

# Hubungan antara Infeksi Parasit Usus dalam Variasi Tipe Golongan Darah dengan Kadar Hemoglobin pada Anak Sekolah Dasar di Jakarta Utara = The Association between Intestinal Parasitic Infection and Hemoglobin Levels in Blood Type Variation among Elementary School children in North Jakarta

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## Abstrak

Latar belakang: Infeksi parasit usus (IPU) masih menjadi permasalahan kesehatan masyarakat di Indonesia. Utamanya, IPU disebabkan oleh STH dan protozoa usus. IPU berhubungan dengan penurunan kadar Hb dan mekanisme pertahanan inang melalui golongan darah. Oleh karena itu, penelitian ini bertujuan untuk mengetahui hubungan antara infeksi parasit usus dalam variasi tipe golongan darah dengan kadar hemoglobin pada siswa sekolah dasar di Jakarta Utara.

Metode: Studi cross-sectional dilakukan di salah satu sekolah dasar di Jakarta Utara yang telah mengikuti Program Penanggulangan Cacingan (Peraturan Menteri Kesehatan RI No. 15 Tahun 2017). Total 215 siswa didapatkan melalui teknik consecutive sampling. Intensitas dan prevalensi IPU diukur dengan metode Kato-Katz dan apusan langsung pada sampel tinja yang dikumpulkan dari tiap siswa. Kadar Hb siswa diukur dengan EasyTouch® GCHb. Golongan darah ABO siswa diuji melalui reaksi aglutinasi dengan reagen. Hasil: Pada 215 siswa, spesies parasit usus yang paling banyak ditemukan adalah *A. lumbricoides* (6,0%) dan *B. hominis* (5,1%), Ditemukan 30 siswa mengalami anemia (14,0%). Tipe golongan darah yang ditemukan, antara lain golongan darah A (29,8%), golongan darah B (31,6%), golongan darah O (32,1%), dan golongan darah AB (6,5%). Melalui analisis bivariat tidak ditemukan hubungan yang signifikan secara statistik antara IPU dengan kadar Hb dalam variasi golongan darah ( $p > 0,05$ ).

Kesimpulan: Tidak ditemukan hubungan yang signifikan secara statistik antara IPU dengan kadar Hb dalam variasi golongan darah pada siswa sekolah dasar yang telah mengikuti Program Penanggulangan Cacingan di Jakarta Utara

.....Introduction: Intestinal parasitic infection (IPI) is still a public health problem in Indonesia and primarily caused by STH and intestinal protozoa. IPI is associated with decreased Hb levels and host defense mechanism depends on blood groups. Therefore, the aim of this study is to determine the association between IPI and Hb levels in blood groups variation in elementary school students in North Jakarta.

Method: A cross-sectional study was conducted in one of the elementary schools in North Jakarta that has participated in the Deworming Program. Total 215 students were collected through consecutive sampling techniques. Intensity and prevalence of IPI were measured by the Kato-Katz method and direct smear on stool samples collected from each student. Students' Hb levels were measured by EasyTouch® GCHb. Students' ABO blood group was tested by agglutination reaction with reagents.

Result: From 215 students, the most common IPI's species were *A. lumbricoides* (6.0%) and *B. hominis* (5.1%). It was found that 30 students had anemia (14.0%). The blood group found included blood type A (29.8%), blood type B (31.6%), blood type O (32.1%), and blood type AB (6.5%). Through bivariate analysis, no statistically significant association was found between IPU and Hb levels in blood type variation ( $p > 0.05$ ).

Conclusion: There was no statistical association between IPU and Hb levels in blood groups variation in elementary school students who had participated in Deworming Program, North Jakarta.