



HYGIENIC AND SANITARY PRACTICES AND PREVALENCE OF ANEMIA AMONG SELECTED PREGNANT WOMEN

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ABSTRACT

In the present paper, health status of pregnant women was assessed following blood hemoglobin level, food hygiene, sanitary practices and presence of parasitic infection. A total Sample of 150 pregnant women of the second and third trimester attending antenatal clinic at private nursing home were randomly selected, among them maximum percentages were following good hygienic practices. Faecal analysis reveals that twenty six percent of pregnant were infested with parasites. Blood hemoglobin level was observed to be less among infested pregnant women compared to non-infested one. Study reveals that poor hygienic habits were found more among infested pregnant women which seems to be major contributory reason for prevalence of infestation.

Key words: Blood hemoglobin, Hygienic and sanitary practices, Parasitic infection.

INTRODUCTION

Pregnancy is a physiological condition in which the fetal growth is accompanied by extensive changes in maternal body composition and metabolism¹. Pregnant woman are considered to be vulnerable group because of increased physiological demands.

Low standards of living leads to consumption of poor quality of diet. Living in unsanitary surroundings is considered to be one of the contributory causes of malnutrition among the pregnant woman and high infant mortality in developing countries².

Pregnant woman are among the groups, most at risk of developing anemia. Parasitic infestation is one of the causes of anemia which occurs specially due to poor sanitation, which leads to chronic blood loss. The intestinal blood loss is found to be associated quantitatively with hookworm bound^{3,4,5,6}. It is known that worm is capable of drawing 0.03 to 0.2 ml of blood⁷ and on heavy infections such daily withdrawal of blood by a large number of parasites over a prolonged period would be sufficient to cause anemia⁷.

A third of all pregnant women in the developing countries are infected with hookworm. About 56% of all pregnant women in developing countries suffer from anemia, 20% of all maternal deaths are either directly or indirectly related to anemia and such increased numbers have led to increased interest in the topic of hookworm related anemia during pregnancy.

Severe anemia in pregnant women is associated with increased risk of premature delivery, maternal morbidity, maternal mortality and un-intellectual development of the child. Therefore, investigations on health status of pregnant woman and causes of anemia are essential to minimize the maternal and foetal mortality rates and to reduce the health hazards associated with pregnancy. Hence, the present study was undertaken to assess the health status of pregnant woman of parbhani town with following objectives.

1. To estimate hemoglobin level in blood of selected pregnant women.
2. To understand the existing hygienic and sanitary conditions in the houses of pregnant women.
3. To determine the worm infection in the faecal matter of the selected pregnant women.

METHODOLOGY

The present study was under taken to assess the health status of pregnant woman, estimations of blood hemoglobin, food hygiene practices, sanitary practices and presence of parasitic infestation were the criterions used for studying the health status of the pregnant women.

A total sample of 150 pregnant women of the second and third trimester, who were attending antenatal clinics at private nursing home from Parbhani town, was randomly selected. The respondents

were personally interviewed by the investigator administering a prepared questionnaire and the information was collected regarding various aspects.

Hemoglobin content in the blood of the selected pregnant women was estimated by "cyanomethemoglobin method"⁸. The information collected on food hygiene practices followed by the pregnant women like washing the vegetables and fruits before cutting and consuming, covering the cooked food, habit of eating soiled foods, and habit of pica. Information also collected on general sanitary practices followed in the houses of pregnant women like source and type of water used for drinking, place of defecation and drainage system of home.

A sub sample of 100 pregnant women was selected for faecal analysis to find out the presence of parasite, ova or egg and the occult blood. Faecal analysis was done with the help of pathologist.

Simple arithmetic means with standard deviations and percentage were calculated to interpret the results. Besides calculating the percentages 't' and 'Z' tests were applied to find the difference between two attributes⁹.

RESULTS AND DISCUSSION

Information regarding the food hygiene practices of the selected pregnant women is given in Figure 1.

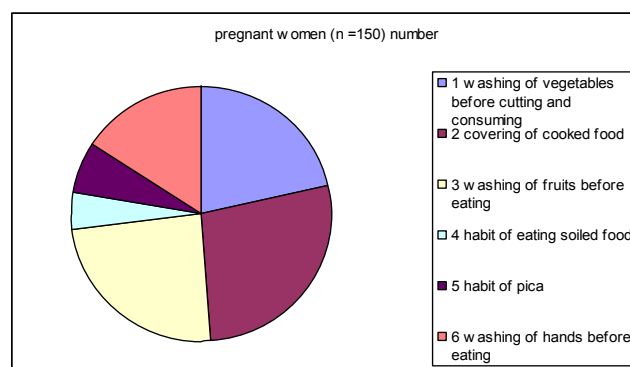


Figure 1: Food hygienic practices in vogue among selected pregnant women

Washing the vegetables before cutting or consuming and washing fruits before eating were the food hygiene practices followed by 79.33 and 89.33 % of pregnant women respectively. All the pregnant women were having the habit of covering the cooked food. Only 17.33% of the pregnant women had the habit of eating the soiled food. The percent of the pregnant women having the habit of pica was 23.33, the practices of washing the hands before eating was followed by 58% of the pregnant women.

Table 1: Mean blood hemoglobin level of the selected pregnant women with and without

Pregnant women	Number of pregnant women	Hemoglobin level in blood(g/100 ml)	
		range	Mean \pm S.D.
with infestation	26	5.49 to 9.79	7.53 \pm 1.113
without infestation	74	6.78 to 12.56	9.47 \pm 1.46
Total	100	Z value	6.95**

** Highly significant

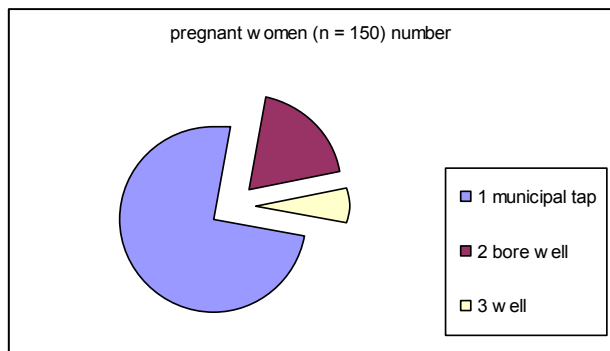


Figure 2: Source of drinking water used by the selected pregnant women

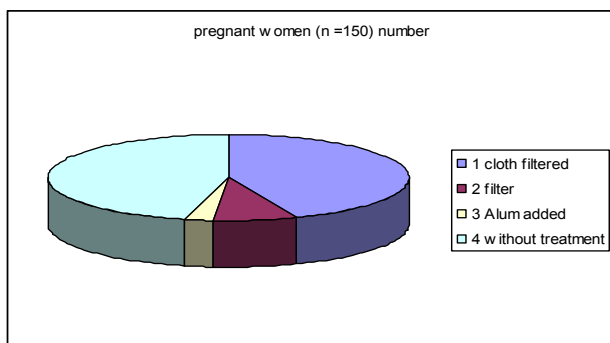


Figure 3: Type of drinking water used by the selected pregnant women

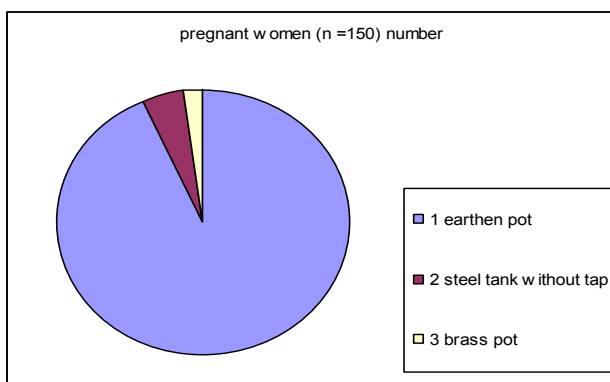


Figure 4: Type of containers used for storage of drinking water by the selected pregnant women

The sources and the type of water used for drinking by the families of the selected pregnant women are presented in Figure 2 and 3 respectively.

Higher percentages (74.67) of the families of pregnant women were using municipal tap water, 19.33 % were using bore well water and only 6.0% of them were using well water for drinking purpose. Percent of the families of the pregnant women used the drinking water without any treatment or purification was 46 while 44 % used cloth filtered water and 7.33 % used filter water for drinking purpose. Alum was used to purify water in only 2.67% of the families. None of the families used boiled water for drinking purpose.

The type of container used for storage of the drinking water is presented in Figure 4. Maximum percentage (93.33) of the families of the pregnant women was using earthen pots without tap for the storage of drinking water. Steel tank without tap and brass pot were used by 4.76 and 2.0% of the families respectively. None of the families were using the copper pot for storing drinking water. Various means employed for the use of drinking water were dipping the glass directly, using the mug and pot with tap attachment in 56.7, 42.6 and 0.7 % of the families respectively. Out of the total sample of 150 pregnant women 78.67 % were having the place for defecation inside the home, among them higher percentage (89.0) of the families of the pregnant women were using flush type and a lower percent (11.0) were using pail system as place for defecation inside the house, on the other hand, the 21.33 % of the families of the pregnant women who were having the common open place of defecation outside the house. It was also observed that all the selected pregnant women were washing the hands and legs after defecation, use of soap, ash and only water were noticed in 59.33, 11.34 and 29.33 % of the pregnant women respectively. Majority of the houses of selected pregnant women had open drainage system, while 22.66 % had closed drainage system. Only one family had soak pit system for drainage.

Hemoglobin level of the blood in the selected pregnant women with and without infestation is given in the table1. The percent of pregnant women having parasitic infestation was 26 and remaining 74 % of the pregnant women were non-infested. The mean hemoglobin level in blood of infested pregnant women was 7.53 \pm 1.13g/100 ml with range of 5.49 to 9.79 g/100 ml, where as, the mean blood hemoglobin value in non infested pregnant women was 9.47 \pm 1.46 g/100 ml with the range of 6.78 to 12.56 g /100 ml. 'Z' value indicated a highly significant difference between the mean hemoglobin values of infested and non -infested pregnant women. From the results it can be concluded that hemoglobin level tends to be lowered in infested pregnant women than that in non-infested women. Similar findings were reported by Kuizer *et al*¹⁰, Devdas *et al*¹¹ and Shan and Sheshadri¹².

Poor hygienic habits such as not washing the hands before eating, not using soap for washing hands after defecation and drinking the water without purification were found more in pregnant women with parasitic infestation than in without infestation. Apart from this, in almost all the houses of infested pregnant women open drainage system was found. Hence, it can be said that poor hygienic habits and poor sanitary practices may be the contributory factors for the wide prevalence of parasitic infestation among the pregnant women.

Thus it can be concluded from the study that, poor food hygienic and sanitary practices among pregnant women would lead to infectious anemia among the selected pregnant women.

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