



Research Article

A Cross Sectional Study on High Risk Pregnancy among Antenatal Women at Rural Primary Health Center in Eastern Part of Rajasthan

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Abstract: **Introduction:** - Around 10-30% of mother during their antenatal period can be classified as high risk and out of these 70-80% accounts to prenatal morbidity or mortality. Every year nearly 529000 women die globally due to pregnancy related causes. **Materials and method:** - The present cross sectional study was conducted at primary health center karwar district bundi (part of eastern Rajasthan), India of population around 22000. There are 8 subcenters with 19 villages comes under PHC Karwa. High risk pregnancy was classified based on the guidelines provided by Kushal Mangal Karyakram by National Health Mission Rajasthan and also the parameters considered for diagnosis of high risk pregnancy were defined as per the guidelines provided by Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA). **Result:** - Total 217 antenatal women were examined and among these 56 pregnant women were identified as a high risk pregnancy which account around 25.8% of total pregnant women. **Conclusion:** - One fourth of pregnant female are high risk pregnant women and most common risk factor associated with this is anaemia. This is due to nutritional negligence seen in pregnant women who may be due to poor education and low socioeconomic status.

Keywords: High risk pregnancy, National Health Mission Rajasthan.

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INTRODUCTION

All pregnancies are at risk even though most of the pregnancies and childbirth are uneventful. Anytime during the course of the pregnancy and childbirth complications can occur, which can affect the health and the overall survival of the mother and the fetus (Managing Complications in Pregnancy and Childbirth. 2017). Almost 15% of all the pregnant women can develop life threatening complications (Ministry of Health and Family Welfare. 2016). WHO has reported that 830 women dies daily due to complication during antenatal period or during the childbirth (WHO. 2018).

High risk pregnancy can be defined as one which is complicated by factor or factors that adversely affects the pregnancy outcome-maternal or perinatal or both (Dutta, 2006). Around 10-30% of mother during their antenatal period can be classified as high risk and out of these 70-80% accounts to prenatal morbidity or mortality (Pradeep, M. K. *et al.*, 2015). Every year nearly 529000 women die globally due to pregnancy related causes. For each death nearly 118 women suffer from life threatening events or severe acute morbidity (Samar, K. H. *et al.*, 2014). But perinatal outcome can be changed significantly by early detection followed by special intensive care of high risk pregnancies. All pregnancies should therefore be evaluated to know whether there are or will be riskfactors (Bharti, K. V. *et al.*, 2013). Severe anemia, Hypertensive disorder (Eclampsia or Preeclampsia), Short stature (<140cm), Bad obstetric history, Young or Elderly primi (below 18 yrs or above 35 yrs), Multipara,

History of APH or PPH, Multiple pregnancy, Medical pregnancy, Medical disorder (Diabetes, Renal failure, Heart disease etc), Abnormal presentation (breech or transverse lie), APH, Congenital malformation, Previous caesarian section, Prematurity, Postmaturity and Rh negative are some of the factors that are taken into account for assessment of high risk pregnancy. The objective of present study is to find out the prevalence of high risk among antenatal women and then form the strategy according to that.

MATERIALS AND METHODS

The present cross sectional study was conducted at primary health center karwar district bundi (part of eastern Rajasthan), India of population around 22000. There are 8 subcenters with 19 villages comes under PHC Karwa. These subcenters are Karwar, Aantarda, kheri, sahan, Baori, Kedaro ki jhopadiyan, Piparwala, Khajoori. This study was conducted over by the medical team which includes Medical officer incharge (PHC Karwar), one lady health visitor, lab technician, one GNM, two ANM (one from same subcenter), one fourth class, one Asha from same village, Aganwadi karyakarta. Medical team inspected 18 villages thoroughly and one complete day was allotted for each village except Karwar (a big village). Training was given to the Asha, ANM and Aganwadi worker 15 days prior to starting of the study. Asha, ANM and Aganwadi workers were instructed to inform to the visitors about medical team visit one day prior so that maximum number of pregnant patients were available.

The antenatal clinic was conducted in each village during this time for providing comprehensive health check up and referral services of pregnant women. On average 10 to 15 pregnant women were examined per day and all health services given were provided to them. Health care services included registration of pregnancy (if not registered), tetanus toxoid immunization, recording of BP and body weight, basic laboratory investigations like haemoglobin, HIV, blood grouping, urine for proteinuria and glucosuria, blood sugar was done. Iron folic acid tablet was given to each pregnant women. They were even Counselling regarding danger signs of pregnancy, birth preparedness, importance of spacing, nutrition, immunization and breastfeeding. This was all given free of cost.

High risk pregnancy was classified based on the guidelines provided by Kushal Mangal Karyakram by National Health Mission Rajasthan and also the parameters considered for diagnosis of high risk pregnancy were defined as per the guidelines provided by Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA). Antenatal women with the following conditions were categorized under high risk pregnancy:

- Severe anemia with hemoglobin level <7 g/dl
- Hypertensive disorder in pregnancy (blood pressure >140/90 mmHg)
- Pregnant women positive for HIV/syphilis
- Hypothyroidism (thyroid stimulating hormone values – first trimester: 0.1–2.5 mIU/L, second trimester: 0.2–3 mIU/L, and third trimester: 0.3–3 mIU/L)
- Gestational diabetes mellitus (glucose challenge test \geq 140 mg/dl)
- Twin pregnancy or multiple pregnancy
- Previous history of lower segment cesarean section
- Younger primi (age <18years) or elderly gravid (age >35 years)
- Malpresentation
- Bad obstetric history (history of congenital malformation, stillbirth, abortion, premature birth, and obstructed labor)
- Rh incompatibility
- Low-lying placenta or placenta previa.

RESULTS

This cross sectional study is a record base study. Out of 241 pregnant women total 217 antenatal women were examined and among this 56 pregnant women were identified as a high risk pregnancy, which is almost one fourth of total pregnant women.

TABLE 1: Age group of high risk pregnant women

AGE(Yrs)	Number
<25	24(42.8%)
26-30	28(50%)
31-35	4(7.1%)
>35	0

Out of 217 pregnant women there was not a single woman above the 35 yrs of age (Table no. 1). Most Probable reason behind this is that this study was conducted on rural PHC and in rural area maximum people completed their family before age of 35 yrs.

Table 2: Factor associated with high risk (severe anemia was most common cause)

S.No.	Cause for high risk	Number
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1	Bad obstetric history	14(25%)
2	Rh -ve	11(19.6%)
3	Multigravida	7(12.5%)
4	Severe Anemia	19(33.9%)
5	Deaf and Dumb	1(1.7%)
6	Preeclampsia	1(1.7%)
7	Previous LSCS	4(7.1%)
8	Twins	1(1.7%)
9	Hypothyroidism	1(1.7%)
10	Other factors	10(17.8%)
Total		69

Out of 56 high risk pregnant women most common cause of high risk pregnancy is severe anaemia which was in 33.9% women followed by bad obstetric history in 25% of case (Table no 2). Some pregnant women having more than one causes for high risk pregnancy and the most common two associated cause is low weight of mother and severe anemia.

DISCUSSION

At the grass root level in the rural areas requires interdisciplinary collaboration among doctors, midwives, auxiliary nurses and other department like ICDS (Integrated Child Development Services). The provision of health care at the terminal end of our health provisioning system in the rural areas urgently requires a willful political drive to improve the present health scenario. The high MMR is due to large number of deliveries conducted at home by untrained persons. In addition, lack of adequate referral facilities to provide emergency obstetric care for complicated cases also contribute to high maternal mortality rate. The prominent gray areas in our society are the age at marriage and child bearing, child spacing, family size and fertility patterns, literacy, socio-economic status and also not to forget the customs and beliefs.

In present study around 25% were high risk pregnant women which is similar to the Majella *et al.*, study they also found that around one fourth of total pregnant women are in high risk group (Majella, M. G. *et al.*, 2019). But it is not similar to the Jaideep KC *et al.*, study they found that around 30.66% pregnant women are high risk pregnant women (Jaideep, K. C. *et al.*, 2017).

In present study maximum high risk pregnant women are between 26-30 yrs and were around 50% of total high risk pregnant females, similarly majella *et al.*, also found in their study that maximum high risk pregnant women are between 26 to 30 yrs but in their study high risk pregnant women are around 31.1% this variation may be due to demographically, socio economically changes (Majella, M. G. *et al.*, 2019). But Jaideep KC *et al.*, found that 91% high risk pregnant females belong to age 30 or less than 30 yrs which is similar to our study which account around 92.8% high risk pregnant female of 30 yrs or below 30 yrs of age (Jaideep, K. C. *et al.*, 2017).

In our study we found that most common cause of high risk pregnancy is severe anaemia which is 33.9 % followed by bad obstetric history (25%) not similar to study of kumar *et al* in their study they found that most common risk factor for high risk pregnancy is short stature followed by bad obstetric history (Pradeep, M. K. *et al.*, 2015).

CONCLUSION

One fourth of pregnant female are high risk pregnant women and most common risk factor associated with this is anemia. This is due to nutritional negligence seen in pregnant women who may be due to poor education and low socioeconomic status. This also shows that current programs are not adequately met according to the need of pregnant women particularly regarding complications of pregnancy and obstetrical emergencies. Some major problems need to be addressed like shortage of facilities and trained staff, link between communities, subcenter and referral facilities.

Limitation of Study

Data of the study was very small so for final conclusion need another study with a large amount of data.

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Conflict of Interest

The authors declare that no conflict of interest, financial or otherwise exists.

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