Comparison of Pregnancy Outcome in Non-Risk and High-Risk Antenatal Mothers

Chandra Metgud, M.D.

Associate Professor, Department of Community Medicine, J.N. Medical College, Belgaum, Karnataka, India

ABSTRACT

Objectives:

1. To know the incidence of high risk pregnancy.
2. To study the pregnancy outcome in Non-risk and High-risk antenatal mothers.

Study Design: Longitudinal study.

Setting: Shindolli Village of Belgaum District.

Participants: All women in this village who were pregnant at the start of the study and who became pregnant during the study period.

Sample Size: 125.

Statistical Analysis: Percentages and Chi-square Test.

Results: The incidence of High risk pregnancy was noted in 51(40.80%) pregnant women. The various risk factors noted were: primigravida 18 years, grand multipara, pre-eclampsia, bad obstetric history, severe anaemia etc. Among 125 pregnancy outcome, 69(93.24%) pregnant women in the non-risk group had good outcome compared to 34(66.67%) in the high risk group. The outcome of the pregnancy was significantly associated with presence of risk factors.

Conclusion: The high-risk pregnancies are due to early marriages and child bearing at an early age. In rural areas early marriages are perpetuated by tradition, belief and family needs to reduce expenditures. A high percentage of anaemia in the pregnant women was due to the fact that, majority of them belonged to low social classes which affect their dietary intake and purchasing power adversely. Another common factor noted in rural area was grand multiparity, due to the need for male child. JMS 2014; 17 (1): 16-19

Key Words: Pregnant women, Risk factors, Pregnancy outcome.

INTRODUCTION

Pregnancy and child birth is a physiological phenomenon, yet it predisposes the woman to several health hazards. The aim of preventive medicine is to ensure that throughout pregnancy and puerperium, every mother will have good health and every pregnancy may ultimately result in a healthy mother and healthy baby¹. Certain proportions of pregnant women are at special risk of diseases, its complications or death because of their biological makeup, their environment or both. These factors are called "Risk Factors" which exert their effect either singly or in combination. Primigravida, high parity, too frequent pregnancies and that too at extremes of age, previous child

loss are some of the universally recognized risk factors². A high risk factor is defined as a factor that is significantly associated with the development of an adverse outcome, viz; different modes of delivery, preterm birth, still birth, and early neonatal death³. The present community based study was under taken to estimate the incidence of high risk pregnant women in a rural area of Belgaum and also to find out the pregnancy outcome.

METHODS

This longitudinal study was conducted in Shindolli village which is a rural field practice area of the Department of Community Medicine, J. N. Medical College, Belgaum. Shindolli, having population of 6335 comes under the Mutaga Primary Health Centre. The present study was conducted for a period of one year. All women (universal sample) in this village who were pregnant at the start of the

Correspondence

Dr. Chandra Metgud, M.D.

Associate Professor, Department of Community Medicine,
J.N. Medical College, Belgaum, Karnataka, India

Email: docchandra2006@yahoo.com

study and who became pregnant during the study period were enrolled. A total of 125 pregnant women were enrolled in the study. Case identification was carried out with the help of anganwadi workers and the case load was cross-checked with female health worker record to identify any missed cases. During the initial visit, using a pre-designed and pre-tested questionnaire, information was collected by interviewing the pregnant women on socio-demographic variables. Each pregnant woman was then followed-up by fortnightly home visits till seven days after delivery. The details were noted down in a pre-designed and pre-tested follow-up proforma.

RESULTS

In the present study, out of 125 pregnant women, 67(53.60%) were between 20-24 years, 30 (24.00%) between 25-29 years, 23 (18.40%) were between 15-19 years, 4 (3.20%) between 30-34 years and only 1(0.80%) was between 35-39 years. Out of the total pregnant women studied, majority 113 (90.40%) were Hindus and only 12 (9.60%) were Muslims. In our study, 66 (52.80%) were housewives, 43 (34.40%) were agricultural labourers, 11

(8.80%) were weavers, 2 (1.60%) each were service persons and coolies and only 1 (0.80%) was tailor. Our study revealed that 81 (64.80%) pregnant women were literates. Among them majority of the pregnant women, 36 (44.44%) were educated upto primary level, 30 (37.04%) upto high school and only 15 (18.52%) women were educated after SSLC. It was also noted that 44 (35.20%) women were illiterates. As regards to socio-economic status, 2 (1.60%) belonged to class I, 6 (4.80%) to class II, 28 (22.40%) to class III, 51 (40.80%) to class IV and 38 (30.40%) belonged to class V according to Modified B.G. Prasad's classification.

The classification of pregnancies into high risk and non-risk was based on WHO criteria given in Park's text book. The incidence of high risk pregnancy was noted in 51 (40.80%) pregnant women. Among 125 pregnant women, 74 (59.20%) had no risk factors, 44 (35.20%) had one risk factor and 7 (5.60%) had 2 risk factors (Table 1). With regards to pregnancy outcome, 111(88.80%) had normal vaginal delivery and 14 (11.20%) ended with caesarian section. On further analysis it was noted that 103 (84.20%) pregnancy outcome were term singleton live birth (Table 2). Majority 69 (55.20%) pregnant women delivered at hospital and remaining 56 (44.80%) at homes. Among 125 deliveries, 69 (55.20%) were conducted by doctors, 18 (14.40%) by local practitioners at homes, 21 (16.80%) by trained dais and health worker female and 17 (13.60%) by untrained dais and family members.

The study showed that good pregnancy outcome was

Table 1: Distribution of High risk pregnant women according to risk factors

Risk Factor	Number
Primigravida $\leq$ 18 years	11
Grand multipara	8
Pre-eclampsia	6
Bad obstetric history	5
Severe anaemia	4
Primigravida $\leq$ 18 years + eclampsia	2
Eclampsia	2
Twins with hydramnios	2
History of epilepsy	2
History of previous LSCS and instrumental delivery	2
Short statured primigravida $\leq$ 18 years	1
Grand multipara with history of asthma	1
Pre-eclampsia with severe anaemia	1
Rh-ve mother with severe anaemia	1
Bad obstetric history with UV prolapse	1
Short statured primigravida	1
Rh -ve mother	1
Total	51

Table 2: Distribution of pregnant women according to pregnancy outcome

Pregnancy outcome	Number	Percentage
Term Singleton live birth	103	84.20
Pre-term singleton live birth	10	8.00
Pre-term twins live birth	2	1.60
Still birth	5	4.00
Early neonatal death	5	4.00
Total	125	100

Table 3: Association between presence of risk factors and pregnancy outcome

Risk Factor	Good outcome		Bad Outcome		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Absent	69	93.24	5	6.76	74	100
Present	34	66.67	17	33.33	51	100
$\chi^2 = 14.704$		Df = 1		p = 0.0001		

observed in 69 (93.24%) pregnant women belonging to non-risk group compared to 34 (66.67%) in high-risk group (Table 3). Only term singleton live births weighing more than or equivalent to 2.5 kg were considered as good outcome based on WHO criteria given in Park's text book. So, as the risk factors appeared, percentage of pregnant women having good pregnancy outcome decreased ($X^2=14.704$, $p=0.0001$).

DISCUSSION

The present study revealed that 59.20% had no risk factors and 40.80% had risk factors. Among 40.80% of pregnant women, 35.20% had one risk factor and 5.60% had 2 risk factors. In a prospective community based study conducted at Sirur, 81.5% pregnant women had no risk factors and 18.5% had risk factors. Among 18.5% of pregnant women, 15.1% had one risk factor, 2.6% had 2 risk factors and 0.8% had 3 or more risk factors⁴. The study showed that “at risk” pregnancy with age 18 years was 11.2%. A study undertaken in a semi-urban community of Pune revealed that “at risk” pregnancy with maternal age 18 years was 25.00%.²

Our study revealed that 33.60% pregnant women were primigravida, 26.40% 2nd gravida, 24.00% 3rd gravida, 8.80% 4th gravida and 7.20% of pregnant women were “at risk” with grandmultiparity. In a study conducted in villages around Hyderabad, 25.0% women were primigravida, 26.4% 2nd gravida, 22.3% 3rd gravida, 11.8% 4th gravida and 14.5% of pregnant women were “at risk” of grandmultiparity⁵. The study revealed that “at risk” primigravida with height 140cms were 4.76%. In a study conducted in urban slum communities of Delhi, 11.0% of the pregnant women were “at risk” with height 140cms⁶. In the present study 69.60% of pregnant women were anaemic and among them 16.09% mildly anaemic, majority 77.01% were moderately anaemic and 6.90% of pregnant women were severely anaemic. In a study conducted in a rural area

of Delhi, anaemia was noted in 96.5% of pregnant women and among them 50.9% were moderately anaemic, 22.8% were mildly anaemic and 22.8% were severely anaemic⁷. In the general population 94-95% are Rh positive and 5-6% are Rh negative⁷. Whereas, the present study revealed that 98.40% pregnant women were Rh positive and 1.60% pregnant women were “at risk” being Rh negative mothers. In our study 8.80% of pregnant women developed pre-eclampsia. Out of these majority 63.64% women developed pre-eclampsia after 36 weeks of gestation. A study carried out in rural Karnataka, 0.4% of pregnant women had high blood pressure⁹. The hospital based study, conducted at Aligarh Muslim University, 4.03% pregnant women had pre-eclampsia. Among them majority 68.21% developed between 33-36 weeks of gestation¹⁰.

CONCLUSION

To summarize, the incidence of high risk pregnancy in our study was 40.80%. As compared to 93.24% in non-risk group, only 66.67% of pregnant women in the high risk group had good pregnancy outcome. So, it is very important in the rural setup to train the health worker females in identification of high risk pregnancies and timely referral to tertiary health care facilities.

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