LAMPIRAN

Lampiran 1. Jurnal Asupan Protein dan Vitamin E Berhubungan dengan Kadar Hemoglobin Pasien Talasemia di RSU Kabupaten Tangerang

ARGIPA. 2020. Vol. 5, No.1: 18-26
Available online: https://journal.uhamka.ac.id/index.php/argipa
p-ISSN 2502-2938; e-ISSN 2579-888X
DOI 10.22236/argipa.v5i1.3922

ASUPAN PROTEIN DAN VITAMIN E BERHUBUNGAN DENGAN KADAR HEMOGLOBIN PASIEN TALASEMIA DI RSU KABUPATEN TANGERANG

Protein and vitamin e intake are related to hemoglobin levels in thalassemia patients in The Tangerang Regency Hospital

Humaira Difaura Rahman
Program Studi Gizi, Fakultas Ilmu-Ilmu Kesehatan, Universitas Muhammadiyah Prof. DR. Hamka, Jakarta, Indonesia
Email korespondensi: humairadifaurarahman@gmail.com

ABSTRAK

Talasemia merupakan penyakit genetik yang diturunkan dari orang tua ke anak melalui DNA yang menyebabkan sel darah kekurangan rantai globin. Anak-anak penderita talasemia mengalami peningkatan pengeluaran energi, kekurangan vitamin dan mineral sehingga berdampak pada keadaan malnutrisi yang akan berakibat langsung pada tumbuh kembang penderita talasemia. Tujuan dari penelitian ini adalah untuk mengetahui hubungan asupan protein, zat besi, vitamin C, vitamin E, dan status gizi dengan kadar hemoglobin pasien talasemia di RSU Kabupaten Tangerang. Subjek penelitian ini yaitu pasien talasemia yang berjumlah 29 orang. Metode penelitian yang digunakan adalah *cross-sectional*. Pengambilan sampel ini dengan teknik *quota sampling* dengan uji korelasi *Pearson Moment Product*. Data asupan protein responden rata-rata 96%, asupan zat besi rata-rata 72,5%, asupan vitamin C rata-rata 79,5%, asupan vitamin E 51,1%, z-score rata-rata -1,59 SD, dan kadar hemoglobin 8,1 g/dl. Hasil penelitian menunjukkan bahwa asupan protein dan asupan vitamin E berhubungan dengan kadar hemoglobin, sedangkan asupan zat besi, asupan vitamin C, dan status gizi tidak berhubungan dengan kadar hemoglobin.

Kata kunci: Asupan Protein, Kadar Hemoglobin, Talasemia, Vitamin E

ABSTRACT

Thalassemia is a genetic disease that are passed from parents to children through DNA which causes blood cells to lack globin chains. Children with thalassemia experienced an increase in energy

Lampiran 2. Jurnal Analisis Faktor-faktor yang Berhubungan dengan Asupan Makanan Pasien Thalasemia di RSUD Banyumas

ANALISIS FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN ASUPAN MAKANAN PASIEN THALASEMIA DI RSUD BANYUMAS

THE ANALYSIS OF FACTORS RELATED TO FOOD INTAKE ON THALASSEMIA PATIENT IN BANYUMAS HOSPITAL

Betty Irmawati[1] ; Agus Prastowo[2]; J. Supadi[3] Mohammad Jaelani[4]; dan Yuniarti[5]

[1]Mahasiswa Jurusan Gizi Poltekkes Kemenkes Semarang
[2] RSUD Prof. Dr. Margono Soekarjo
[3,4,5]Dosen Jurusan Gizi Poltekkes Kemenkes Semarang

ABSTRACT

Background : *Nutritional deficiencies in long time can impair growth in thalassemia children, and the low energy reserves and existence of hypercatabolic make nutrition status of children leading to wasting condition. Result of initial survey in Instalation of Integrated Thalassemia Service, Banyumas Hospital, energy intake on thalassemia patient 54% is deficiency category.*

Objective : *To find factors related to food intake on thalassemia patient who receive regular blood transfusion in Banyumas Hospital.*

Methods : *The kind of research is inferential with cross sectional design. The number of subject is 57 patients, age 6-15 years. Statistic analysis is used to chi square test.*

Results : *The part of subject energy intake is deficit, with mean of energy intake is 85,74 ± 13,62% AKG. All of subject do not experience side effect of gastrointestinal disturbance from consuming iron chelation. 66,7% subject consume supplement according to doctor prescription, 57,9% subject have good of nutrition knowledge, and 63,2% subject get good support from family. Result of statistic analysis is p value for consuming supplement variabel is 0,003; 0,57 for nutrition knowledge and 0,01 for family support.*

Conclusion : *There are relation about consuming supplement and family support with food intake, but there are no relation about nutrition knowledge with food intake.*

Keywords : *thalassemia, food intake, family support*

ABSTRAK

Latar Belakang : Kekurangan gizi dalam waktu lama dapat menyebabkan lambatnya pertumbuhan pasien thalassemia, serta cadangan energi yang rendah dan adanya hiperkatabolik mengakibatkan status gizi anak menjadi kurus. Hasil survey pendahuluan di Instalasi Pelayanan Thalasemia Terpadu RSUD Banyumas, 54% pasien thalassemia asupan energinya termasuk dalam kategori kurang.

Lampiran 3. Jurnal Nutritional Intake, Sun Exposure and Vitamin D Level in Childrens with Thalassemia Major

World Scientific News

An International Scientific Journal

WSN 142 (2020) 180-194 EISSN 2392-2192

Nutritional intake, sun exposure and vitamin D level in childrens with thalassemia major

Yesi Herawati[1,*], Gaga Irawan Nugraha[2], Dida Akhmad Gurnida[3]

[1]Faculty of Medicine, Universitas Padjadjaran, Jalan Eyckman No. 38 Bandung, Indonesia

[2]Departement of Basic Medical Science, Faculty of Medicine, Universitas Padjadjaran, Jalan Eyckman No.38 Bandung, Indonesia

[3]Departement of Pediatric Hasan Sadikin Hospital / Universitas Padjadjaran, Jalan Pasteur No. 38 Bandung, Indonesia

*E-mail address: yesiagustian@yahoo.com

ABSTRACT

Children with thalassemia major generally experience growth retardation. One of the growth parameters is serum vitamin D levels. The main source of vitamin D comes from endogenous synthesis with sun exposure and dietary sources. This cross sectional study involved 84 children with thalassemia major aged 4-14 years old taken through concecutive sampling. Nutritional intake was obtained through a semi quantitative food frequency questionnaire, while the duration of sun exposure was calculated at peak UVB intensities at 11.00-15.00. The enzyme-linked immunosorbent assay (ELISA) method was used to examine vitamin D levels. The data was analized by Spearman Rank corelation dan multiple

Lampiran 4. Jurnal Nutritional Deficiencies Are Common in Patients with Transfusion-Dependent Thalassemia and Associated with Iron Overload

ournal of Food and Nutrition Research, 2018, Vol. 6, No. 10, 674-681
vailable online at http://pubs.sciepub.com/jfnr/6/10/9
Science and Education Publishing
OI:10.12691/jfnr-6-10-9

Nutritional Deficiencies Are Common in Patients with Transfusion-Dependent Thalassemia and Associated with Iron Overload

Elijah K Goldberg[1], Sushrita Neogi[1], Ashutosh Lal[2], Annie Higa[3], Ellen Fung[1,2,*]

[1]Children's Hospital Oakland Research Institute, 5700 Martin Luther King Jr. Way, Oakland CA, 94609
[2]Department of Hematology, UCSF Benioff Children's Hospital Oakland, 5700 Martin Luther King Jr. Way, Oakland CA, 94609
[3]Clinical and Translational Sciences Institute, UCSF Benioff Children's Hospital,
5700 Martin Luther King Jr. Way, Oakland CA, 94609
*Corresponding author: efung@mail.cho.org

Received September 19, 2018; Revised November 05, 2018; Accepted November 21, 2018

Abstract Patients with thalassemia are frequently deficient in key micronutrients. Attempts to correct these inadequacies through nutritional supplementation have been met with some success, although disparities between intake and circulating levels continue to be observed. This study employed a convenience sample of 41 well-nourished transfusion dependent patients with thalassemia to identify possible mechanisms behind nutritional deficiencies. Each subject completed a Block 2005© Food Frequency Questionnaire (FFQ), through which macro and micronutrient intake was quantified. Fasting blood was drawn to assess vitamins A, C, D, E, copper, selenium, zinc and hematologic parameters. Dietary intake was found to be inadequate compared to Institute of Medicine (IOM) recommendations for many of the fat-soluble vitamins, as well as calcium and zinc. Circulating deficiencies of vitamins C, D, copper, zinc and γ tocopherol were also present in over 20% of patients. Many individuals who consumed an adequate dietary intake had deficient levels of circulating nutrients, which suggest alternative etiologies of nutrient excretion or loss, in addition to higher micronutrient requirements. Liver iron concentration displayed a significant negative relationship with vitamins C ($r=-0.62$, $p<0.001$), E ($r=-0.37$, $p=0.03$), and zinc ($r=-0.35$, $p=0.037$), indicating that in iron-overloaded patients, these nutrients are either endogenously consumed at higher rates or sequestered within the liver, resulting in a functional nutrient deficiency. While this study identified hepatic iron overload to be a significant cause of nutritional deficits commonly observed in patients with thalassemia, multiple etiologies are simultaneously responsible. In response to these findings, nutritional status should be monitored regularly in at-risk patients with thalassemia, and prophylactically addressed with supplementation or aggressive chelation to avoid associated co-morbidities.

Keywords: *thalassemia, nutrition, vitamin C, vitamin D, iron overload, zinc, Food Frequency Questionnaire*

Lampiran 5. Jurnal Faktor-faktor yang Mempengaruhi Pertumbuhan Anak Penderita Talasemia di Jawa Tengah, Indonesia

JURNAL KEDOKTERAN DIPONEGORO
Volume 8, Nomor 4, Oktober 2019
Online : http://ejournal3.undip.ac.id/index.php/medico
ISSN Online : 2540-8844

Jurnal Kedokteran Diponegoro

Ridho Egan John Purba, Yetty Movieta Nency, Helmia Farida

FAKTOR – FAKTOR YANG MEMPENGARUHI PERTUMBUHAN ANAK PENDERITA TALASEMIA MAYOR DI JAWA TENGAH, INDONESIA

Ridho Egan John Purba[1], Yetty Movieta Nency[2], Helmia Farida[2]
[1]Mahasiswa Program Pendidikan S-1 Kedokteran, Fakultas Kedokteran, Universitas Diponegoro
[2]Staf Pengajar Ilmu Kesehatan Anak, Fakultas Kedokteran, Universitas Diponegoro
Jl. Prof. H. Soedarto, SH., Tembalang-Semarang 50275, Telp. 02476928010

ABSTRAK

Latar Belakang: Talasemia merupakan kondisi di mana hemoglobin mengalami hemolisis akibat gangguan sintesis rantai hemoglobin atau rantai globin. Kegagalan pertumbuhan adalah kejadian umum pada pasien dengan penyakit talasemia. Kondisi anemia dan kekurangan gizi kronis akan menyebabkan seorang anak talasemia memiliki perawakan pendek. **Tujuan:** Untuk mengetahui faktor-faktor yang mempengaruhi pertumbuhan anak penderita talasemia mayor dengan lingkar lengan atas (LiLA) dan tinggi badan penderita talasemia mayor. **Metode**: Penelitian merupakan uji analitik observasional belah lintang. Subjek penelitian adalah anak usia 0-18 tahun penderita talasemia mayor yang berobat ke PMI Semarang pada bulan Februari – Juni 2019 yang memenuhi kriteria penelitian. Data diambil dari anamnesis dan dan rekam medis, kemudian dianalisis bivariat pada data berskala. Hubungan antara variabel diuji menggunakan uji x^2. Analisis multivariat dilakukan untuk menilai faktor mana yang dominan dalam pengukuran lingkar lengan atas serta tinggi badan dengan regresi logistik. **Hasil**: Sebanyak 26 anak diikutsertakan dalam penelitian ini. Faktor-faktor yang berhubungan signifikan dengan pengukuran LILA adalah frekuensi transfusi darah (p=0,026), tidak ada faktor yang berhubungan signifikan dengan pengukuran tinggi badan . Faktor yang paling dominan terhadap pengukuran LiLA adalah lama sakit (*p* 0,000), sedangkan faktor dominan pengukuran Tinggi Badan adalah lama sakit (*p* 0,000) dan jenis kelasi besi (*p* 0,000). **Kesimpulan**: Terdapat hubungan yang signifikan antara frekuensi transfusi darah dengan pengukuran LiLA dan merupakan faktor dominan dalam pengukuran LiLA. Faktor lama sakit memiliki hubungan yang signifikan dengan pengukuran Tinggi Badan, dan merupakan faktor dominan dalam pengukuran Tinggi Badan.

Kata kunci: Talasemia, transfusi darah, lingkar lengan atas, lama sakit, tinggi badan