Audit of Third Trimester Pregnancy Admissions for Incidence and Severity of Anemia

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Research Article

Abstract: **Objectives:** To know the incidence of anemia in admitted women of third trimester pregnancy. **Methods:** We prospectively analyzed the Hemoglobin status of pregnant women, in their third trimester, hospitalized for labour at MIMSR Medical College and YC rural hospital, Latur. Estimation of hemoglobin of pregnant women was done by automated cell counter. **Results:** Total 230 antenatal cases were included in study. Of which, 54 women were found to be anemic (<10gm%). Incidence of anemia (Hb < 10 gm%) is 23.48%. Incidence of severe anemia (Hb < 6 gm%) is 4.34%, moderate anemia (Hb 6-7.9 gm%) is 3.91% and mild anemia (Hb 8 - 10 gm%) is 19.13%. **Conclusion:** The incidence of anemia in pregnant women from this hospital admission is just 23.48%, which is quite lower than other Indian reports.

Key words: Pregnant women, Anemia, third trimester.

Introduction

Anemia during pregnancy is a common medical disorder in obstetric practice of developing countries. Its incidence varies in urban and rural population. Nutritional deficiencies being the common cause of anemia during pregnancy, its incidence varies according to the nutritional status of women. Prevalence of anemia in India is among the highest in the world. Prevalence of anemia is higher among pregnant women and preschool children. Even among higher income educated segments of population about 50 per cent of children, adolescent girls and pregnant women are anemic. Inadequate dietary iron and folate intake due to low vegetable consumption, perhaps low B12 intake and poor bioavailability of dietary iron from the fibre, phytate rich Indian diets are the major factors responsible for high prevalence of anemia. Increased requirement of iron during growth and pregnancy and chronic blood loss contribute to higher prevalence in specific groups. In India, anemia is directly or indirectly responsible for 40 per cent of maternal deaths [1]. WHO recorded that anemia was significantly high in the third trimester of pregnancy than in other two trimesters. Hemoglobin less than 10gm/dl is considered anemia for pregnant women[2]. Erli Amel Ivan, Mangaiarkkarasi A [3] did study for evaluation of anemia in booked antenatal mothers during the last trimester in urban population and found 83% cases having Hb level less than 10 gm%. R.G. Viveki *et al.* [4] did study in urban health centre in Belgaum, Karnataka for Prevalence of Anemia and Its Epidemiological Determinants in Pregnant Women and found 85.59%.of 3rd trimester women to be anemic. V. P. Gautam *et al*.[5] did study on pregnant women in rural area of Delhi and observed 96.5% women anemic.

Material and Methods

We prospectively analyzed the Hemoglobin status of pregnant women in their third trimester, who were hospitalized for labour at MIMSR Medical College and Yashwantrao Chavan Rural Hospital, Latur. Estimation of hemoglobin of pregnant women was done by automated cell counter on venous blood sample. The study was conducted from 1 September 2012 to 28 February 2013(Six months duration). Pregnant women beyond 28 weeks were included into the study. Pregnancies less than 28 weeks and delivered women were excluded from the study.

Observation

Table 1: Distribution of cases according to Hemoglobin

Hemoglobin (gm%)	Number of cases N=230
> 10	176 (76.52%)
8 – 9.9	44 (19.13%)
6 – 7.9	9 (03.91%)
< 6	1 (0.43%)

Total 230 women in their third trimester were subjected for hemoglobin estimation. 54 women (23.48%) were having hemoglobin less than 10 gm/dl (Table 1). The mean hemoglobin of total 230 cases in this study is 11.26 gm/dl. The mean hemoglobin of multigravida women was significantly less than primigravida (Table 2).

Table 2: Distribution of cases according to Gravidity

Gravida	Number of cases	Mean Hb (gm%)	Range (gm%)	SE of difference between 2 mean (Primigravida with Multigravida); P value
Primigravida	82	11.72 ± 1.67	7.6 to 15.7	2.81599; P=0.005289 Significant
Gravida 2	91	10.96 ± 1.93	5.4 to 16.1	
Gravida 3	36	11.06 ± 1.63	6.3 to 14.8	
Gravida >3	21	11.11 ± 2.25	6.5 to 16.7	
Multigravida (all except primigravida)	148	11.01 ± 1.91	5.4 to 16.7	

Discussion

The percentage of cases with hemoglobin less than 10gm/dl in this study is just 23.48%, which is much lower than almost all other studies from India. Most of the studies quote the incidence of anemia (hemoglobin less than 10gm/dl) in third trimester of pregnancy to be more than 80%. These observations at first gaze appear shocking, as anybody would expect the incidence to be around 80%. However looking at the commonest cause of anemia in India to be nutritional deficiencies, the answer to this low rate of anemia becomes obvious. The population cared by this rural hospital is mainly agriculture based rural population. Being associated with farming this population has availability of green vegetables and adequate nutrition. This appears to be the reason why the incidence of anemia is less. Just good antenatal clinic attendance cannot explain this low incidence, as other studies on booked cases also reveal anemia incidence as 83%. Thus this audit reveals that the incidence of anemia in the third trimester pregnancy admissions at this center ids just 23.48%.

Conclusion

Agriculture based pregnant population may not have anemia as common as other population groups.

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