Pengaruh pemberian albendazol terhadap konsentrasi retinol dalam serum anak sekolah dasar yang tinggal di daerah endemis cacingan = The effect of albendazole treatment on serum retinol concentration in primary school age children living in a helminth endemic area

Kalumpiu, Jane Florida, author

Abstrak

Infeksi STH (Soil transmitted helminth) masih merupakan masalah kesehatan di Indonesia dan dapat ditemukan bersamaan dengan Kurang Vitamin A (KVA). Infeksi STH dapat menyebabkan gangguan penyerapan nutrisi termasuk vitamin A. Belum diketahui pengaruh pengobatan cacingan terhadap status vitamin A anak SD. Penelitian pre-eksperimental dilakukan pada anak SD kelas 3-5 di salah satu SDN di Jakarta Utara. Sampel tinja dan darah diambil sebelum dan tiga minggu sesudah pengobatan (albendazol 400mg tiga hari berturut-turut). Pemeriksaan FLOTAC dilakukan untuk infeksi STH dan High Performance Liquid Chromatography untuk retinol. Prevalensi STH didapatkan sebesar 61,9%. Dari 99 anak, prevalensi KVA kategori ringan (<1,05 μmol/l) ditemukan pada 17,2% anak dan sedang (<0,70 μmol/l) pada 2% anak. Status infeksi STH tidak berhubungan signifikan dengan konsentrasi retinol baseline. Anak laki-laki memiliki konsentrasi retinol baseline lebih rendah dibandingkan anak perempuan (p=0,045). Terjadi kenaikan konsentrasi retinol mendekati bermakna (p=0,05) setelah pengobatan, pada anak terinfeksi STH dan tidak terinfeksi. Konsentrasi retinol baseline memiliki hubungan terbalik dengan perubahan konsentrasi retinol (􀀁= -0,340, p=0,002). Dapat disimpulkan bahwa infeksi STH tidak mempengaruhi konsentrasi retinol baseline atau perubahan konsentrasi retinol setelah pengobatan. Jenis kelamin berperan sebagai salah satu faktor yang mempengaruhi konsentrasi retinol baseline. Selisih konsentrasi retinol setelah pengobatan dapat diprediksi oleh konsentrasi retinol baseline.
.....Soil Transmitted Helminthes (STH) infection is still a health problem in Indonesia and often found together with Vitamin A Deficiency (VAD). STH infection can impair absorption of nutrients including vitamin A. The effect of deworming on the vitamin A status of primary school children is unknown. Pre-experimental study was carried on children of grade 3-5 at one of primary schools in North Jakarta. Stool and blood samples were taken before and three weeks after treatment (albendazole 400 mg for three consecutive days). FLOTAC examination was used to determine STH infections and High Performance Liquid Chromatography for serum retinol. The prevalence of STH was 61.9%. Of 99 children, 2% had moderate deficiency (<0,7 μmol/l) and 17,2% had mild (<1,05 μmol/l) deficiency of vitamin A. STH infection was not significantly associated with serum retinol concentration at baseline. Boys had lower serum retinol concentration compared to girls (p = 0.045). After treatment serum retinol concentrations was increased with marginal significance (p = 0.05), occurring in those infected with STH or not. Serum retinol concentration at baseline had an inverse association with the change in serum retinol concentration after treatment (ß = -0.340, p = 0.002). To conclude, STH infection had no effect on serum retinol concentration before treatment as well as the change in serum retinol concentration after treatment. Gender was one of the factors that influenced the serum retinol concentrations at baseline. Serum retinol concentration at baseline can be used as a predictor for the magnitude of change in serum retinol concentration after treatment.