Original Research Article

Study of risk factors to know persistence of anemia during pregnancy

Bhawna Gera[1], Swati Shiradkar[2*]

[1]Jr. Resident, [2]Professor and HOD, Department of OBGY, MGM Medical College and Research Centre, Aurangabad, Maharashtra, INDIA.
Email: bhawnastein_46@yahoo.co.in

Abstract

Anemia is one of the most commonly encountered medical disorder during pregnancy. Unfortunately the overall incidence of anemia in pregnancy even after forty years of implementation of anemia eradication programme is still 50%. Reasons for persistence of anemia in pregnancy can be manifold like unawareness of the patient and the doctor, inadequate testing, inadequate treatment and no treatment. This study was done to know which cause predominates so that we can focus our efforts to reduce prevalence of anemia in pregnancy.

Key Words: Pregnancy, anemia, risk factors, patient's compliance, doctor's awareness.

***Address for Correspondence:**
Dr. Swati Shiradkar, Professor and HOD, Department of OBGY, MGM Medical College and Research Centre, Aurangabad, Maharashtra, INDIA.
Email: bhawnastein_46@yahoo.co.in
Received Date: 23/08/2018 Revised Date: 14/09/2018 Accepted Date: 23/10/2018
DOI: https://doi.org/10.26611/10128213

Access this article online

Quick Response Code:

Website: www.medpulse.in

Accessed Date: 26 November 2018

INTRODUCTION

Anemia is one of the most commonly encountered medical disorder during pregnancy. In developing countries, it contributes significantly to high maternal morbidity and mortality. Increased incidence during pregnancy is due to increased maternal iron needs and demands from the growing fetus and placenta, increased erythrocyte mass and expanded maternal blood volume[1-2]. India was the first developing country to take up a National Nutritional Anemia Prophylaxis Programme to prevent anemia among pregnant women and children[3]. The National Nutritional Anemia Prophylaxis Programme of iron and folic acid distribution to all pregnant women in India through primary health care system was initiated in 1970 during the fourth five year health plan[4]. Unfortunately the overall incidence of anemia in pregnancy even after forty years of implementation of anemia eradication Programme is still 50%[5], WHO has estimated that prevalence of anemia in pregnant women is 14% in developed and 51% in developing countries, of which India contributes about 65-75%[6]. According to a study conducted on prevalence of anemia, Assam is the worst state in India as per mean HB (10.98g/dl) and also with the highest percentage (69%) of anemic women. The highest mean HB (12.85 g/dl) level is seen in Kerala along with the lowest prevalence (22.4%) of anemia[7] and Maharashtra contributes 51% of anemia in pregnancy. A clinical audit was conducted at MGM Medical College and Research Centre for patients having regular antenatal visits at MGM. In the audit period of three months, 9 out of 70 booked patients were anemic. Out of these 9,6 were non compliant, 2 did not get their repeat test done and 1 showed no improvement even after giving iron therapy. So it was clear that regular antenatal visits, timely testing and treating anemia and patient's compliance can decrease the incidence of anemia but there is no uniformity in testing and treating anemia amongst antenatal care providers because of their varied credentials from Anganwadi workers to specialists. It means reasons for persistence of anemia can be manifold like:

How to cite this article: Bhawna Gera, Swati Shiradkar. Study of risk factors to know persistence of anemia during pregnancy. *MedPulse – International Journal of Gynaecology*. November 2018; 8(2): 93-96. http://medpulse.in/Gynacology/index.php

1. Unawareness
    - Of the patient
    - Of the doctor (about prophylactic and therapeutic iron therapy)
2. Inadequate treatment
    - Non compliance
    - Intolerance
3. Inadequate testing
4. No treatment

This study was done to know which cause predominates so that we can focus our efforts to reduce prevalence of anemia in pregnancy.

AIM AND OBJECTIVE

To do a detailed study of patients entering into labour with anemia pertaining to cause for the anemia.

Objectives

1. To detect degree and type of anemia
2. To know the cause i.e. delay in diagnosis, inadequate treatment or inability to rule out rare causes of anemia.

MATERIALS AND METHODS

Study Period: 1st August 2018 to 31st August 2018.

Inclusion Criteria: Every third anemic patient entering into labour process at MGM irrespective of her booking status i.e. booked regularly at MGM, booked irregularly at MGM, booked outside with regular visits, booked outside with irregular visits or unbooked.

OBSERVATIONS AND RESULTS

Table 1:

Total number of deliveries	269
Patients found anemic	91
Patients included in the study	30
Prevalence of anemia	33.8

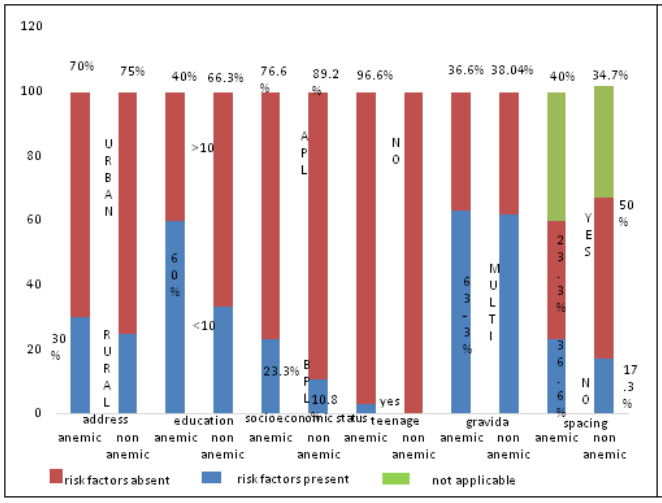

Figure 1

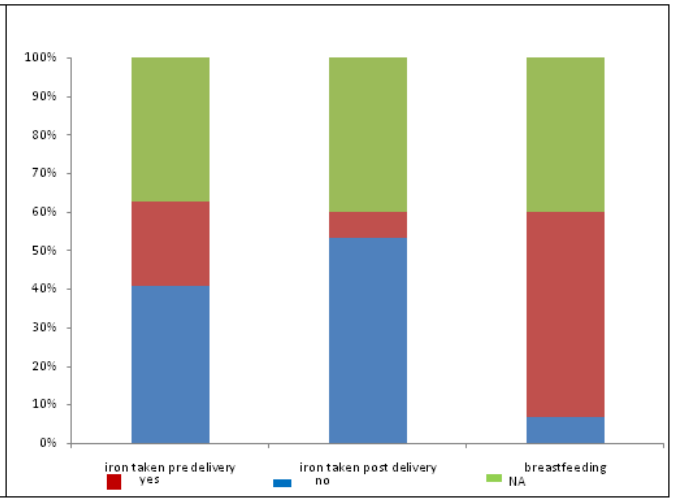

Figure 2

In figure 1, demography of patients was having anemia in pregnancy was compared with non anemic patients during same period with known risk factors. Figure 2, Deficient iron stores due to inadequate treatment in previous pregnancy is carried forward in the present pregnancy.

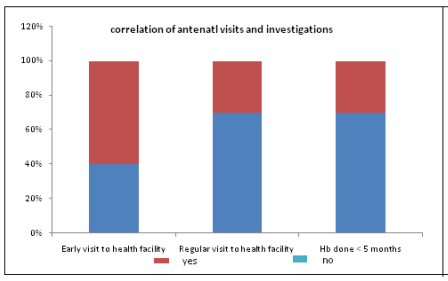

Figure 3

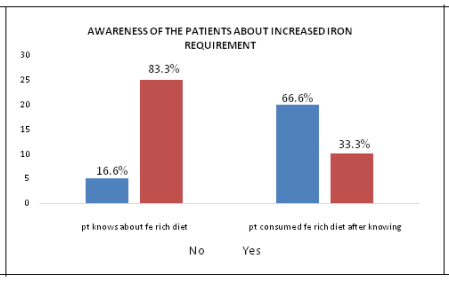

Figure 4

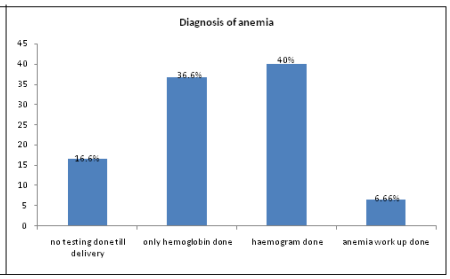

Figure 5

In Figure 3, Irregular visits and late testing are major contributory factors. Figure 4, 83.3% patients were aware but only 33.3% implemented and figure 5 Inadequate testing is another contributory factor.

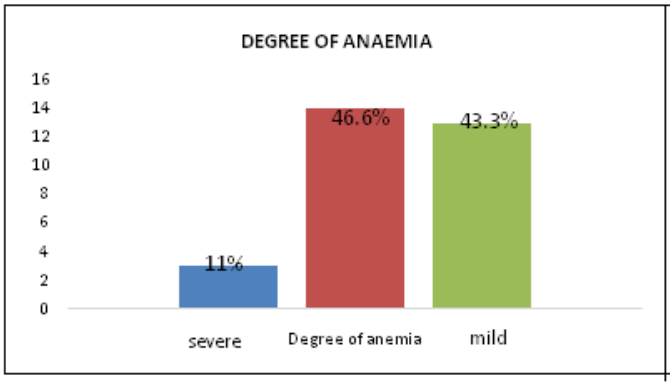

Figure 6: Majority of the patients have mild or moderate anemia

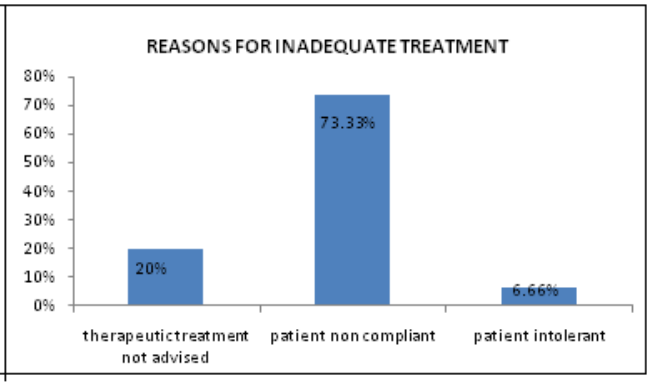

Figure 7: Non compliance is the major contributory factor

DISCUSSION

It is seen that exposure to antenatal care is improved along with the timing but regularity and timing at which hemogram is done, and appropriate treatment according to hemogram levels till anemia is adequately corrected is lagging. Demography of the patients is studied to know the presence of known risk factors. Out of known conventional risk factors parity, teenage pregnancy, menorrhagia, infections, less spacing and area of residence were not found to be the cause for anemia. Less education and less income continued to be the risk factors. Similar observations were seen by Nik Rosmawati NH, *et al*[8]. It was found that anemia in this pregnancy may be the effect of deficient treatment in last pregnancy which have exhausted patient's iron stores, as usually at the time of discharge, iron is prescribed for one month, irrespective of breastfeeding[9]. Need of iron during breastfeeding and to replenish iron stores is required. Inspite of early registration patients remain anemic because of irregular visits and late testing. It was observed that in five patients were there whose hemogram was first time done at the time of delivery. It was found that late antenatal registration was one of the major cause for anemia in pregnancy[10]. Most of the patients visiting health care facilities are advised hemoglobin instead of hemogram where early stages of iron deficiency and multiple deficiencies are missed leading to uncorrected anemia. Majority of the patients have mild or moderate anemia so there may not be felt need of treatment by the patient / doctor as they are asymptomatic. Non compliance of the patient may be the effect of unawareness but significant number of care givers are also playing a role in inadequate treatment by not advising therapeutic treatment inspite of less hemoglobin[11].

CONCLUSION

Early diagnosis and appropriate treatment till lactation is required for a pregnant lady to treat anemia adequately. In order to achieve this, skill development in maternity care giver and awareness of patient is mandatory.

- Along with early registration, early and adequate testing for anaemia should be encouraged.
- Depending upon the results of haemogram, the dose of iron should be appropriate (prophylactic / therapeutic).
- Repeat hemogram in each trimester in case of non anaemic patients and every monthly in anaemic patients till anaemia is corrected should be done to ensure adequacy of treatment.
- Proactive counselling regarding complications of anaemia and need for correction and effects of persistence of anaemia on pregnancy outcome can be done to achieve better compliance by patients.
- In every ANC visit compliance should be ensured.
- In case of no improvement in hemogram with treatment, further investigations to find out cause should be done.

REFERENCES

1. Recommendations to prevent and control iron deficiency in the United States. Centers for Disease Control and Prevention. *MMWR Recomm Rep*. 1998;47:1-29. [PMID: 9563847]
2. Mei Z, Cogswell ME, Looker AC, Pfeiffer CM, Cusick SE, Lacher DA, et al. Assessment of iron status in US pregnant women from the National Health and Nutrition Examination Survey (NHANES), 1999– 2006. *Am J Clin Nutr*. 2011; 93:1312-20. [PMID: 21430118]
3. International Journal of Community Medicine and Public Health Prashant D et al. Int J Community Med Public Health. 2017 Feb;4(2):537-541
4. Kishore J. National Health Program of India, 11th edition, Century Publications, New Delhi, 2014:477-79.

5. World Health Organization. The prevalence of anaemia in women: A tabulation of available information WHO/MCH/MSM92.2. Geneva: WHO, 1992.
6. Kalaivani K. Prevalence and consequences of anaemia in pregnancy. Indian J medical research. 2009; 130:627-33.
7. Asia-Pacific Journal of Public Health / Vol. 20, No. 4, October 2008
8. Nik Rosmawati NH, Mohd Nazri S, Mohd Ismail I (2012) The Rate and Risk Factors for Anemia among Pregnant Mothers in Jerteh Terengganu, Malaysia. J Community Med Health Educ 2:150. doi:10.4172/2161-0711.1000150.
9. World Health Organization. The prevalence of anemia in women: A Tabulation of Available Information; second edition. Geneva: WHO, 1992. (WHO/MCH/MSM/92.2).
10. Ikeanyi E M, Ibrahim A I. Does antenatal care attendance prevent anemia in pregnancy at term?. Niger J Clin Pract 2015;18:323-7
11. Tadesse et al., J Women's Health Care 2017, 6:6 DOI: 10.4172/2167 0420.1000409.

Source of Support: None Declared
Conflict of Interest: None Declared