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AN ANEMIC NATION: A FOCUS ON THE PREVALENCE OF ANEMIA

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ABSTRACT

Objective: To assess the frequency of anemia in adults of Pakistan. Introduction; Anemia is a still widely prevalent among the apparently healthy adults of Pakistan. This study is to assess the frequency of anemia in adults without any known blood dyscrasias, or organ compromise. It would enable us to know how grave the situation is and propel us to double our efforts in its eradication. **Methodology:** 100 patients were randomly selected in a cross sectional, observational study from 4th June 2018 till 22nd June 2018 at Creek General Hospital, Karachi, a multicenter tertiary care hospital. The participants were patients from medical clinics aged 18 years and above. Pregnant females, patients under 18years and patients with severe organ insufficiency or blood dyscrasias were excluded. The results showed that out of 28 males, 14 had anemia (50%), whereas, out of 72 females, 49 were found anemic, accounting for 68% of the count. In the study, 12 (12%) patients were found to be smokers from which 7 out of 12 (58%) were anemic. 11 out of 100 patients (11%) were diabetic, out of which 7 presented with anemia (63%). It was seen that 15 out of 23 (65%) women with 0-3 children had anemia. Amongst those who had 4-6 children 56% had anemia (13 out of 23). In the group of mothers with more than 7 children, 9 out of 10 (90%) were diagnosed with anemia. Anemics were more that non anemic in all age groups. **Conclusion:** anemia is widely prevalent in Pakistan.

KEYWORDS: Anemia, hemoglobin, parity, Age groups, Karachi.

INTRODUCTION

The global anemic prevalence is 33% with 1.62 billion people affected worldwide with it being an epidemic in developing nations like Pakistan.1 Although there are multiple factors contributing to this problem, malnutrition due to poverty and lack of awareness of a healthy diet is a major one. Other factors include malabsorption diseases due to hookworm manifestation, intestinal tuberculosis and bleeding disorders due to various reasons. This study is an attempt to assess the gravity of anemia prevalent in a low socioeconomic population of various ethnic communities which visited the outpatient clinic of the tertiary care hospital. This in turn would allow clinicians to be more focused in their management of anemia in the population.

OBJECTIVE

A study to find the prevalence of anemia in a population of a low socioeconomic status.

METHODOLOGY

100 patients visiting the Out-Patient Clinic of the Creek General Hospital,a tertiary care hospital were randomly selected for this observational, crosssectional study conducted from 4th June 2018 - 22nd June 2018. History was taken for presence of diabetes, smoking and number of children in females according to a preset questionnaire. Patients under 18 years, with severe illness, organ deficiency, blood dyscrasias and pregnant women were excluded. The Complete Blood Count (CBC) of these patients was recorded for anemia. The data was analyzed on SPSS 22.

Objective Definitions
Anemia (WHO Criteria) - Hemoglobin levels.[1]
Males: Hg < 13mg/dl.
Females: Hg<12mg/dl.

RESULTS

In the study in 100 patients, 63 (63%) were found to be anemic.
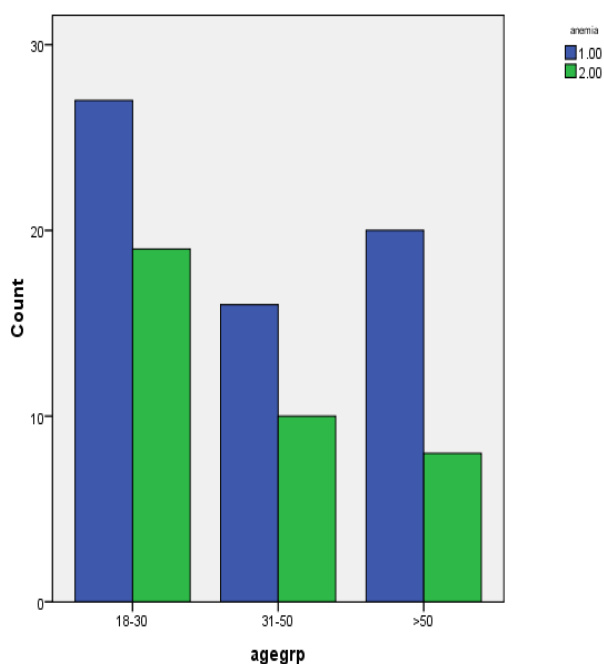
Figure 1: Anemia Prevalence According To Age Groups.

The study showed that there were 72 females and 28 males. Out of 28 males, 14 had anemia (50%), whereas, out of 72 females, 49 were found anemic, accounting for 68% of the count.

In the study, 12 (12%) patients were found to be smokers from which 7 out of 12 (58%) were anemic. 11 out of 100 patients (11%) were diabetic, out of which 7 presented with anemia (63%).

The number of children in females was recorded. It was seen that 15 out of 23 (65%) women with 0-3 children had anemia. Amongst those who had 4-6 children 56% had anemia (13 out of 23). In the group of mothers with more than 7 children, 9 out of 10 (90%) were diagnosed with anemia.

The frequency of anemia was seen according to the age group of people. The results are shown in the figure 1:

DISCUSSION

My study shows a high percentage of anemia in our population in both the genders. This is agreeing to other local studies where the prevalence of anemia has been high which stresses on the fact that this low hemoglobin in our society is to be tackled urgently and effectively. A similar study done in Peshawar[4] showed that 66% of the patients were anemic. Another study done in Rural Sindh[5] demonstrated that 69.75% of the population was anemic suggesting that anemia is a nationwide concern in both rural and urban area. Fig. 2 is a comparison of the severity of anemia among the regions of Pakistan.[6,7]
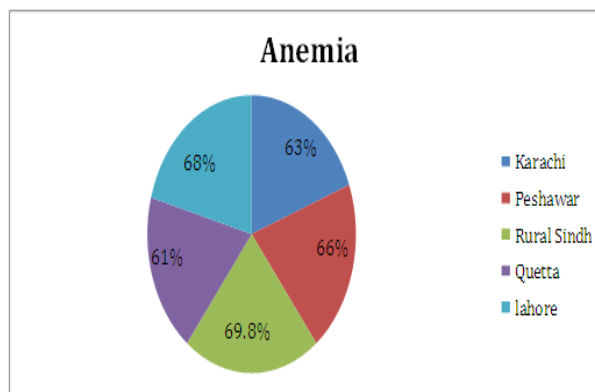
Figure 2: Anemia Prevalence In Various Regions Of Pakistan.

The wide prevalence is primarily due to malnutrition, malabsorption and chronic diseases. The unhygienic environment leading to chronic worm and parasitic infestation also worsens the situation.[8] Our study showed a higher prevalence in females due to not only hormonal cycles but also due to the generalized norm of our male dominated society where males are given preference in health and education. This neglect, lack of education and lack of care that the females are facing contributes to a breed of unhealthy malnourished mothers which in turn leads to neglected children which is agreed by Ghazala in her Abbotabad study.[9]

An eye opener is the high prevalence of anemia in apparently healthy males whereas it is generally thought that anemia is a condition attributed to females. This was emphasized by Nageen.[10] in her research on anemia in males. The rampant tendency towards various forms of addiction like gutka, niswar, tobacco has exacerbated the prevalence of anemia. There is a higher tendency of males to eat junk food and unhealthy food due to their exposure to such FAD diet being away from home either due to work or pleasure which then leads to gastritis and lower gastrointestinal chronic blood loss. The smokers were considerably more anemic than nonsmokers in spite of the fact that smokers generally have secondary polycythemic physiological response which is a grave sign.[11] Smoking is associated with gastritis, loss of appetite and chronic respiratory infections which would then lead to nutritional deficiencies and an overall ill health.[12]

Diabetes is a chronic illness and anemia of chronic disease exists in them which can only be annihilated if their sugar control is achieved.[13] Renal profile also plays a very important role in minimizing the risk of anemia.[14] Our results showed that a very high percentage of diabetic patients with anemia pointing to the poor control of diabetes and its complications explained by Bonakdaran.[15] as well.

Pakistan is a highly populated country with early marriages and multiple pregnancies among its women being a serious issue because of the malnourishment and

ill health that prevails in the mothers and the children as well.[16] Women were higher parity are bound to be anemic because of the lack of supplements, lack of nourishment as per body requirement and blood loss that follows. A male privileged society adds to the woes of women here. An Indian study agreed that anemia was more common with high parity.[17]

The study is an eye opener into the gravity of the situation with anemia taking its toll on the health of the community as a whole which then affects the overall being of the country's economic growth.[18,19] The clinicians should be high alerted into the wide prevalence of anemia even in those appearing healthy and hence required intervention be done to eradicate it. The government needs to construct a targeted program which should include food fortification with micronutrients, health education about a balanced diet and hygiene on a community level and in schools through trained health personnel and electronic messages.[20] An anemia free nation would increase the quality life of an individual and in turn the whole nation.

CONCLUSION

Prevalence of anemia is very high in population of a low socioeconomic status.

LIMITATION OF STUDY

The study had a limited sample size and was hospital based. It should be further extended to be a community based study with a larger sample size.

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