

THE VALUE OF FOOD: A NECESSARY RHETORIC

Ekem IAE

School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana

Summary

Food is a basic necessity of life. It provides nutrients, which in turn provide energy, required not only for daily activity through various physiological functions, but for growth, repair and immunity. It follows logically that with optimal nutrition, health is granted and ill-health distanced. This, however, is not the premise from which the general populace, the medical and pharmaceutical establishments, and governments discuss health. The populace eats to taste and satisfaction; the healthcare apparatus exists to attend to the sick; and the health

budget is on hospitals, equipment, drugs and emoluments of the health work force. The attention given to the content of food by the community, the space occupied by food and nutrition in medical school curricula, and policies on food and nutrition by governments are testaments to this. In this write-up, the value of food is illustrated with a clinical case, and recommendation to raise the attention paid to food and nutrition from the current level is made.

Literature

Malnutrition affects health in a totality that is generally oblivious¹ to both patient and caregiver. The extent of damage only becomes obvious after correction. Health is “a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity”.² The wealth of a nation depends on the health of its people. In this piece, an allegation is made that disease is first and foremost caused by malnutrition in either content and/or quantity. The causes of ill-health as narrated in average medical literature are inherited and acquired, with the latter predominating (i.e., microbial, degenerative, and malignant). Good nutrition will forestall all these by a healthy immune system, optimal growth and repair, and a well-developed cognitive function.^{3,4,5} This would aid critical thinking, resulting in positive health actions and avoidance of uncalculated risks.

An Illustrative Case

A 23 year old female was referred to the haematology clinic in November 2020 on account of severe anaemia (Haemoglobin {Hb} – 5.5g/dl). The significant finding on interrogation via history was an unbalanced diet. This young lady, although with a normal body mass index (BMI), was attempting to lose weight to improve her looks. Examination finding of significance was pallor. She was counselled on proper nutrition as management without medication. Her Hb three months later was 11.2g/dl. She was visibly excited. The Full Blood Counts (FBCs) on both occasions are shown in the table below. Notably, it was not only the Hb that improved; all the parameters changed positively.

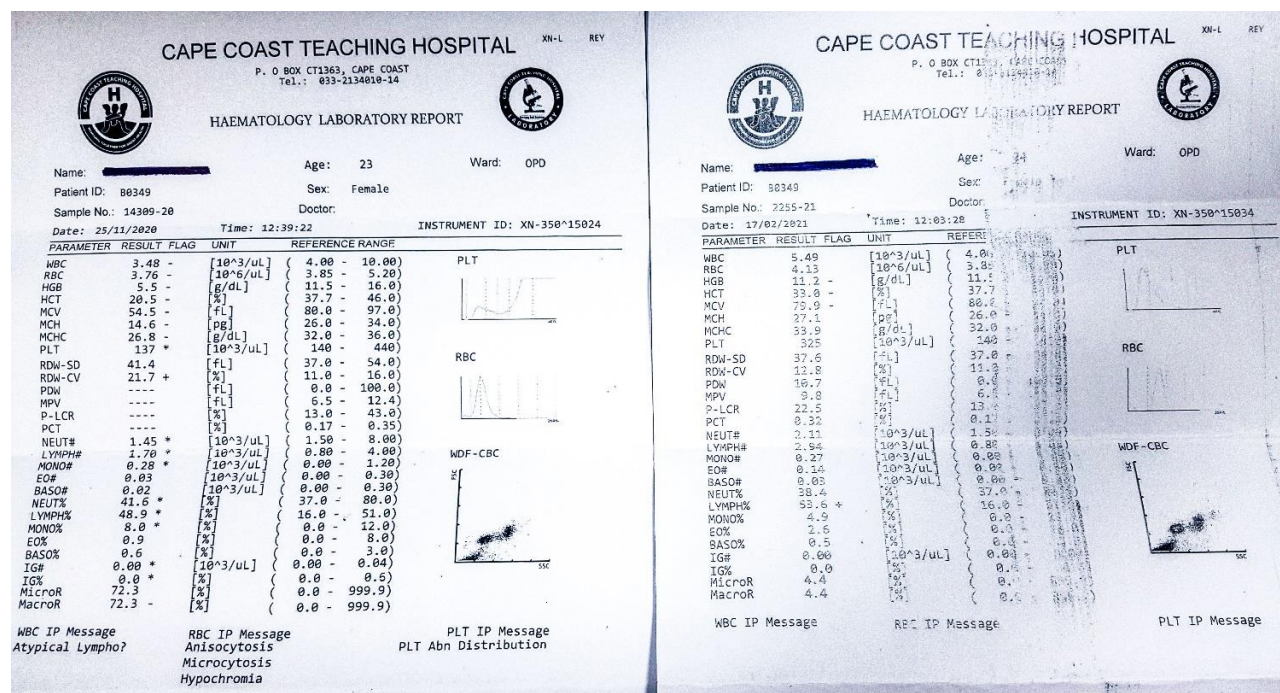
Corresponding Author: Prof Ivy A.E. Ekem
 School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana
Phone Number: +233(0) 27771955
Email Address: ekem_ivy@hotmail.com
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Table 1 Full Blood Count Before and After Dietary Intervention

Parameter	WBC x 10 ⁹ /l	RBC x 10 ¹² /l	Hb g/dl	HCT %	MCV fl
FBC Nov 2020	3.48	3.76	5.5	20.5	54.5
FBC Feb 2021	5.49	4.13	11.2	33	79.9
Comment ↑ or ↓	↑ 58%	↑	↑ 192%	↑	↑
Parameter	MCH Pg	MCH C g/dl	PLT x 10 ⁹ /l	RDW SD fl	RDW CV %
FBC Nov 2020	14.6	26.8	137	41.4	21.7
FBC Feb 2021	27.1	33.9	325	37.6	12.8
Comment ↑ or ↓	↑	↑	↑ 137%	↓	↓
Parameter	NEU x 10 ⁹ /l	LYM x 10 ⁹ /l	MON x 10 ⁹ /l	EO x 10 ⁹ /l	BAS x 10 ⁹ /l
FBC Nov 2020	1.45	1.70	0.28	0.03	0.02
FBC Feb 2021	2.11	2.94	0.27	0.14	0.03
Comment ↑ or ↓	↑	↑	↓	↑	↑

Key: FBC – Full Blood Count; WBC – White Blood Cell count; Hb – Haemoglobin; HCT – Haematocrit; MCV – Mean Cell Volume; MCH – Mean Cell Haemoglobin; fl – femtolitres; pg – pictograms; MCHC – Mean Cell Haemoglobin Concentration; PLT – Platelet count; RDW – Red cell Distribution Width; SD – Standard Deviation; CV – Coefficient of Variation; NEU – Neutrophil count; LYM – Lymphocyte count; MON – Monocyte count; EO – Eosinophil count; BAS – Basophil count; Feb – February; ↓ - Decreased; ↑ - Increased.

The photomicrographs are attached as Picture 1
Picture 1: Photomicrographs of the FBC before and after



Taking the three main parameters individually, the haemoglobin (Hb) went up by 192%, the white cell count (WBC) by 58%, and the platelets (Plt) by 46%.

Discussion

This patient had a false notion of herself. There is the possibility that poor nutrition by itself contributed to this. Iron which is the major mineral component of haemoglobin is a requirement for the carriage of oxygen for all the body’s functions. In its deficient state, there is poor cognitive function, sluggish metabolism,⁶ and thus reduced global physical and mental activity. The white cells are required for protection against foreign invasion,⁷ be it microbes or oncogenic activity; platelets are a requirement for normal haemostasis.⁸ The effect of malnutrition is worst on children where brain development is at its peak. In our communities in Africa where anaemia, and iron deficiency specifically in some populations are as high as 73% and 64% respectively,⁹ can it be said that the cognitive development of a great majority is jeopardized even before school? Is the substandard perception of one’s abilities a surprise? Could the socio-economic and leadership woes in these environments be attributable to suboptimal childhood development? Could the differences in FBCs noted across various ethnic populations be nutrition-related? How about the differences in disease patterns? Could we possibly attribute the differences in national developments to nutrition? Maybe, just maybe, nutrition is the great leveller. I invite all to investigate. While waiting for peer review and double-blind studies, feed yourself and those you care for properly, where feeding properly means an adequate mix of protein, carbohydrate, fat,

minerals and vitamins (from fruits and vegetables) in quality and quantity at every meal.

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