Review of 100 Inpatients at TCMH with Haemoglobin of 10 gm. percent or less

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SUMMARY:

Studying retrospectively the case records of 1713 consecutive admissions in T. C. Military Hospital over the last 10 months, a total of 100 cases with Hb less than 10gm% were noted. Hb of 10gm% or below was taken arbitrarily in this review to mean 'anaemic'. Anaemia was most commonly found associated with chronic infections. This was closely followed by anaemia due to bleeding, a sizable number of which was due to hookworm infestation. In only 32 of these cases peripheral blood picture was available, the commonest morphology being normocytic and hypochromic. Only in 14 of these cases the diagnosis of anaemia was made primarily.

INTRODUCTION:

Anaemia is a common problem encountered in daily practice, though less among the enlisted men, due to adequate screening during recruitment, easy access to medical facilities during their tenure of service and provision of good diet. This study, included retired personnels and families of enlisted and retired army personnels, but they are few in number.

The purposes of this study are:

- a) to study the number of cases of anaemia with Hb of 10 gm% or below in a give fixed time,

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- b) to find the aetiological factors responsible.
- c) to classify the morphological type of anaemia and
- d) to offer any prophylactic suggestions.

METHOD:

The case records of all indoor admissions at T. C. Military Hospital from 1st Magh 2034 to 29th. Kartik 2035 were scrutinised, and any patient whose Hb was 10 gm% or below during the stay in hospital was noted. Age, sex, Hb%, morphology of red blood cells, diagnosis and other relevant findings were recorded and tabulated. Admissions from all the departments of T. C. Military Hospital were included. They were mainly from the army and the police, but there were some exservicemen and families of army and exservicemen as well.

OBSERVATIONS:

Admissions:

Year	Month	No. of Admissions	Total	Average Monthly Admissions.
2034	Magh	122	420	171.3
	Falgun	163		
	Chaitra	135		
2035	Baisakh	153	1293	
	Jestha	232		
	Ashadh	211		
	Shrawan	218		
	Bhadra	150		
	Aswin	190		
	Kartik	139		

Admissions were maximum during summer months, and the highest being 232 in the month of Jestha, and the lowest in those 10 months was 122 in the month of Kartik. This gives the impression that the admissions were less during winter months confirming with the general impression. The average monthly admission in this hospital was 171.3 as calculated in those 10 months.

Sex distribution:

Male	Female	Total
83	17	100

From this figure it appears that anaemia is 5 times more common in male than female. This is misleading and it is due to the fact that this hospital provides medical care essentially to the army and the police and exservicemen, in which female population is very few in number, and family members admitted are also limited in number. So if it is seen in true perspective of population of both sexes that were admitted in that period, the proportion of cases of anaemia will be more in female population. Only 79 females were admitted in the same period as 1634 males.

Age distribution :

The maximum number of cases is found in the young adult age group, 16-35, it being 61 out of 100. This is again due to the fact that the maximum number of cases admitted is of this group i.e. in this survey 1045 cases out of 1713.

Aetiological factors :

The aetiological factors responsible for anaemia are listed.

below (in decreasing order of frequency)

1. Infections (45 cases)

Tuberculosis- Pulmonary Tuberculosis, Tubercular meningitis

Liver Abscess- Amoebic, Pyaemic

Other abscesses

Urinary tract infection

Chest infection- chronic, acute

Enteric fever

2. Bleeding (38 cases)

Hookworm infestation (23 cases)

Duodenal ulcer- with frank bleeding

- without bleeding

Aspirin medication

3. Auto-immune diseases (6 cases)

Acute nephritis

Nephrotic syndrome

Rheumatoid arthritis

4. Malignancies (6 cases)

Breast

Colon

Abdominal

Pleura

5. Nutritional (4 cases)

6. Bone marrow defect (4 cases)

Depression

Chronic myeloid leukaemia

Multiple myeloma

7. Haemolytic (3 cases)

Malaria

Jaundice

8. Chronic renal insufficiency (1 case)

9. Not known (5 cases)

Hydrocoele

Inguinal hernia

Gastroenteritis

The total is 112, and the discrepancy is due to more than one factor being responsible for anaemia,

Morphological pictures :

The morphological picture was available only in 32 cases out of the 100. They are as follows:

Normocytic, hypochromic.....19

Normocytic, normochromic.....7

Microcytic, hypochromic.....3

Microcytic, normochromic2

Normochromic with anisocytosis and

poikilocytosis.1

32 - Total

OTHERS :

Out of 100 cases only 14 were given the diagnosis of anaemia, and the rest of the 86 were put in this 'anaemic' group as Hb was found to be equal to or below 10 gm% on review.

DISCUSSION :

In T. C. Military Hospital approximately 2000 cases are admitted in a year at the rate of 171.3 per month; and anaemia was found in 5.8% of the admitted cases.

45% of those anaemia are associated with infections which are usually chronic in nature. There is a mild haemolytic element as evidenced by reduced red cell life span, and the bone marrow is unable to compensate the haemolysis by increase in red cell production. The impaired bone marrow response is supposed to be due to (a) disturbance of erythropoietin production or utilisation, and (b) disturbance of iron metabolism with its impaired flow from the reticuloendothelial system to the bone marrow. Anaemia is usually of mild or moderate severity, and is of normocytic, normochromic picture. The bone marrow shows no diagnostic features and is usually of normal or moderately increased cellularity. The myeloid-erythroid ratio may be increased. The iron content is normal or increased. The anaemia is corrected by treating the infection and iron therapy, and other haematinics are ineffective and so not indicated usually. This can be prevented or reduced in severity by early diagnosis of infection and prompt treatment.

38% of anaemia were due to bleeding, and 23% were due to hookworm infestation. Hookworm infestation is quite common in our country. However to produce clinical anaemia there should be heavy infestation, and for prolonged period. Dietary deficiency and other concurrent illnesses may accelerate the process. Along with the blood loss, iron is lost. First the stored iron is depleted, and Hb starts decreasing. Each hookworm usually ingests 0.03 - 0.15 ml of blood in 24 hours, and in heavy infestation over 1000 worms may be harboured. Adequate toilet facilities and proper sanitation and foot wear, facilities for diagnosis and treatment, health education and improvement in socio-economic condition will drastically reduce the incidence of this type of anaemia. The anaemia may be of severe degree, and one case of hookworm infestation was admitted with Hb as

REFERENCES:

1. Gilles M.H.: Gastro-intestinal helminthiasis. (May 1968) B. M. J. No.56 12 Vol.3 Pp. 475-478
2. Thompson R. B.: Anaemia as a manifestation of systemic diseases. The practioner: No. 1159 Vol. 199 Pp.46-50.
3. Wintrobe M. M.: Clinical Haematology, Lea & Febiger.

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