

Hubungan Asupan Nutrisi dengan Kadar Vitamin D Pada Anak yang Terinfeksi Tuberkulosis

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Abstrak

Latar belakang

Vitamin D dapat meningkatkan aktivitas antimikrobal makrofag terhadap *Mycobacterium tuberculosis*. Defisiensi vitamin D diindikasikan sebagai salah satu faktor risiko penyakit Tuberkulosis (TB). Kurangnya asupan nutrisi yang mengandung vitamin D dapat mempengaruhi kadar vitamin D dalam darah sehingga akan mempengaruhi imunitas terhadap infeksi TB.

Tujuan

Mengetahui hubungan asupan nutrisi yang mengandung vitamin D dengan kadar vitamin D darah pada anak yang terinfeksi Tuberkulosis.

Metode

Penelitian dilakukan secara *cross sectional* pada bulan Oktober 2014 sampai Maret 2015 di Poliklinik Anak RS Dr M Djamil dan Puskesmas kota Padang. Subyek penelitian adalah anak usia 1-14 tahun yang kontak serumah dengan penderita TB dewasa BTA positif, dengan hasil *Tuberculin Skin Test* positif. Asupan vitamin D diperoleh melalui *Food Recall 2x24* jam dengan standar normal > 600 International Unit menurut *Recommended Dietary Allowance* (RDA) dan diolah menggunakan program Nutri-Survey Indonesia. Kadar vitamin D darah berupa 25(OH)D diukur menggunakan metode *Cheluminescent Immunoassay*, dengan kategori nilai normal >30-50 ng/ml, insufisiensi >10-30 ng/ml, dan defisiensi <10 ng/ml.

Hasil

Total subjek penelitian 57 orang. Sebanyak 54 (94,7%) anak mendapat asupan vitamin D dibawah RDA. Terdapat 45 (83,3%) anak diantaranya mengalami insufisiensi vitamin D dan 9 (16,7%) anak memiliki kadar vitamin D cukup. Sebanyak 3 (5,3%) anak mendapat asupan vitamin D sesuai RDA namun hanya 1 (33,3%) diantaranya memiliki kadar vitamin D darah normal ($p=0,446$).

Kesimpulan

Sebagian besar anak yang terinfeksi TB mengalami insufisiensi vitamin D, meskipun secara statistik tidak memiliki hubungan yang bermakna dengan asupan nutrisi.

Kata kunci

Asupan nutrisi, kadar vitamin D, anak terinfeksi Tuberkulosis

Association Between Dietary Intake and Vitamin D Level in Children with Tuberculous Infection

Abstract

Background

Vitamin D has already known for its antimicrobial activity against *Mycobacterium tuberculosis* and indicated as a risk factor of Tuberculosis (TB) disease. Lack of dietary intake of vitamin D would compromise the vitamin D status in children with Tuberculosis infection.

Objective

The aim of the study is to know the association between dietary intake of vitamin D and vitamin D level in children with Tuberculosis infection.

Method

This cross sectional study was conducted on October 2014 to Maret 2015 at M Djamil hospital and Community Health Center in Padang. The subject were children aged 1-14 years old with household contact of sputum smear-positive adult TB and positively tuberculin skin test result. Dietary intake of vitamin D was estimated using 2x24 hours Food Recall with normal value > 600 International Unit based on recommended dietary allowance (RDA) and calculated by Indonesian Nutri-Survey Program. The vitamin D level (25(OH)D) was measured using Cheluminescent Immunoassay and categorized as normal (>30-50 ng/ml), insufficiency (>10-30 ng/ml) and deficiency (<10 ng/ml).

Result

There were 57 children included in the study. Amount of 54 (94,7%) children have vitamin D intake below of RDA. Forty five (83,3%) children among them suffered from vitamin D insufficiency and 9 (16,7%) children were in normal level. There were 3 (5,3%) children have adequate vitamin D intake but only 1 (33,3%) of them has normal level (p=0,446).

Conclusion

Most of the children with TB infection were suffered from vitamin D insufficiency, although no significant statistical association were noted with dietary intake.

Keyword

Dietary intake of Vitamin D, vitamin D level, children with tuberculous infection.