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* STUDY OF *

* ANAEMIA IN PREGNANCY *

* AT A N E K A L *

* IN RURAL WOMEN *

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THE STUDY OF ANEMIA IN PREGNANCY

A I M : TO DETECT ANEMIA IN RURAL POPULATION IN PREGNANT WOMEN

INTRODUCTION :

Anemia in pregnancy is a major public health problem in developing countries. It is one of the commonest causes of high maternal mortality rate. Anemia is directly responsible for about 20% of maternal deaths and in about another 20% a predisposing factor. It is also responsible for high incidence of premature and low birth weight babies thus increasing the perinatal mortality and morbidity. (Reference - Menon 1968).

According to W.H.O. reference Committee on haematology (1968) a level of hemoglobin below 11.5% gm during pregnancy has been accepted as indicative of anaemia. Majority of women go through pregnancy without any apparent problems with mild and moderate anaemia, obvious complications noted when Hb falls below 8.5 g%. Hb surveys in different parts of country indicate that incidence of anaemia during pregnancy varies between 40 - 70%. Severe anaemia in pregnancy is seen in about 10% of cases. The incidence of anaemia increases with increasing parity. In rural population, incidence of anaemia is likely to be of a much higher order due to poor socio-economic status and associated infestations and infections. A seasonal variation in the incidence of anaemia in pregnancy was observed being highest

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during summer, perhaps due to non availability of leafy vegetables during this season. (Reference : Swaminathan 1966).

CRITERIA FOR MILD, MODERATE SEVERE ANAEMIA

Hb	11.5 gm%	-	16.5 gm %	Normal
	8.5 gm%	-	11.5 gm %	Mild
	5.5 gm%	-	8.5 gm %	Moderate
	Less than		5.5 gm %	Severe

METHODS AND MATERIALS USED :

This study was conducted in the mobile clinic at Anekal village. 6 villages were studied. Total number of patients - pregnant females included in study were 50. A thorough clinical examination done to pick up pallor in conjunctiva, nails, palms, buccal mucosa, tongue. Since we did not have any sophisticated techniques to do Hb estimation, a simple Hb% estimation done in the field using Sahli's haemoglobinometer which gave us accurate value of haemoglobin.

PHYSIOLOGY OF IRON REQUIREMENT IN PREGNANCY :

Iron is required for the growth of fetus and placenta to meet daily physiological losses and requirements of lactation. 500 mg of Iron is required by bone marrow during pregnancy. Therefore for each pregnancy increased iron requirements is 500 mg - 600 mg of Iron.

Results of diet surveys in India show that average Indian diet has adequate iron content 20 - 22 mg/day. Most of the population in Asian countries have very poor or negligible stores of Iron. Thus most women start pregnancy in an Iron deficient state, due to uncompensated menstrual losses or due to repeated pregnancies and 60 - 70% have Iron deficiency anaemia by third trimester. Government of India has accepted the recommendations of a study group on nutritional anaemia that 60 mg of Elemental Iron with 500 ~~mg~~^{µg} of folic acid should be given daily as a supplement in last 12 - 16 weeks of gestation.

D A T A A N A L Y S I S :

All pregnant females who came to mobile clinic from 6 villages of Anekal viz. Harogade, Hulimangala, Ingalwadi, H.P. Colony, Bestamanahalli, Vanakanahalli were examined and Hb% check up was done.

It is found that out of 50 pregnant females 20 patients are anaemic. Remaining 30 are healthy, normal.

The following table shows :-

(1) Total No. of patients studied	= 50
(2) No. of Villages	= 6
(3) No. of Anaemic pregnant Women	= 20 (40%)
(4) No. of normal pregnant women	= 30 (60%)

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	Name of Villages	No. of Preg. patient	Normal preg. Women	Anemics	Percentage of Anaemia
A)	HAROGADE	7	3	4	57.14%
B)	HULIMANGALA	8	4	4	50%
C)	INGALWADI	13	9	4	30.76%
D)	H.P.COLONY	NO	ANC	CASES	
E)	BESTAMANAHALLI	15	11	4	26.66%
F)	VANAKANAHALLI	7	3	4	57.14%

The above data is depicted in the Graph 1 and 2.

The 2 parameters taken into consideration for detecting anaemia in pregnancy are :

- (a) Clinical Examination for Pallor, Koilonychia, Edema, Dyspnoea.
- (b) Haemoglobin Estimation

Clinically out of 50 patients, 20 were Pallor positive. Based on Hb% they were grouped as mild, moderate, severe. Out of 20 anemics - 16 were mildly anemic and 4 moderately anemic. No severe anemic cases found.

Regarding spacing of pregnancies in the 20 anemic patients showed most of the pregnancies had a gap of minimum of 2 years - 3 years. Only 3 cases had a gap of 1 - 1½ years.

The following tabular column shows number of

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of patients in all 3 trimesters and anaemia in all 3 trimesters.

Name of the Village	No. of pregnant women	TRIMESTERS		
		I	II	III
HAROGADE	7	1	2	4
HULIMANGALA	8	3	2	3
INGALWADI	13	0	4	9
H.P.COLONY	0	0	0	0
BESTAMANAHALLI	15	2	5	8
VANKANAHALLI	7	1	3	3

Name of the Village	No. of pregnant women	No. of Anemic in all Trimesters		
		I	II	III
HAROGADE	7	0	2	2
HULIMANGALA	8	1	0	3
INGALWADI	13	0	1	3
H.P. COLONY	0	0	0	0
BESTAMANAHALLI	15	0	1	3
VANKANAHALLI	7	0	2	2

The above data shows most of the patients who came were in 3rd trimester - 23 cases and 16 cases in 2nd trimester and 7 in the first trimester.

No. of patients found to be anaemic were in the

3rd trimester. Then 6 cases in 2nd trimester, only 1 case in first trimester.

I N T E R P R E T A T I O N :

Anaemia in pregnancy is one of the causes of maternal morbidity and mortality. Government of India has taken step to prevent anaemia occurring in pregnant women. They have recommended regular intake of Iron and folic acid tablets from 2nd trimester onwards in addition to dietary intake.

Most of pregnant women under study have regularly taken Iron and folic acid given to them by LHV, ANM, Doctors. Some of them have not received any Iron and folic acid.

The above results when taken as percentage shows 73% normal pregnant female in Bestamanahalli, 70% in Ingawadi, 50% in Hulimangala, 42% at Solur, Harogade.

57.14% Anaemia detected in Harogade and Vankanahalli.

In Bestamanahalli Village only 26.66% anaemia cases in pregnancy seen. This particular village, pregnant women underwent regular checkups, received regular Iron and folic acid tablets. They were well aware of their health. Anaemia in pregnancy was mostly seen in 3rd trimester.

D I S C U S S I O N :

Anaemia is the condition in which there is a reduction

in Haemoglobin concentration in blood stream to a level below 11.5 gm%.

Iron, folic acid, vitamins, trace elements are required for formation of Hb which takes place in bone marrow. These substances are ingested from food, green ^{LEAFY} vegetables, cereals, meat. Normally excess Iron ingested is stored in bone marrow so that during periods of stress it can be used for formation of Hb. One such physical stress is pregnancy.

During pregnancy, growth of fetus, uterus needs extra iron. Most of our Indian Women start pregnancy with low iron in body.

In the study, I found that most of the anaemia in pregnancy in villages was due to nutritional deficiency. A pregnant women requires in addition to normal an extra 20 - 24 mg of Iron per day. Apart from nutritional cause, socio-economic factors play an important role. Hardships, imposed by poor nutrition, water shortage, food taboos, inadequacies in food production and storage, absence of effective systems of social security results in anaemia in pregnancy.

The study showed out of 20 anaemic pregnant women - 4 had moderate anaemia, 16 mild anaemia. These women did not have any symptoms of dyspnoea, tiredness, dizziness, headaches. No case of severe anaemia found in study. Some of the multiple pregnancies did not give any history

of anaemia in previous pregnancies. No infant deaths. No complicated previous pregnancy - delivered at home or PHC.

WHO study showed that anemia is a cause of maternal death in India and also in other developing countries.

To treat severe cases of anaemia blood transfusions, hospitalisation needed. Mild and moderate cases can be treated by Iron, Folic Acid.

C O M M E N T S :

- (1) Some women didnot receive Iron and folic acid tablets because no ANM visited gave them tablets.
- (2) Some women because of social obligation did not go for health check up to PHC / any other medical facility.
- (3) Means of transport for some women from interior village to PHC was difficult therefore they did not go for prenatal check up.
- (4) Inadequate supply or inferior quality of medicines.

ROLE OF HEALTH SERVICES IN PREVENTING - ANAEMIA
IN PREGNANCY :

- (1) Health Care before pregnancy :
Build up nutritional status of women right from childhood.
- (2) Health Education :
In schools, Community level should be done as two way exchange of ideas which will prevent people's registance for health promotion.

(3) Health Care during pregnancy :

(a) Prenatal care is the most important - whose main function is promotion of health during pregnancy through advice and education activities.

- Screening, identification and referral of pregnant women if anaemia is suspected - mobile clinics, PHC, ANMs.
- Regular follow up and monitoring is necessary.

If effective prenatal care is taken it will prevent all the complications of anaemia in pregnancy.

(b) Post natal care - Should also be good. The same women will be pregnant again, we should be able to prevent future complication by taking care in present pregnancy itself.

(c) During Post natal period, a suggestion of spacing of pregnancy becomes important. Advice regarding contraception can be done. By good spacing of pregnancy - blood loss during delivery, low iron intake, will replenish and be ready for future pregnancy.

S U G G E S T I O N S :

- (1) LHV, ANM and other health personnel should do house to house check up regularly.
- (2) If any pregnant women identified should be subjected to thorough clinical examination and simple field test Hb% estimation by Sahli's method. This test can be learnt by health worker and by small pin prick

you can save pregnant women going through many complications.

- (3) All ANM's during their training period can be taught to estimate Hb. Each ANM can be provided with Haemoglobinometer.
- (4) In some villages ANMs were working for namesake. They did not bother to see ANCs or give Iron and folic acid tablets.

C O N C L U S I O N :

It is found that Incidence of anaemia in pregnancy is 40% - Much can be done to reduce the incidence of anaemia if all pregnant women have healthy nutrition and also regular supplementation of 60 mg of Elemental Iron and 500 mg of folic acid. The provision of good quality of maternal health services is needed not only to prevent anaemia in pregnancy but also other causes of maternal deaths.

R E F E R E N C E S :

- (1) Menon - 1968
- (2) WHO reference committee on Haematology 1968.
- (3) Study of seasonal variation and nutritional deficiency - Swaminathan 1966.
- (4) Methods of preventing maternal deaths WHO - Geneva - 1989.



