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Malnutrition in Children

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Abstract

Childhood malnutrition is a dietary deficiency that is caused by a lack of food, an eating disorder or a chronic health condition that hinders the absorption of the necessary nutrients required by the body. This is a threat because it contributes to the deaths of 45 percent of children below the age of 5. Addressing malnutrition requires multiple actions that can be spearheaded by the various sections of public health. Academic institutions play a role in carrying out research, but there is still a need for coordination on the part of the UN agencies and the various governments of affected countries [1]. Malnutrition manifests alongside other diseases, which may have a negative bearing on the life of a child. However, earl detection helps mitigates these negative effects but it is highly dependent on the educational levels and socio-economic status of the caregiver. The main challenge for players in the public health sector is to eradicate all causes of malnutrition, but this begins with the specific governments [2].

Objective: To examine carefully a malnutrition case

Methods: History, examination, investigation, diagnosis, and treatment

Results: The patients' health did improve

Conclusion: Precise diagnostic measures should be carried out to identify the symptoms of malnutrition and certain treatment measures should be applied

Keywords

Malnutrition; Public Health; Diet; Access

Introduction

The World Health Organization defines malnutrition as the cellular imbalance caused between energy and nutrients and the body's requirements to carry out growth and other related functions. Larson-Nath and Goday state that malnutrition predisposes children to other diseases and its treatment is made possible through the consumption of foods from all food groups, keeping in mind to use locally available products [3]. There are preventive measures against malnutrition, but it requires the input of both the mother and the healthcare providers. This case study analyzes the various causes of malnutrition, treatment options and other ways of preventing future cases. Aside from this, extreme cases of malnutrition in children above the age of 5 are irreversible, with the effects manifesting not only physically but mentally up to adulthood. It is therefore recommended that caregivers not only attend clinics regularly but also check in their children at health facilities when their level of activity is significantly lower and is characterized by sleepiness, shortness of breath and signs of weakness [4].

Method

This girl was brought to a health clinic in rural Jordanian by her mother and older sister after they noticed that she had stopped concentrating on her school work and spent most of her time sleeping in the family's home. Her mother said that she was seven years old, but her physique showed her to be slightly below the age of 6. Apart from this, the health worker also noticed that the girl was extremely short for her age, she displayed fatigue and constantly cried to her mother about her aching bones. She had little muscle mass and weighed below the required limit for children her age. As they waited for medical attention, the patient was irritable and showed crankiness, refusing to drink the water that her mother offered her. The nurse collected this information, and further tests were carried out to determine whether there were other diseases other than the apparent lack of nutrition. F100 was then administered; this is a therapeutic milk formula that aids in the alleviation of severe malnutrition as well as supplies the body with ions and energy before solid foods are introduced in the course of the day. In April 2016, the UN General Assembly resolved to adopt the UN Decade of Action on Nutrition 2016 – 2025, whose aim is to catalyze the

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policy commitments that would result in measurable actions that address the issues related to malnutrition.Larson-Nath and Goday state that malnutrition predisposes children to other diseases. The reasons for this are multifactorial and may possibly be associated with other underlying diseases (2019). This case study analyzes the various causes of malnutrition, treatment options and other ways of preventing future cases.

Examination

It was determined that this patient was not only suffering from typhoid, but she was displaying the classic symptoms of acute malnutrition. She was given a multivitamin tablet, and Oral Rehydration Salt (ORS) was administered to help in the restoration of fluid and necessary electrolytes. The on-call pediatrician also prescribed ceftriaxone and albendazole to combat the infection that was caused by parasites and iron to help in the restoration of the blood quality [5]. Additionally, F100 was administered; this is a therapeutic milk formula that aids in the alleviation of severe malnutrition. The patient recovered and the clinic's nutrition team counseled her mother on her condition and she was advised to provide a more nutritious diet. Her mother stated that her daughter had stopped eating fish after she fell ill when she was four years old. She also hated some fruits and vegetables which were abundant in their locality. Her mother was advised to broaden the diet to include as many vitamins as possible in order to replace the nutrients her body was missing [6]. The head nutritionist also gave the mother a list of foods that were readily available in her village; they were also affordable. The interactions between infection and undernutrition can create a lethal cycle of not only deteriorating nutritional status but also worsening illnesses as the individual grows older. During the first 1000 days, poor nutrition also leads to stunted and impaired cognitive ability as well as a reduced performance in school.

Discussion

WHO defines malnutrition as a cellular imbalance caused between energy and nutrients and the body's requirements to carry growth and other related functions? A balanced diet is necessary for a child's development, but in their absence, the child manifests non-communicable diseases, micronutrient deficiencies and the wasting of body mass. This case can either refer to undernourishment or overnutrition. Undernutrition sets in when there is an intake of insufficient proteins and calories, while overnutrition is the excessive intake of nutrients, more than the body requires for metabolism and development. Nutrition levels are a determinant of both child and maternal health and account for up to 10 percent of the world's disease burden and breastfeeding or pregnant women and children under the age of 5 are more likely to develop malnutrition [7]. Malnutrition is a problem that hinders the attainment of the SDGs because poorly fed children lack the mental and physical capacity to function on their own. It leads to cardiac dysfunction, oral hygiene problems, and anaemia [4]. Lenters et al. [8] state that the management of acute malnutrition has political and economic contexts that has to be addressed. The predictors of malnutrition are often in the form of illnesses, which when ignored, may result in dire effects. The measures of child nutrition are useful in tracking development processes, and this determines whether the Sustainable Development Goals remain attainable or not, especially the second goal, which is to 'end hunger, achieve food security and improved nutrition, and promote sustainable agriculture'.

Treatment of malnutrition

The treatment of malnutrition needs to address all underlying conditions and to replace the nutrients which may be missing from the body. This is, however, only possible upon seeking a professional medical opinion. According to Lelijveld [9], there is an apparent absence of guidance on what form of treatment would work for moderate acute malnutrition (MAM), which is often the case in extreme clinical diagnoses (2019). It remains unclear whether counselling or using food products is effective, or the combination of both methods.

Dietary supplements and changes

The mother was placed under the guidance of dieticians. Their role was to develop a diet plan to ensure that the patient gets sufficient nutrients. A healthier, balanced diet was recommended, and this includes the consumption of fortified foods and drinks that are high in nutrients. A study conducted in Niger established that dietary diversity remains the best response to treating malnutrition. This is not only safe but also cost-effective, especially when using traditional or organic foods. This helps in minimizing medical costs and improving the child's condition [10]. However, in third world countries that produce their own traditional foods, malnutrition is caused by the excessive consumption of one type of food, for instance, carbohydrates or vitamins, thereby leading to protein deficiency. Children under the age of five should be breastfed regularly if the mother is able to. In addition, the mother should consume foods that are high in protein when she is breastfeeding. If the baby is past weaning, protein-rich foods should be introduced.

Support and care services

Parents who have malnourished children receive care from social care officials and other visitors who can help in the preparation of food. An occupational therapist also plays a role in identifying the problems with their diets.Wherever possible, material support should be provided for these families so that they can better manage their child's nutritional intake. Rahman [11] further states that seeking dietary support during and after pregnancy is dependent on the mother's level of education and her socio-economic status. The patient's mother was married off early, and this explains why she was unable to diagnose that her child was suffering from malnutrition.

Prevention

Preventing malnutrition requires the consumption of a healthy and balanced diet. This is not only vital for the body organs, but it also helps in the proper development of growing children. This involves eating foods from all the main groups, and especially plant and animal protein.

a) **Improving the healthcare system:** Systems that are efficient are necessary in preventing the rising cases of malnutrition in children. This can be done by making available information regarding feeding and weaning. Smita and Rathore [12] conducted a survey of 100 mothers in arural setting. It was discovered that deep-seated customs and beliefs prevented them from adequately feeding their children. The role of healthcare facilities then is to not only provide a diagnosis but to carry out sensitizations on the advantages and necessity of exclusive breastfeeding, of feeding children with nutritious foods and how to maintain proper levels of sanitation.

b) **Early detection:** A properly documented growth chart can help in the early detection of malnutrition. At a given time, the emphasis is placed on the velocity of growth rather than the child's weight. The presence of a flat curve on the child's chart is an indication of a problem and can be arrested and handled. The maintenance of this chart is done using anthropometric indices such as chest circumferences, weight, and height mid-arm circumference, among others [13].

c) **Nutritional supplements:** Vulnerable groups that are biologically vulnerable are the target groups for efforts made by governments to guarantee health. Providing the patient with supplements not only helped regain her balance, with the main objective being accelerated physical growth and rehabilitation [14].

Conclusion

Malnutrition in children is characterized by the lack of appetite for either drink or food, low body temperature, loss of muscle and fat and a prolonged healing time for wounds. In some cases, they have a lower immune response to illnesses. Child malnutrition affects not only affects their educational achievements but also their long-term ability to be economically productive. Mental impairment that is caused by iodine deficiency in the system is not only irreversible but is also directly linked to loss of productivity [15]. The interactions between infection and undernutrition can create a lethal cycle of not only deteriorating nutritional status but also worsening illnesses as the individual grows older. During the first 1000 days, poor nutrition also leads to stunted and impaired cognitive ability as well as a reduced performance in school [16]. In April 2016, the UN General Assembly resolved to adopt the UN Decade of Action on Nutrition 2016–2025, whose aim is to catalyze the policy commitments that would result in measurable actions that address the issues related to malnutrition.There are preventive measures against malnutrition, but it requires the input of both the mother and the healthcare providers. Treating malnutrition is made possible through the consumption of foods from all food groups, keeping in mind to use locally available products [17].

References

1. Hawkes C, Demaio AR, Branca F. Double-duty actions for ending malnutrition within a decade. The Lancet Global Health. 2017 Aug;5(8):e745-e746.
2. Buckinx F. The Public Health Challenge of Ending Malnutrition: The Relevance of the World Health Organization's GINA Database. Asia Pac J Public Health. 2018 Oct; 30(7):624-628.
3. Larson-Nath C, Goday P. Malnutrition in Children with Chronic Disease. Nutrition in Clinical Practice. 2019 Apr; 34(3):349-358.
4. Solechah M, Satriyandari Y, Astuti DA. Effect of Malnutrition on the Occurrence of Anemia: A systematic literature review. In Proceeding International Conference. 2019;1(1):472-478.
5. Harris JB, Brooks WA. Typhoid and paratyphoid (enteric) fever. In Hunter's tropical medicine and emerging infectious diseases. Content Repository Only! 2020; 608-616.
6. Smolinske SC. Dietary Supplements in Children. Pediatric Clinics. 2017 Dec; 64(6):1243-1255.
7. Mahmoudiono T, Segalita C, Rosenkranz RR. Socio-ecological Model of Correlates of Double Burden of Malnutrition in Developing Countries: A Narrative Review. Int J Environ Res Public Health. 2019 Oct;16(19):3730.
8. Lenters L, Wazny K, Bhutta ZA. Management of severe and moderate acute malnutrition in children. Reproductive, Maternal, Newborn and Child Health. 2016;208.
9. Lelijveld N, Beedle A, Farhikhtah A, Elrayah EE, Bourdaire J, et al. Treatment of moderate acute malnutrition using food products or counseling: A systematic review. Field Exchange. 2019;60: 43.
10. Madzorera I, Duggan C, Berthe F, Grais RF, Isanaka S. The role of dietary diversity in the response to treatemnet of uncomplicated severe acute malnutrition among children in Niger: a prospective study. BMC Nutrition. 2018 Sep;4(1):35.
11. Rahman MS, Howlader T, Masud MS, Rahman ML. Association of low-birth weight with malnutrition in children under five years in Bangladesh: do mother's education, socio-economic status, and birth interval matter? PloS one.2016; 11(6):p.e0157814.
12. Smita B, Rathore SS. Impact study on the prevention of malnutrition in children through amylase-rich weaning food. HortFlora Research Spectrum. 2018 Jul; 7(2):171-173.
13. Scherdel P, Dunkel L, van Dommelen P, Goulet O, Salaun JF,et al. Growth monitoring as an early detection tool: a systematic review. The lancet diabetes and endocrinology. 2016 May; 4(5):447-456.
14. IpP, Ho FKW, Rao N, Sun J, Young ME, et al. Impact of nutritional supplements on cognitive development of children in developing countries: a meta-analysis. Scientific reports. 2017; 7(1):10611.
15. Batista TH, Veronesi VB, Ribeiro ACAF, Giusti-Paiva A, Vilela FC. Protein malnutrition during pregnancy alters maternal behavior and anxiety-like behavior in offspring. Nutritional neuroscience. 2017 Oct; 20(8):437-442.
16. Hashim NHR, Harith S, Bakar RS, Sahran NF. Prevalence and Risk Factors Associated with Malnutrition among Children with Learning Disabilities: A Scoping Review. Malaysian Journal of Nutrition. 2017;23(1).
17. Ahmed T, Hossain MI, Islam M, Ahmed AS, Afroze F, Christi MJ. Protein-Energy Malnutrition in Children. In Hunter's Tropical Medicine and Emerging Infectious Diseases. 2020;1034-1041.