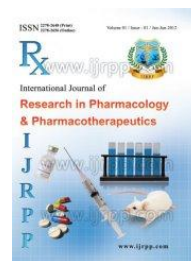




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Role of clinical pharmacist in prevalence of anemia

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ABSTRACT

Anaemia is a major public health problem in developing countries like India and is especially seen among women of childbearing age, during pregnancy and lactation. Nearly two-thirds of pregnant and one-half of non-pregnant women in developing countries have anaemia, which increases the risk of maternal and foetal mortality and morbidity.

Objective

To study the prevalence of anaemia among female population.

Materials and Methods

A total of 400 prescriptions were taken for a period of 3 months. Lab data from prescription forms were taken in the study to know Hb levels. The data was collected in a self administered data collection form.

Results

A high prevalence (64%) of anaemia (Hb<11g/dl) was observed. The prevalence of anaemia was significantly higher in those aged ≥ 20 years. Significant association was found with woman's age, parity, educational and socio-economic status. However, family type and birth interval were not significantly associated with anaemia. Among the 320 prescriptions 82 were in the teenage (15-20), 178 were the middle aged (20-30) and 60 were the above middle age (>30).

Conclusion

There is an urgent need to create awareness by the pharmacists by patient counselling among female population about the complications associated with anaemia particularly in pregnancy and menstrual cycles.

Key words: Anaemia, Pregnancy, Haemoglobin. Pharmacists role.

INTRODUCTION

Anaemia is defined as decreased haemoglobin level, or circulating red blood cells and it is the most common problem during pregnancy. Women with

haemoglobin level less than 11 g/dl should be considered as anaemic. Iron deficiency can be due to inadequate oral intake or poor bioavailability of iron in foodstuffs. It can also occur due to excessive loss of iron from the body. While the diet may contain

adequate amounts of iron, poor bioavailability of dietary iron is considered as the major reason for the widespread prevalence of iron deficiency anaemia. Malaria and hookworm infestations also contribute to the anaemia. Moreover, mothers with fewer intervals between the subsequent pregnancies become anaemic as a result of additional demands and the loss of blood during each delivery. Folate deficiency anaemia has been seen in 25-50% of pregnant women in India are seen and effects the people having low economic status. According to World Health Organization (WHO), in developing countries anaemia affects nearly two thirds of pregnant and one half of non- pregnant women. Prevalence of anaemia in South Asian countries is among the highest in the world. Among the South Asian countries, India has the highest prevalence of anaemia (87%) and half of the global maternal deaths due to anaemia occur in South Asian countries; India contributes to about 80 per cent of the maternal deaths due to anaemia in South Asia. In contrast, only 4-12% of women of child-bearing age in developed countries suffer from anaemia. Various studies from different regions of the India have reported the prevalence of anaemia to be between 33-100%. According to National Family Health Survey-3 (NFHS-3), prevalence of anaemia was 59% in pregnant women. A United Nations expert panel considered severe anaemia (< 7g/dl) as an associated cause in up to half of the maternal deaths worldwide. In India, anaemia is the second most common cause of maternal death, accounting for 20% of total maternal deaths. Anaemia during pregnancy can be associated with severe complications like increased risks of maternal mortality, premature delivery, low birth weight, etc. Thus, routine screening tests for anaemia are recommended in pregnant women. This survey describes the factors such as maternal age, literacy, socio-economic status, family type etc.

MATERIALS AND METHODS

A total of 400 prescription forms were taken for a period of 3 months. Hb value less than 11gm/dL is considered as anemia. Out of 400 forms only 320 were suitable for the study criteria. Data was collected in a self administered data collection form which contains all the details of the patient such as age, marital status, family if it is nuclear or joint family, dietary habits, socio –economic status. General physical examination followed by systemic examination was done in all patients by physician during their regular ward rounds. The forms of prescription are taken and then according to the details in them the required data was collected. Anaemia was classified according to WHO criteria. Haemoglobin concentration of less than 11.0 gm/dl was considered as anaemia. Haemoglobin concentration of 10.0-10.9 gm/dl, 7.0-10.0 gm/dl and less than 7.0gm/dl were considered to indicate mild, moderate and severe anaemia respectively. The data collected was compiled, tabulated and finally analyzed.

RESULTS

None of the women enrolled was a vegetarian. More than half of the study subjects were from joint families and majority was illiterate followed by primary level education. Most of studied subjects belong to younger age group (15-30). The majority of subjects observed from data forms had moderate anemia 82 (25.6%) followed by severe anemia 178(55.6%) and mild anemia (18.5%) 60 . All the women with multiple pregnancies were found to be anemic. The severity of anemia found from the data of prescribed forms was significantly higher in those aged 20-30 years The peripheral blood smear (PBS) identified normocytic, hypochromic and microcytic types, morphological characteristics consistent with iron deficiency anaemia.

Table :1.Age wise distribution

| Age | Number of prescription data forms | Percentage |
|-----------|-----------------------------------|------------|
| Age 15-20 | 82 | 25.6% |
| Age 20-30 | 178 | 55.6% |
| >30 | 60 | 18.5% |

Table: 2. Based on the socio economic status

| Category of economic status | Percentage |
|-----------------------------|------------|
| Low class | 62.5% |
| Moderate class | 35% |
| High class | 2.5% |

Table: 3. Based on the rate of literacy

| Literacy rate (n=320) | Yes | No | Percentage |
|--------------------------|-----|-----|------------|
| Literates | 45 | 275 | 14% |
| Illiterates | 275 | 45 | 86% |

DISSCUSSION

In this study it was found there was 64% of prevalence of anemia. Majority of the women were suffering from moderate anemia (52%) followed by severe anemia (22%). The severity of anaemia was significantly higher in women aged ≥ 35 years. Most of the anaemic pregnant women were in the 25-29 year age group. We have found a much higher prevalence of anaemia in our study. Very high prevalence of anaemia (91 %) early in pregnancy, an indicator of the maternal anaemia, continues to be a major health problem not only in this part of the country but also in many other states of country and worldwide that needs attention.

CONCLUSION

The prevalence of anemia was not significantly related with birth interval and was seen to increase

with increase in parity. These factors could be taken care of by timely health education to adolescent girls regarding importance of literacy, delaying the age of marriage, family spacing, small family norm, etc. During pregnancy, efforts should be geared towards the early detection and treatment of anemia before delivery. The role of community pharmacist has a major role in counselling and also, medical staff managing pregnant women should endeavor to investigate anemic pregnant women further in order to bring the awareness of anemia, and avoiding its increase by educating them. Screening for anemia, treatment of anemic women, and availability of food fortification (wheat flour with iron and folic acid), milk sugar and salt with iron to build long term iron stores remains the key to reduce anemia. Even cooking in cast iron utensils improves iron content in diet. The anemia control programme needs to be implemented more efficiently

REFERENCES

- [1] Gautam CS, Saha L, Sekhri K, Saha PK. Iron deficiency in pregnancy and the rationality of iron supplements prescribed during pregnancy. *Medscape J Med.* 2008;10(12):283.
- [2] Malee M. Anemia in Pregnancy. *Obstet Gynecol.* 2008; 112(1):201-7.
- [3] Van den Broek NR, Let sky EA, white SA, Shenkin A. Iron status in pregnant women: which measurements are valid? *Br J Haematol.* 1998 Dec;103(3):817-24.
- [4] WHO/UNICEF/UNU. Iron Deficiency Anemia: Assessment, Prevention and Control. Geneva, Switzerland: World Health Organization; 2001.
- [5] Narasinga Rao BS, Vijayasarathy C, Prabhavathi T. Iron absorption from habitual diets of Indians studied by the extrinsic tag technique. *Indian J Med Res.* 1983; 77 : 648-57.
- [6] Nadiger HA, Krishnamachari KAVR, Nadamuni Naidu A, Narasinga Rao BS, Srikantia SG. The use of common salt (sodium chloride) fortified with iron to control anemia: results of a preliminary study. *Br J Nutr.* 1980;43:45-51.

- [7] World Health Organization (WHO). The prevalence of Anaemia in women: a tabulation of available information. Geneva, Switzerland: WHO; 1992.
- [8] Luwang NC, Gupta VM, Khanna S. Anaemia in pregnancy in rural community of Varanasi. *Ind J Prev Soc Med.* 1980;11: 83-3
- [9] Agrawal V, Tejwanin S. Prevalence of iron deficiency anaemia in Indian antenatal women especially in rural areas. *Ind Med Gaz.* 1999;300-3.
- [10] National Family Health Survey for India conducted by. Mumbai, India: International Institute for Population Science; 2006.
- [11] de Benoist B, McLean E, Egli I, Cogswell M, editor. WHO global database on anaemia. Geneva: WHO; 2008. Worldwide prevalence of anaemia 1993-2005.
- [12] Ezzati M, Lopez AD, Dogers A, Vander HS, Murray C. Selected major risk factors and global and regional burden of disease. *Lancet.* 2002; 360: 1347-60.
- [13] Irshad G, Jafri SA, Kousar S, Ali I. Significance of serum ferritin in diagnosis of iron deficiency anaemia in pregnant females of Pakistan. *Professional Med J.* 2011; 18(3): 475-78
- [14] World Health Organization (WHO). Sixth Report on the World Health Situation (1973-1977). Geneva: World Health Organization; 1980.
- [15] Tiwari BK, Kundu AK, Bansal RD. National Iodine Deficiency Disorders Control Programme in India. *Indian J Public Health.* 1995;39(4):148-51.
- [16] World Health Organization Nutrition in Preventive Medicine. The Major Deficiency Syndromes, Epidemiology and Approaches to Control. WHO Monograph Series No. 62. Geneva, Switzerland: World Health Organization; 1976.
- [17] Dass A, Bhatt I, Dhaliwal B. Megaloblastic anaemia in pregnancy (in Dehli). *J Obstet Gynae Ind.* 1967; 17:37-43.
- [18] Pathak P, Kapil U, Kapoor SK, Saxena R, Kumar A, Gupta N, et al. Prevalence of multiple micronutrient deficiencies amongst pregnant women in a rural area of Haryana. *Indian J Pediatr.* 2004;71(11):1007-14.
- [19] Thangaleela T, Vijayalakshmi P. Prevalence of anemia in pregnancy. *Indian J Nutr Diet.* 1994; 31: 26-29.
- [20] Jin L, Yeung LF, Cogswell ME et al. Prevalence of anaemia among pregnant women in South-east China. *Public Health Nutr.* 2010; 13:1511-1518.
- [21] Kisioglu NN, Ozturk M, Cakmak ZA, Özgüner F. Anemia prevalence and its affecting factors in pregnant women of Isparta Province. *Biomed Res (India)* 2004; 16 (1): 11-14
- [22] Adish AA, Esrey S A, Gyorkos T W, Jean –Baptise J, Rojkani A. Effects of consumption of food cooked in iron pots on iron status and growth of young children; a Randomised trial. *Lancet.* 1999;353: 712-716..
- [23] Wild BJ, Bain BJ. Investigation of abnormal haemoglobins and thalassaemia. In: Lewis SM, Bain BJ, Bates I, editors. *Dacie and Lewis practical haematology.* 9th ed. London: Churchill Livingstone; 2001. pp. 231–68.