



A STUDY OF HEMOGLOBIN STATUS AMONG FIRST MBBS FEMALE STUDENTS IN MEDICAL COLLEGE JABALPUR

Physiology

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ABSTRACT

Objectives: To assess the haemoglobin status among first MBBS female students in medical college Jabalpur during session 2018 – 19.

Methods: After taking consent from First MBBS female medical students, haemoglobin level was estimated and results assessed statistically.

Results: Present study shows that 70.2 percentage first MBBS female students during session 2018-19 have no anemia, 26.3 percentages has mild anemia, 3.5 percentages has moderate anemia while no one has severe anemia.

Conclusion: Even after so many measures, health programmes and having better knowledge of health and access to health care facilities significant number of female medical students still have low haemoglobin level.

KEYWORDS

Haemoglobin status, first MBBS, female medical students.

INTRODUCTION

Medical doctors, specially medical students are very important component of a society that builds the health status of a community. Among medical doctors, female medical students have to play very important role for betterment of a society. So they should be in good health to serve the society as a competent doctor in general public, as an authority.

Haemoglobin is present in the red blood cells that contain iron. Haemoglobin level estimation is the simple and easy method to know the iron deficiency. As per World Health Organization (WHO) iron deficiency is a condition in which haemoglobin level falls less than normal and the condition is called as anemia. There are many causes of anaemia and anaemia due to iron deficiency is common. The term is derived from the Greek term anaimia, meaning lack of blood. The symptoms of anemia usually include pale skin, weakness, shortness of breath, fainting, palpitations, chest pain, and restless legs syndrome. Adolescent being a formative year in life is more prone to major nutritional deficiency.

Accelerated growth, hormonal changes, onset of menstruation and malnutrition due to changes in the food habits are the main causes of iron deficiency anemia in adolescent girls. Poor eating habits, meal skipping, eating away from home, snacking and fast food consumption predispose them to dietary deficiencies.

Also, chronic blood loss due to changes in menstrual pattern, worm infestation etc. further increases their chance of being anemic. Students, who study medicine, also follow the same pattern, inspite of them having better knowledge about health and better access to health care facilities. Women with even mild anemia experience fatigue and reduced work capacity.

The medical students may suffer anemia because of long schedule of work in college, clinical labs and extra-curricular activities. Most of the data available included both male and female medics, while there is no study done primarily on female medics.

Thus, present study was done to find out the hemoglobin level in female undergraduate medical students.

MATERIALS AND METHODS

The present study was carried out in the department of physiology, Netaji Shubhash Chandra Bose Medical College Jabalpur Madhyapradesh. For this study, total 57 female first MBBS students of 2018-19 sessions were selected. The age of all the subjects was between 17 to 21 years.

We used SAHLI'S ACID HEMATIN METHOD for the estimation of haemoglobin because it is very economic and can be used for hemoglobin estimation where automated hematology analyser is not available. No technical expertise is needed to perform it.

All the observations were recorded and analysed statistically.

RESULTS

Collected data was statistically analyzed. The observations and results are presented in the tabular form. The results are expressed as numbers and percentages.

Table 1: Haemoglobin level in gram percentage among first MBBS female students of Medical College Jabalpur

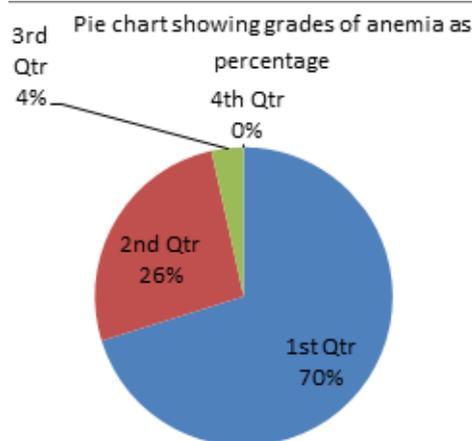
S.No.	Age in years	Haemoglobin Level in g/dl
1	18	13.4
2	17	12.5
3	19	13.4
4	19	13.8
5	20	13.4
6	19	12.8
7	18	13.4
8	20	12
9	19	13.3
10	19	10.2
11	20	12.7
12	19	12.7
13	19	11.9
14	20	12
15	21	14.1
16	19	13.2
17	19	8.9
18	19	13.3
19	20	12.9
20	19	13.2
21	19	12.5
22	19	12.7
23	19	13.4
24	19	8.6
25	19	10.6
26	20	12
27	21	12.1
28	19	12.4
29	19	14.5
30	17	10.7
31	20	12
32	20	11.8
33	20	13.6
34	17	13.4
35	19	10.5
36	20	10
37	18	11
38	18	10.3
39	21	12.5
40	21	13
41	20	12.4
42	18	11.5

43	20	13.6
44	19	10
45	18	11.5
46	17	14
47	17	12.9
48	19	14
49	19	14.5
50	18	13.4
51	19	11.7
52	19	12.7
53	20	13.4
54	18	11
55	17	13.1
56	19	13.7
57	17	10.7

Abbreviations: g = gram, dl = decilitre

Grades of anemia as percentage among first mbbs female medical students in medical college Jabalpur:

S. No.	Grade	Haemoglobin level in g/dl	Observations in percentage
1	Normal	>12 - 16	70.2
2	Mild	10 – 12	26.3
3	Moderate	7 -9	3.5
4	Severe	Less than 6	0



DISCUSSION

Various studies have been done to evaluate the prevalence of anemia in pregnancy, children and young population but very few studies were conducted among students, specially female medical students that reflects the real health status of the country. As per various studies conducted in different areas of the country the important cause of anemia in females is loss of iron per menstrual cycle. As per WHO the most common cause of anemia is iron deficiency. Anemia lead to poor health status reduced immunity, increased morbidity and decreased academic performance. Female medical students are not the exception to above mentioned natural factors contributing to anaemia. In addition female medicos are at high risk because of hectic postings in pre and paraclinical labs, outpatient department, hospital, college, high pressure of academic performance and extra-curricular activities. This much stress and burden of medical study contribute to poor nutrition, irregular and unhealthy eating practices, skipping breakfast, light meals, snacking, no or less fruits and vegetables in diet. In a study done by Saratha *et al*, medical students specially females are anemic. Previous studies also reported that medicos are at high risk due to poor eating practices and stress. In India still now gender discriminations, social stigmas and improper self care practices contribute to poor health status among females.

In present study most of the female medicos had mild anemia (26.3%) while 3.5 % had moderate anemia and no one was suffering from severe anemia. These findings also correlate with other studies done on female students. In contrast to present study Pandey S and his colleagues study shows that 68.97% student were mild anemic, 31.03% had moderate anemia and no one was severely anemic. Chaudhary SM *et al*, also reported the similar findings that correlates with Pandey S study. This much difference in the findings may be due to study population difference. As female medicos are highly educated

and deals with health status of our society they have less percentage of anemia as compared to non medical students reported by previous studies.

Apart from good nutrition we need to implement health strategies and policies for eradication of anemia. WHO programmes should be implemented at different levels including government as well other health care providers of the country. Target group specially young ones need iron supplementation. Also awareness, education and motivation is necessary for improving the health status of the population.

CONCLUSION

To conclude female medical students had also anemia in significant grades that might lead to decreased efficiency. As the sample size of the present study is small and the study was conducted in female medicos of only one college so it do not reflects the anemic status of all female medicos of the country. Further studies should be conducted in different parts of world including larger number of female medicos for better outcome and planning strategies.

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