|| ISSN(online): 2589-8698 || ISSN(print): 2589-868X ||
International Journal of Medical and Biomedical Studies
Available Online at www.ijmbs.info
PubMed (National Library of Medicine ID: 101738825)
Index Copernicus Value 2018: 75.71
Original Research Article
Volume 4, Issue 1; January: 2020; Page No. 80-81

STUDY OF ANEMIA AMONG ADOLESCENT GIRLS

Dr. B S Gupta[1], Dr. Yogesh Singh[2]
[1] Professor & Head of Department Physiology, Birat Medical College, Nepal
[2] Assistant Professor, JNU-IMSRC, Jaipur

Article Info: Received 20 December 2019; Accepted 14 January. 2020
DOI: https://doi.org/10.32553/ijmbs.v4i1.868
Corresponding author: Dr. B S Gupta
Conflict of interest: No conflict of interest.

Abstract
Background: In India adolescents constitute about 25% of the population and form an important physiological group whose nutritional needs demand special attention. Adolescence is a significant period of human growth and maturation, when unique changes occur and many adult patterns are established.
Methods: This was cross-section study. All the adolescent girls studying in standards 9th - 12th class who were given consent to hemoglobin estimation were included in the study.
Results: The prevalence of anemia among adolescent girls was found as 73.00%. Out of 730 anemic girls, 520 girls were suffering from mild degree of anemia and 190 girls were having moderate degree of anemia. Only two girl was found severely anemic.
Conclusion: The prevalence of anemia among adolescent girls is alarmingly high in India.
Keywords: Prevalence, Anemia, Adolescent.

Introduction

The world's adolescent population (age 10–19 years) is estimated to stand at more than 1 billion, yet adolescents remain largely neglected, difficult-to-measure, and hardto-reach population in which the needs of adolescent girls, in particular, are often ignored.[1]

In India adolescents constitute about 25% of the population and form an important physiological group whose nutritional needs demand special attention [2] Adolescence is a significant period of human growth and maturation, when unique changes occur and many adult patterns are established.[3]

Increased nutritional needs at this juncture relate to the fact that adolescents gain up to 50% of their adult weight, more than 20% of their adult height, and 50% of their adult skeletal mass during this period.[4] The iron needs are high in adolescent girls because of the increased requirements for expansion of blood volume associated with the adolescent growth spurt and the onset of menstruation.[5]

WHO has classified anemia into three categories: mild (11.0 - 11.9 g/dl), moderate (8.0 - 10.9 g/dl) and severe (< 8 g/dl) anemia [6]. UNICEF classified anemia to be mild in children, adolescent girls and pregnant women if the Hb level in blood is between 8.0 and 10.99 g/dl among children, 10.0 to 11.99 g/dl among adolescent girls and 8.0 - 10.99 g/dl Hb level among pregnant women. For severely anemic the Hb level should be below 5.0 g/dl among children, 8.0 g/dl among adolescent girls and 5.0 g/dl among pregnant women. Accordingly moderate anemia is denoted when the Hb level is between mild and severe anemia[7].

Materials and Method

This was cross-sectional study. All the adolescent girls studying in standards 9th - 12th class who were given consent to hemoglobin estimation were included in the study. The girls ≥20 years, and those suffering from any chronic disease were not included in the study. A total of 1000 girls were interviewed and were investigated for their Hemoglobin concentration. A predesigned and pretested schedule was used to collect the information about the participants.

Results

Table 1: Prevalence of anemia among adolescent girls (N = 1000)

Hb level (g/dl)	No. of girls	Percentage
>11	270	27.00
10.0-11.9	520	52.00
7.0-9.9	190	19.00
<7.0	20	2.00
Total	1000	100.00

The prevalence of anemia among adolescent girls was found as73.00%. Out of 730 anemic girls, 520 girls were suffering from mild degree of anemia and 190 girls were having moderate degree of anemia. Only 20 girls was found severely anemic.

Table 2: Distribution of adolescent girls according to general appearance

General appearance	No. of girls	Percentage
Well nourished	640	64.00
Moderately nourished	250	25.00
Mal nutrition	110	11.00
Total	1000	100.00

The above table reveals that out of 1000 of the adolescents girls 640(64.00%) adolescents girls were well nurshied, 250(25.00%) were moderately nourished and remaining 110(11.0%) were malnourished.

Discussion

Anemia during adolescence influence women's entire life cycle. It also has negative consequences for survival, growth, development of their children later in life. The Government of India has made the adolescent health as a part of RCH package since 1997.

Later to combat the problem, Government of India started Adolescent Girls anemia Control Program with technical support from UNICEF. The main interventions of this program were later continued under the heads of SABLA and WIFS scheme under Rashtriya Kishor Swasthya Katyakram (RKSK). In the base line survey for the program by UNICEF, 65- 99% of adolescent girls were found anemic, at various states of country. [8]

In this study the prevalence of anemia among adolescent girls was observed as 73.00%, which is very close to the observations taken by Rati et al[9] and Patnaik et al[10], who found the prevalence as 80% and 78.8% in their studies in rural areas of Karnataka and Odisha respectively. Though Kaur et al [11] observed anemia prevalencerate as 59.8% in rural Wardha (Maharashtra). Whereas a very high prevalence of anemia (90.1%) was noted by Kulkarni et al [12] in adolescent girls of a urban slum in Nagpur.

Conclusion

The prevalence of under nutrition and anemia among adolescent girls is alarmingly high in India.

References

1. Brabin BJ, Hakimi M, Pelletier D. An analysis of anemia and pregnancy-related maternal mortality. J Nutr. 2001;131:604S-614S.
2. Sidhu S, Kumari K, Uppal M. Prevalence of anaemia among adolescent girls of scheduled caste community of Punjab. The Anthropol. 2005 Oct 1;7(4):265-7.
3. Jolly R, Rajaratnam A, Asokan JS, Jonathan P. Prevalence of anemia among adolescent girls of rural Tamilnadu. Indian Ped. 2000;37(5):532-6.
4. Meier PR, Nickerson HJ, Olson KA, Berg RL, Meyer JA. Prevention of iron deficiency anemia in adolescent and adult pregnancies. Clinical Med Research. 2003 Jan 1;1(1):29-36.
5. Dallman PR. Changing iron needs from birth through adolescence. In: Fomon SJ, Zlotkin S, eds. Nutritional Anemias. Nestle Nutrition Workshop Series. Nestec Ltd. New York, NY: Vevey/ Raven Press. 1992;30:29-38.
6. World Health Organization. Nutrition micro nutrient deficiencies, Iron deficiency anemia, the challenge: WHO (2018)
7. International Institute for Population Sciences: Nutritional Status of Children and prevalence of Anemia among Children, Adolescent Girls, and Pregnant Women. Mumbai: IIPS (2006).
8. www.Unicef.in/uploads/publication/resourcs/ pub_doc82.pdf
9. Rati SA, Jawadagi S. Prevalence of anemia among adolescent girls studying in selected schools. International Journal of Science and Research.2014; 3(8): 1237 - 1242.
10. Pattnaik S, Patnaik L, Kumar A, Sahu T. Prevalence of anemia among adolescent girls in a rural area of Odisha and its epidemiological correlates.Indian Journal of Maternal and Child Health. 2013;15 (1):1-11.
11. Kaur S, Deshmukh PR, Garg BS. Epidemiological correlates of nutritional anemia in adolescent girls of rural Wardha. Indian Journal of Community Medicine. 2006;31(4): 255-258.
12. Kulkarni MV, Durge PM, Kasturwar NB. Prevalence of anemia among adolescent girls in an urban slum. National Journal of Community Medicine. 2012;3 (1):108-111.