Prevalensi dan faktor risiko infeksi TB Laten pada Pasien Halassemia Mayor Anak = Prevalence and risk factors for Latent Tuberculosis infection in Pediatric Thalassemia Major Patients

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Abstrak

Latar belakang. Pasien thalassemia mengalami anemia kronis akibat tidak terbentuk atau berkurangnya produksi rantai globin- atau - yang diturunkan secara genetik, menyebabkan terjadinya eritropoiesis inefektif dan hemolisis. Kondisi tersebut menyebabkan pasien thalassemia memerlukan transfusi rutin seumur hidupnya. Transfusi rutin akan menyebabkan stimulasi antigen berulang dan iron overload. Stimulasi antigen berulang dan stres oksidatif akibat iron overload akan menyebabkan terjadinya gangguan imunitas dan membuat mereka lebih rentan terhadap infeksi, termasuk infeksi tuberkulosis. Tujuan. Mengetahui prevalensi infeksi tuberkulosis laten pasien thalassemia mayor anak, dan mengetahui hubungan antara lama sakit dan kadar feritin serum dengan kejadian infeksi tuberkulosis laten pada anak dengan thalassemia mayor. Metode. Desain penelitian ini adalah studi potong lintang. Subjek merupakan pasien thalassemia mayor anak usia 1 hingga 18 tahun yang kontrol rutin di RS Anna Medika Kota Bekasi. Uji interferon gamma release assay (IGRA) dilakukan pada semua subjek untuk mendeteksi adanya infeksi tuberkulosis. Hasil. Penelitian dilakukan pada 127 subjek thalassemia mayor anak, usia 1-18 tahun, sesuai kriteria inklusi dan eksklusi. Prevalensi infeksi TB laten pada populasi pasien thalassemia mayor anak adalah sebesar 8,7%. Tidak ada hubungan antara variabel lama sakit dan kadar feritin serum dengan terjadinya infeksi TB laten pada pasien thalassemia mayor anak. Kesimpulan. Prevalensi infeksi TB laten pada populasi thalassemia mayor anak lebih tinggi dibanding populasi anak nonthalassemia.

.....Background. Thalassemia patient suffers chronic anemia due to no or lack of production of the - or - globin chain that causes ineffective erythropoiesis and hemolysis. This typical condition causes thalassemia patients to need routine blood transfusions for the rest of their life. Routine transfusion causes repeated antigen stimulation and iron overload. Repeated antigen stimulation and oxidative stress due to iron overload can cause immunity problems that make thalassemia major patients more prone to infection, including tuberculosis (TB) infection. Objectives. To identify the prevalence of latent tuberculosis infection in pediatric patients with thalassemia major and to evaluate the correlation between the length of illness and serum ferritin level with the occurrence of tuberculosis infection latent in pediatric patients with thalassemia major. Methods. This research is a cross-sectional study. The subjects were pediatric patients aged 1 to 18 years old who were diagnosed with thalassemia major, who routinely visited and were treated in Anna Medika Hospital in Bekasi. IGRA test had been done to all of the subjects to detect the existence of tuberculosis infection. Results. The research is done to 127 thalassemia major pediatric patients,range ages 1to 18 years old, that are suitable with inclusive and exclusive criteria. The prevalence of latent TB infection in thalassemia major pediatric patients population is 8,7%. There is no correlation variable between the length of illness and serum ferritin level with the occurrence of latent TB infection in thalassemia major pediatric patients. Conclusions. The prevalence of latent TB infection in thalassemia major children population is higher than that in the population of children without thalassemia.