

MS  
8-3-05



## Anaemia in Pregnancy : A Great Challenge

Sudhaa Sharma\*, Pawan Suri\*\*, Annil Mahajan\*\* Chanchal Gupta\*

Anaemia is one of the most frequently observed nutritional deficiency disease in both developed and developing countries. Awareness of its importance has increased because of its negative effects on physical working capacity on the mother and foetus. Anaemia is defined as low haemoglobin concentration or low haematocrit leading to decrease in oxygen carrying capacity of blood. WHO has estimated that about 2.5 billion individuals or about 40% of world population is anaemic. In an attempt to understand the seriousness of problem, it has been proposed that countries be classified with respect to degree of public health significance of anaemia. An anaemia prevalence > 40% is high, 15-40% is medium and <15% is low (1). India comes in high prevalence category.

Anaemia in pregnancy constitutes 50% of the total anaemia and in National Family Health Survey (NFHS-2) in 1998-99 in India, 54% of rural women in child bearing age are anaemic as against 46% of women in urban areas. Anaemia in pregnant women in State of Kerala is 23% as against 62% in North-Eastern States (2).

Centres for Disease Control and Prevention (USA) has defined anaemia in pregnancy as Hb < 11.0 gm% in first and third trimester and < 10.5 gm% in second trimester of pregnancy (3). WHO has accepted 11.0 gm% as the lower limit whereas India and other developing nations have it at 10 gm%.

Anaemia in pregnancy is mostly nutritional and iron deficiency is the most prevalent single nutritional deficiency at present (4). Other nutritional deficiencies like folic acid, Vit B<sub>12</sub>, Vit A, Vit B<sub>2</sub> and B<sub>6</sub> only constitute small percentage of the nutritional anaemias. Most of

the times anaemia produces no symptoms but if it is severe, the common features include lethargy, feeling of exhaustion, light headedness, ankle swelling, headache, tinnitus, worsening of preexisting angina, skin and nail changes, breathing difficulties, lack of appetite etc.

In pregnant women, however, anaemia has got double effect i.e. on mother and foetus. In mother, it is a direct cause of death in 10-15% and is associated with sepsis, haemorrhage and cardiac failure in about 54.4% of women during antenatal, intrapartum and post partum period (5). Regarding foetal growth, it is associated with adverse obstetric outcome in the form of spontaneous abortion, preterm labour, low birth weight, intrauterine growth retardation and even increased incidence of cardiovascular events in adult life in form of hypertension (6-8).

Diagnosis of anaemia includes a battery of tests ranging from a simple blood test to the more sophisticated and advanced techniques like soluble transferrin receptor concentration (STRC) and RBC ferritin level etc. In developing countries like India simple estimation of haemoglobin/haematocrit, peripheral blood film and red blood cell indices are sufficient enough and economical as well.

Management of nutritional anaemia is as simple as diagnosis. Because of varied bioavailability, dietary habits and patient status, different dosage schedules have been recommended by different authorities (9). WHO has recommended combination tablet containing 60 mg elemental iron and 250µgm folic acid to be taken once a daily for mild anaemia and twice daily for moderate to severe anaemia. It is a safe, effective, well tolerated and

From the Postgraduate Departments of \*Gynaecology & Obstetrics & \*\*General Medicine, Govt. Medical College, Jammu (J&K).  
Correspondence to : Dr. Sudhaa Sharma, Asstt. Professor, Postgraduate Department of Gyna. & Obst., Govt. Medical College, Jammu (J&K).

inexpensive therapy for iron deficiency anaemia. Similarly, various programmes for both prophylaxis and treatment have been recommended by other authorities like national consultation on control of Nutritional Anaemia in India (NCCNA); Programme, Food and Nutrition Board of Institute of Medicine, American College of Obstetrics and Gynaecology (ACOG) and WHO etc. Side effects with a standard dose of any oral iron preparation, except for gastritis if any, occurs in only small percentage of the patients (10). In addition to the supplementation in fact, deworming and blood transfusion if required should be carried out as and when required.

Keeping in view the volume of the disease, damage it causes to the community and country both in terms of the economic loss and manpower, a war has to be declared against this disease, as the world had declared a war against terrorism. Even FOGSI had declared year 2002 as the year of 'War on Anaemia', as according to it, the eradication of anaemia is the key to "Safe Motherhood" and corner stone of "Reproductive and Child Health Programme".

As it is totally a preventable and treatable disease, easy to diagnose and easy to treat, needs no expert opinion, treatment is simple, inexpensive and cost effective, thus, to curtail the total prevalence and lessen the complications caused by anaemia, an awareness has to be generated amongst the common masses. It must become a "Mass Movement" and for this to happen, we have to have the involvement of general public, social workers, NGOs, doctors and paramedicals, politicians and above all the media people. Like diabetes detection or eye check up camps, haemoglobin estimation camps can be held and stress can be laid on dietary modification, food

fortification and control of viral, bacterial, parasitic infections.

*Flesh out of Flesh and Blood out of Blood*, is the task what only women can do. In spite of that, they are the ones who taste the things last of all even in some good families. *During pregnancy, in spite of sharing the lost few bouts, they should be encouraged to 'eat for two' rather than 'eat for none'.*

#### References

1. Indicators for assessing iron deficiency and strategies for its Prevention. World Health Organisation. Geneva, 1996.
2. National Family Health Survey. NFHS-2, Publisher. International Population Studies, Mumbai 2000.
3. Centres for Disease Control. CDC, criteria for children and child bearing aged women. *Morb and Mort Wkly Rep* 1989 ; 38 : 400-04.
4. Garby L. Iron deficiency. Definition and prevalence. *Clin Haematol* 1973 ; 2 : 245.
5. Bhatt RV. Maternal Mortality in India FOGSI WHO study. *J Obstet Gynaecol Ind* 1997 ; 47 : 207.
6. Scanlon KS, Yip R, Schieve LA, Cogswell ME. High and low haemoglobin levels during pregnancy. Differential risk for preterm birth and small for gestational age. *Obstet Gynaecol* 2000 ; 96 : 741.
7. Rusia U, Madan N, Agarwal N, Sikka M. Sood S. Effect of maternal iron deficiency anaemia on foetal outcome. *Ind J Pathol Microbiol* 1995 ; 38 : 273-79.
8. Barker DJP, Bull AR, Osmond C, Simmonds SJ. Fetal and placental size and risk of hypertension in adult life. *BMJ* 1990 ; 301 : 256.
9. Crosby WH. Prescribing iron? Think safely. *Arch Intern Med* 1978 ; 138 : 766.
10. Solvell I. Oral iron therapy: side effects. In: Hallberg J, Haimarh HG, Vasotti A (eds): *Iron Deficiency*. Orlando, Fla, Academic. 1970 ; 573.

**Editorial board encourages the submission of articles through computer disks/floppy for publication with a written copy of manuscript. The version of floppy and written manuscript should be the same. Describe the software used, the type of computer and any special (non-keyboard) characters used. The illustrations and figures/tables should be enclosed with the manuscript. Disks will not be returned to Authors.**