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Anemia Prevalence among Neglected Elderly With Reference To Area Hospital of Jangareddigudem Mandal, Andhra Pradesh

Dr.K. Sunitha,
civil assistant surgeon, Area hospital, Jangareddygudem, west godavaridisrict, Andhra pradesh

Abstract: *Anemia is a significant public health challenge in India. It has devastatingeffects on health, physical and mental productivity affecting quality of life, particularly among the vulnerable. Urgent action from all concerned is called for since anemiacould translate into significant morbidities for affected individuals and consequentsocio-economic losses for the country. The present study discuss prevalence, significance and required action to prevent anemia in Old age persons*

I. Introduction

India is the second most populous country in the world. Prosperity of any nation depends on the health and well being of their population.India, with its teaming billion plus population, comprising a very large child population and an equally large female population in the reproductive age suffering from anaemia and malnutrition is a definite threat for the national economy in the long run, for, the disease morbidity will cut short the economic potential of the population.Iron deficiency anaemia is the leading cause of morbidity among the vast sections of people, especially in the developing countries. Concurrent prevalence of malnutrition, both a cause for and an effect of iron deficiency anaemia would worsen the morbidity outcome of the people in the world. Ravages of poverty, illiteracy, poor environmental sanitation, tropical weather and large prevalence of intestinal worm infestations have been the major causes for the prevalence of iron deficiency anaemia and malnutrition.

Anaemia is a condition in which the number of red blood cells (RBCs), and consequentlytheir oxygen-carrying capacity, is insufficient to meet the body's physiological needs. Thefunction of the RBCs is to deliver oxygen from the lungs to the tissues and carbondioxide from the tissues to the lungs. This is accomplished by using haemoglobin(Hb), a tetramer protein composed of haem and globin. Anaemia impairs the body's
ability for gas exchange by decreasing the number of RBCs transporting oxygen andcarbon dioxide. Anaemia results from one or more of the following process: defective redcell production, increased red cell destruction or blood loss. Iron is necessary for synthesis ofhaemoglobin. Iron deficiency is thought to be the most common cause of anaemia globally, butother nutritional deficiencies (including folate, vitamin B12 and vitamin A), acute and chronicinflammation, parasitic infections, and inherited or acquired disorders that affect Hb synthesis,
red blood cell production or red blood cell survival can all cause anaemia. Iron deficiencyanaemia results in impaired cognitive and motor development in children and decreased workcapacity in adults .The effects are most severe in infancy and early childhood. Inpregnancy iron deficiency anaemia can lead to perinatal loss, prematurity and low birth weight(LBW) babies. Iron deficiency anaemia also adversely affects the body's immune response.

- Decreased work output
- Decreased work capacity
- Diminished concentration
- Disturbance in perception
- Poor learning ability
- Irregular menstruation
- Low pre-pregnancy iron stores
- LBW babies and preterm delivery

1Table 1: Haemoglobin levels to diagnose anaemia (g/dl)

Age groups	No Anaemia	Mild	Moderate	Severe
Children 6–59 months of age	>11	10-10.9	7-9.9	<7
Children 5–11 years of age	>11.5	11-11.5	8-10.9	<8
Children 12–14 years of age	>12	11-11.9	8-10.9	<8
Non-pregnant women (15 years of age and above)	>12	11-11.9	8-10.9	<8
Pregnant women	>11	10-10.9	7-9.9	<7
Men	>13	11-12.9	8-10.9	<8

Source: Haemoglobin concentration for the diagnosis of anemia and assessment of severity. WHO
Iron deficiency adversely affects

• The cognitive performance, behaviour and physical growth of infants, preschool and school-age children;
• The immune status and morbidity from infections of all age groups;
• The use of energy sources by muscles and thus the physical capacity and work performance of adolescents and adults of all age groups.

Aim Of Present Study: The objective of present study is to understand the prevalence of anemia in rural India and recommend suggestion for government action

Locale Of The Study: Jangareddygudem is a town in the West Godavari district of Andhra Pradesh, India.

Sample Of The Study: The out patients who visited the government hospital and got their blood test done.Antenatal and postnatal women are excluded in this sample.

Methodology: Data on hemoglobin levels and anemia cases(nov13-oct14) from government hospital was collected and presented in frequencies. Informal interviews of people to study the causative factors of low hemoglobin levels.

II. Results And Discussions

Table 2: Age wise Hemoglobin levels of patients of Government hospital in last one year(nov2013-oct2014)

S.No	Age in Years	Hemoglobin levels(g/dl)				
		2-4	4.1-6	6.1-7	7.1-8	8.1-9
1.	5-15 (n=53)	7(13%)	4(7%)	19(35%)	23(43%)	-
2.	16-25(n=118)	9(7%)	19(16%)	34(28%)	50(42%)	6(5%)
3.	26-35(n=131)	5(4%)	27(20%)	30(22%)	66(50%)	3(2%)
4.	36-45(n=101)	4(4%)	20(20%)	27(27%)	45(45%)	5(5%)
5.	46-55(n=108)	5(4%)	30(28%)	23(21%)	45(41%)	5(4%)
6.	56-65(n=107)	4(4%)	25(23%)	21(20%)	48(45%)	9(8%)
7.	Above65(n=99)	5(5%)	11(11%)	10(22%)	50(50%)	23(23%)

The above table gives the hemoglobin level of patients of government hospital of Jangareddygudam. The results clearly indicate that severe problem of anemia. In age 5-15yrs age group 20% of them fall under severe anemic category while 78 percent are in moderate anemic category. In age group of 16-25years the results show that 7% are having hemoglobin levels of 2-4gm/dl, 16 percent of them have hemoglobin level of 4.1-6gm/dl. Majority of them (28%) are having levels of 6.1-7gm/dl and 42 percent of them have 7-8gm/dl hemoglobin level. In age group 26-35 years 50 percent are having 7.1-8 gm/dl of hemoglobin level. In other age groups also we find that almost 50 percent were in 7.1-8gm/dl level of hemoglobin and very less percentage (5%) are above 8 gm/dl level of hemoglobin. It was interesting to note that on average 4% of the sample had hemoglobin levels in range of 2-4gm/dl which is very less. The results of the study show an interesting fact that none of the sample have more than 9gm/dl of hemoglobin level across the age groups. Another surprising and interesting finding of the study was that of all age groups geriatric anemia was found to be more prevalent in the selected locale.

The finding of the study revealed that 5 percent of the sample had very low hemoglobin levels of 2-4gm/dl and 11 percent of the older age group had hemoglobin level of 4.1-6gm/dl which is very alarming and 22 percent of the sample had hemoglobin levels of 6.1-7gm/dl. It was interesting to note that 73 percent of sample had average level of hemoglobin 7.1-9gm/dl.

Table 3 Prevalence of Anemia age wise as per the records of Government hospital in period of Novv13-Oct14

S.no	Age in years	no	%
1.	5-15 (n=53)	7	13%
2.	16-25(n=118)	3	4%
3.	26-35(n=131)	7	5%
4.	36-45(n=101)	5	5%
5.	46-55(n=108)	2	2%
6.	56-65(n=107)	4	4%
7.	Above65(n=99)	26	26%

The above table indicate anemia cases in government hospital for one year. The table reveals that out of the cases in age group 5-15years 13% of them are purely anemic cases. In 16-25 years age group 4% of the cases registered were anemia. In the same way it was found that in each group on an average 5% cases were of

anemia. The findings of the study further revealed the fact of all other age groups anemia was recorded more in geriatrics. The results indicate striking percentage of older people with anemia.

Table 4 Gender wise anemia cases registered in government hospital during the period of Nov13-Oct14

S.no	Anemia cases	
1.	Gender	
a.	Males	7
b.	Females	20
2.	Caste Wise	
a.	SC	15
b.	ST	7
c.	Others	14

The above table clearly indicates that anemia is more prevalent in females and there are more female anemia cases than male anemia cases. In caste wise also the results indicate that anemia is prevalent in other castes followed by SC and STs.With informal interviews the following were found to be the causative factors of low hemoglobin levels in selected sample.

Factors for low hemoglobin levels in selected sample:
Poverty: One of the main reasons for anemia is poverty. Low socioeconomic status, unemployment was found to be underlying cause for malnutrition resulting in anemia. This is true for old age anemia, because without any support or initiative from government they are most neglected group
Improper nutrition intake: Intake of imbalanced diet lacking micronutrients was found to another important reason for anemia in the study.

Malaria: Malaria is one of the major health problem causing malaria. It involves increased removal of circulating erythrocytes as well as decreased production of erythrocytes in the bone marrow.
Sanitation: Sanitation was found to be secondary reason for anemia. Lack of proper sanitation facilities in the study area, was found to be reason for common diseases specially malaria and other chronic diseases resulting in anemia.

Menstrual problems: Heavy loss of blood during menstrual cycle results in anemia
Anemia related to kidney disease: The kidneys release a hormone called the erythropoietin that helps the bone marrow make red blood cells. In people with chronic (long-standing) kidney disease (CKD or end stage renal disease (ESRD), the production of this hormone is diminished, and this, in turn, diminishes the production of red blood cells, causing anemia.

Cancer: Chronic disease condition like cancer was found to be causative factor of anemia

Local Medicines: Another important causative factor of anemia was found to be usage of local medicine. Lack of awareness, poverty and ignorance is driving people to local medical practitioners, these medicine are causing heavy blood loss and resulting anemia

Intestinal worms: Unhealthy living conditions, contaminated food are causative factors of intestinal parasites which leads to loss of blood resulting in anemia

Old Age Anemia:
Elderly people with anemia are 40% more likely to have problems that keep them from being independent Anemia has been associated with decreased life expectancy of older adults. As early as age 65, people with kidney disease, diabetes, and/or heart failure are more likely to die if they have anemia. . While managing anemia may be life saving in some circumstances.

III. RecommendationsAnd Suggestions

The study reveals that anemia though prevalent in all age groups, is more in older people in selected locale.

- This age group in particular don't have any support.
- Old age population-level anemia control strategies should be sustainable, given available resources; should involve input from relevant government and nongovernment health and non health agencies
- Should involve consultation and partnerships with targeted communities and the food industry; and should incorporate monitoring and evaluation to ensure efficacy and safety.

- To bring to the attention of program and project managers of health and related activities the serious negative consequences of anemia for the health and physical mental and economic productivity of individuals and populations
- To improve blood bank services for old age people with the support of NGOs. Blood should be given to oldage people even if donor is not available also.
- Old age people should not charged for blood bank services. Red cross blood bank or any other organisation should take initiative to support blood bank services.
- Old age homes should be established within the government hospital campus itself
- Old age population-level anemia control strategies should be sustainable, given available resources; should involve input from relevant government and nongovernment health and nonhealth (eg, education, agriculture) agencies
- Should involve consultation and partnerships with targeted communities and the food industry; and should incorporate monitoring and evaluation to ensure efficacy and safety.
- To bring to the attention of program and project managers of health and related activities the serious negative consequences of anemia for the health and physical mental and economic productivity of individuals and populations.

IV. Conclusion

Elderly people are the most neglected population specially in rural areas. Lack economic support and less physical stamina they are most prone to anemia. Concentration of government and other NGO is mainly on pregnant and children. Government should take special imitative to care for the old age anemia. They should be given iron fortified food and supplements through Primary health care centers. Because of their lack of mobility government should take steps to door delivery services. Awareness should be created on sanitation, healthy habits and consequences of alcohol and usage of local medicine.As a mark of respect to the people who served the younger generation we will have to take commitment to their health needs specially anemia which is a causative factor of medical emergencies.