

A study of associated factors of male adult anemic patients at tertiary health care center

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Abstract

Background: Anemia is a global public health problem, at any stage of life **Aims and Objectives:** To study associated factors of male adult anemic patients at tertiary health care center **Methodology:** This was a cross-sectional study in 50 patients admitted to the medical wards of P.D.S.C.G.H. Male patients between 12 and 60 years of age, with anemia and a hemoglobin of less than 7gm% were included in the study. **Result:** The most common associated factors were Nutritional in 42%, Leukemia's in 10% Lymphomas in 8% Chronic malaria in 8%, Hookworm infestations-6%, Chronic blood loss in 6%, Hemolytic in 6%, Secondary to non hemopoietic malignancy in 6%, Drug induced in 4%, Anemia of chronic disease in 4%. The age of the patients in this study ranged from 12-60 years with a means of 37.3 years. **Conclusion:** It can be concluded from our study that the most common associated factors were Nutritional, Leukemia's, Lymphomas, Chronic malaria, Hookworm infestations, Chronic blood loss, Hemolytic Secondary to non hemopoietic malignancy, Drug induced, Anemia of chronic disease etc. **Key Words:** Anemia, Nutritional anemia, Leukemia's, Lymphomas, Chronic malaria, Hookworm infestations, Hemolytic anemia.

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Received Date: 22/07/2017 Revised Date: 12/08/2017 Accepted Date: 10/09/2017

DOI: <https://doi.org/10.26611/1021336>

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 14 September 2017

INTRODUCTION

Anemia is a global public health problem, at any stage of life ^{1,2}. A recent systematic analysis using national and subnational anemia survey data estimated a worldwide prevalence of 32.9% in all ages combined, contributing more years lived with disability than either depression or chronic respiratory diseases ³. Anemia has diverse consequences and different subgroups of the population have varying vulnerabilities to its complications, such as fatigue and congestive cardiac failure; the rate and severity increasing with the severity of anemia ⁴⁻⁶. Conditions resulting in anemia act largely through either

reduced red cell production or increased red cell loss, but the former is more often implicated in the etiology of severe anemia ⁷⁻⁹.

MATERIAL AND METHODS

This was a cross-sectional study in 50 patients admitted to the medical wards of P.D.S.C.G.H. Male patients between 12 and 60 years of age, with anemia and a hemoglobin of less than 7gm% were included in the study. All the female patients and male patients not in the specified age group. Patients diagnosed as having renal and on treatment were excluded from the study. Patients who already had diagnostic work up elsewhere, and on treatment were excluded from the study. All the patients were subjected to a details history and physical examination. Their social and dietary habits were enquired. The details ere recorded in the proforma. All the patients underwent a series of diagnostic investigations. They were hemogram, ESR, blood urea, blood sugar, serum creatinine, serum electrolytes, complete urine examination, stool for ova and cysts, stool for occult blood and a chest X-ray additional investigations were done as required in the case for the establishment of diagnosis.

RESULT

Table 1: Distribution of the Patients as per the age

Age group	Number of case	% Age of total
12-19	10	20
20-29	13	26
30-39	10	20
40-49	8	16
50-59	9	18

The age of the patients in this study ranged from 12-60 years with a means of 37.3 years.

Table 2: Distribution of the patients as per the associated factors

Etiology	Number of cases	% Age of the total
Nutritional	21	42%
Leukemia's	5	10%
Lymphomas	4	8%
Chronic malaria	4	8%
Hookworm infestations	3	6%
Chronic blood loss	3	6%
Hemolytic	3	6%
Secondary to non hemopoietic malignancy	3	6%
Drug induced	2	4%
Anemia of chronic disease	2	4%

The most common associated factors were Nutritional in 42%. Leukemia's in 10% Lymphomas in 8% Chronic malaria in 8%, Hookworm infestations-6%, Chronic blood loss in 6%, Hemolytic in 6%, Secondary to non hemopoietic malignancy in 6%, Drug induced in 4%, Anemia of chronic disease in 4%.

DISCUSSION

Although different risk factors influence anemia independently, they commonly exist concomitantly, making it challenging to single out a definitive cause especially in resource-poor settings where access to advanced diagnostic tools is limited^{10,11}. Important causes of anemia in developing countries include micronutrient deficiencies, infectious diseases, hemoglobinopathies, and maternal blood loss. In terms of presentation, iron deficiency anemia is typically microcytic hypochromic, and anemia from chronic diseases is normocytic normochromic, whereas macrocytic anemia is commonly associated with B12 and folate deficiencies, or drug and alcohol toxicities, though overlap is common¹²⁻¹⁴. Intricate relationships between economic, political, demographic, sociocultural and biological factors influence the patterns of underlying causes, vulnerability to, and distribution of anemia severity and consequences^{8,9}. Anemia is a major global health problem, especially in developing countries like India. Anemia can be of various types based on the morphology of the RBCs depending on etiology and clinical aspect.

30% or nearly one third of world's population is suffering from anemia due to various causes¹⁵. The most common being deficiency of essential elements for the synthesis of hemoglobin (Iron, Vitamin B12 and Folic Acid), blood loss, repeated pregnancies in females of reproductive age, worm infestation, hemolysis due to known or unknown causes and bone marrow conditions causing suppression of red cell synthesis. Chronic diseases such as chronic renal failure, rheumatoid arthritis and tuberculosis are also known causes¹⁶ India and many other developing countries. The importance of iron-deficiency as cause of anemia varies by region. Prevalence of iron deficiency anemia is higher in India than other developing countries¹⁷. In our study we have seen that The most common associated factors were Nutritional in 42%, Leukemia's in 10% Lymphomas in 8% Chronic malaria in 8%, Hookworm infestations-6%, Chronic blood loss in 6%, Hemolytic in 6%, Secondary to non hemopoietic malignancy in 6%, Drug induced in 4%, Anemia of chronic disease in 4%.

CONCLUSION

It can be concluded from our study that the most common associated factors were Nutritional, Leukemia's, Lymphomas, Chronic malaria, Hookworm infestations, Chronic blood loss, Hemolytic, Secondary to non hemopoietic malignancy, Drug induced, Anemia of chronic disease etc.

REFERENCES

- McLean E, Cogswell M, Egli I, Wojdyla D, de Benoist B. Worldwide prevalence of anaemia, WHO vitamin and mineral nutrition information system, 1993-2005. *Public Health Nutr.* 2009; 12:444-54.
- Stevens GA et al. Global, regional, and national trends in haemoglobin concentration and prevalence of total and severe anaemia in children and pregnant and non-pregnant women for 1995-2011: a systematic analysis of population-representative data. *Lancet Glob Health.* 2013; 1(1):e16-e25.
- Kassebaum NJ, Jasrasaria R, Naghavi M, Wulf SK, Johns N, Lozano R, et al. A systematic analysis of global anemia burden from 1990 to 2010. *Blood.* 2014; 123:615-24.
- Stoltzfus RJ. Iron deficiency: global prevalence and consequences. *Food Nutr Bull.* 2003; 24(Suppl 4):99-103.
- Martinsson A, Andersson C, Andell P, Koul S, Engstrom G, Smith JG. Anemia in the general population: prevalence, clinical correlates and prognostic impact. *Eur J Epidemiol.* 2014; 29:489-98.
- Lone FW, Qureshi RN, Emanuel F. Maternal anaemia and its impact on perinatal outcome. *Trop Med Int Health.* 2004; 9:486-90.
- Van Hensbroek MB, Calis JC, Phiri KS, Vet R, Munthali F, Kraaijenhagen R, et al. Pathophysiological

- mechanisms of severe anaemia in Malawian children. PLoS One. 2010; 5:e12589.
8. Balarajan Y, Ramakrishnan U, Ozaltin E, Shankar AH, Subramanian SV. Anaemia in low-income and middle-income countries. *Lancet*. 2011; 378:2123–2135. doi: 10.1016/S0140-6736(10)62304-5.
 9. Van Hensbroek MB, Jonker F, Bates I. Severe acquired anaemia in Africa: new concepts. *Br J Haematol*. 2011; 154:690–5.
 10. Munasinghe S, van den Broek N. Anaemia in pregnancy in Malawi - a review. *Malawi Med J*. 2006; 18:160–75.
 11. Yip R, Ramakrishnan U. Experiences and challenges in developing countries. *J Nutr*. 2002; 132(Suppl 4):827–30.
 12. Ford J. Red blood cell morphology. *Int J Lab Hematol*. 2013; 35:351–7.
 13. DeLoughery TG. Microcytic anemia. *N Engl J Med*. 2014; 371:1324–1331. doi: 10.1056/NEJMra1215361.
 14. Roy CN. Anemia of inflammation. *Hematology Am Soc Hematol Educ Program*. 2010; 2010:276–280.
 15. Khambalia AZ, Aimone AM, Zlotkin SH. Burden of anemia among indigenous populations. *Nutr Rev*. 2011; 69(12):693-719.
 16. Muhammad Idris, Anis-ur-Rehman. Iron deficiency anaemia in moderate to severely anaemic patients. *J Ayub Med Coll Abbottabad* 2005; 17(3):45-7.
 17. Gupta SK, Agarwal SS, Kaushal R, Jain A, Gupta VK, Khare N. Prevalence of Anemia among rural population living in and around of rural health and training center, Ratua Village of Madhya Pradesh. *Muller J Med Sci Res* 2014;5(1)15-8.

Source of Support: None Declared
Conflict of Interest: None Declared

