our study.

Pregnancy outcome in our study showed that the prevalence of still birth was 8.7 % while low birth weight was present in 42.9% of the high risk women. These findings were in accordance with the studies conducted by Zareen et al and Doke et al. [10] Our study also showed that pregnancy complications and outcomes were associated significantly with various demographic variables and parity of the women. This is due to the fact that pregnancy is a situation influenced by various factors and there is a web of associated conditions which would result in an outcome, either favorable or unfavorable.

CONCLUSION

Pregnancy is termed high risk due to various complications in its course and in the current study majority of high risk pregnant women were in their early twenties, belonged to lower socio-economic class, were less educated and were multigravidae. The common reasons noted for considering them as high risk were previous caesarean section, anemia and preceding bad obstetric history. There were significant associations observed between

various socio-demographic variables and the pregnancy outcomes like low birth weight and still births.

The current study recommends strengthening of existing antenatal services, especially at rural areas, to detect high risk conditions at the earliest so as to provide adequate and high quality of care in order to prevent as many adverse outcomes. Regular educational activities to the women and their families regarding adequate utilization of health services and various national programmes are desirable.

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REFERENCES

1. WHO. Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice. World Health Organisation, Geneva, 2006; 4 -10 [Internet]. Available on www.who.int/entity/maternal_child_adolescent/documents/impac. [Accessed on 25.04.2014]
2. MOHFW. Mission Document. Ministry of Health and Family Welfare, Government of India, New Delhi. 2007; 1-2. [Internet] Available on www.nird.org.in/brgf/doc/Rural%20HealthMission_Document.pdf [Accessed on 06.02.2014]
3. *United Nations. Millennium Development Goals Report. United Nations, New York. 2014 [Internet] Available on* www.un.org/millenniumgoals.pdf *[Accessed on 02.09.2014]*
4. WHO. Hemoglobin concentrations for the diagnosis of anemia and assessment of severity. VMNIS. Nutrition and Health Department, World Health Organization; 2011: 3. [Internet] Available on *www*.who.int/topics/reproductive_health/anemia.
5. Zareen N, Naqvi S, Majid N, Fatima H. Perinatal Outcome in High Risk Pregnancies. J Coll Physicians Surg Pak 2009; 19 (7):432-35.
6. Samiya M, Samina M. Identification of High Risk Pregnancy by a Scoring System and its Correlation with Perinatal Outcome. IJPD 2008; 5(1):
7. Kaur J, Kaur K. Obstetric complications: Primiparity Vs. Multiparity. Euro. J. Exp. Bio., 2012; 2 (5):1462-1468
8. Alem M, Enawgaw B, Gelaw A, Kena T, Seid M, Olkeba Y. Prevalence of anemia and associated risk factors among pregnant women attending antenatal care in Azezo Health Center Gondar town, Northwest Ethiopia. J Interdiscipl Histopathol 2013; 1(3): 137-144
9. *IIPS. National Family Health Survey 3. International Institute of Population Sciences. Mumbai, 2007; 163-165.* [Internet] *Available on* www.rchiips.org/nfhs/nfhs3.html. [Accessed on 19.07.2014]
10. Doke PP, Karantaki MV, Deshpande SR. Adverse pregnancy outcomes in rural Maharashtra, India (2008–09): a retrospective cohort study. BMC Public Health 2012; 12:543.

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