

A case of nutritional anemia

Lalit Une^{1*}, Sharad Bansal², R C Mahajan³

¹Professor, ²Associate Professor, ³Lecturer, Department of Paediatrics, IIMSRC, Warudi, Jalna, Maharashtra, INDIA.

Email: lalit_68@yahoo.com, drsbansal@hotmail.com

Abstract

A 9 year old girl presented with long standing anemia, reduced appetite, skin infections. Patient was from poor socio economic background with minimal food intake at time of hospitalization. She was treated with hematinics, blood transfusion, albendazole, antibiotics for skin infection, therapeutic diet, counseling. She responded well with this therapy.

Key Words: Nutritional Anemia.

*Address for Correspondence:

Dr. Lalit Une, Professor, Department of Paediatrics, IIMSRC, Warudi, Jalna, Maharashtra, INDIA.

Email: lalit_68@yahoo.com

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INTRODUCTION

Nutritional anemia is condition in which HB concentration of given individual is below the normal due to deficiency of one or more nutrient needed for haemopoiesis. haemoglobin can be increased by supplementation of iron, folate, vitamin b12, protein and vitamin E. IDA, Iron deficiency anemia is most widespread nutrient deficiency globally. According to 3rd NFHS3, Nutritional family health survey 79% Indian children have anemia including 71% urban 84% rural.

CASE REPORT

Bhumika Bhagwan Nikam, 9 years resident of shendra midc Aurangabad, younger daughter of 2 siblings elder one who is 15 years old, father left the family permanently before 9 years when mother was pregnant 3 months with this patient. This girl was hospitalized on 22nd December 2014 with chief complaint of

1. Generalized weakness
2. Puffiness of face
3. Intermittent fever
4. Skin infections

These symptoms were persistent since 5 to 6 months for this taken treatment from local doctor with no relief. No history of bleeding from any site, trauma, breathlessness. No past history of any major illness, hospitalization. Family history- they are staying with maternal uncle, poor socio-economic condition, mother is doing some daily wages work. Due to illness this child could not attend school for the last 6 months. Immunization-she is completely immunized for her age, took last dose as opv, dpt as second booster.

Anthropometry weight -20Kg

Height-117cm

MAC-15cm

Diet-total intake of this child was very poor at the time of hospitalization, she used to take tea, half bhakri, bhaji only, accounting 230calories and 7 grams protein.



On examination

General condition -poor

Afebrile

platynychia

stomatitis

Anemia++

Heart rate-92 per minute

RR-22 per minute

BP-90/70 mm of hg

Skin infections over limbs, multiple boils

Swelling over cheeks present

No signs of CCF

Systemic examination

CVS-S1S2 normal

No murmur

RS, CNS, PA-Within normal limit

This child was hospitalized with provisional diagnosis of severe anemia, nutritional with skin infection.

Her investigations are

HB-3.7gm%

RBC-2.6m/cmm

PCV-13.6%

MCV-52.1fl

MCHC-27.2g/l

RDW-20.4%

TLC-11,000/cmm

DLC- P72 L24 E1 M3

Platelets-4060000

PS-Microcytic hypochromic

Severe anisopoikilocytosis

Few normo blast seen

Opinion-microcytic anemia.

Reticulocyte count 7%, corrected 2.1%.

Sickling negative

CXR-Normal

USG Abdomen normal

HIV non-reactive

KFT, LFT-within normal limit

This girl had severe anemia, multiple boils still was not in congestive cardiac failure due to long duration of illness, compensated stage.

Management

Assurance, counselling, diet advice, psychological support.

This child was started with

IV fluids

Albendazole

HPD

PCV transfusion

Injection cefuroxime

Multivitamins

Syrup tonoferon

Folic acid

This child responded very well with above therapy. She was hospitalized for 12 days, her irritability reduced, appetite improved, wanted to attend school again which she missed since last 6 months. Given transfusion on day 3, her post transfusion HB was 6.5 gm%.

DISCUSSION

Etiology of anemia in this child is multifactorial, iron deficiency, protein calories deficiency, poor socioeconomic condition, recurrent subclinical infections, worm infestations. The prevalence of anemia in urban slums school children age 5-13.9 years was found to be 41.8 %³. Demaeya *et al* reported the prevalence of anemia in 6-12 years is 36%⁴. While study among 5-15 years old urban and school children of Punjab it was 77%⁵. The prevalence was as high as 93% in children from Varanasi⁶. Wide variation in prevalence of anemia in different studies could be explained on the basis of heterogeneity of population, dietary pattern different nutritional status and incidence of worm infestation. The HB levels at which symptom appear depends upon rate of development of anemia. The most common and early symptom is easy fatigability, anorexia, poor school performance. Dyspnea on exertion, tachycardia and palpitation indicate severe anemia. Delayed and inadequate weaning with milk based diet results in poor iron intake. Usually occurring 6 months -2 years of age. Other causes include chronic diarrhoea, cow's milk allergy. Adolescent are particularly susceptible due to increased micronutrient requirement during growth spurt and in girls menstruation and or pregnancy.

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