

Kegagalan mempertahankan nilai Hemoglobin pasca transfusi pada penderita Thalassemia tergantung transfusi terkait terbentuknya Aloantibodi dan Autoantibodi Eritrosit : proporsi dan faktor yang berhubungan = Failure on maintaining Haemoglobin level after transfusion in transfusion dependent Thalassemia patients related to Erythrocyte Alloantibody and Autoantibody production proportion and related factors / Andree Kurniawan

Andree Kurniawan, author

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Abstrak

ABSTRAK

Latar belakang. Pada penderita thalassemia yang telah lama mendapat transfusi, nilai hemoglobin pasca transfusi tidak bertahan sesuai dengan yang diharapkan. Telah dilaporkan mengenai terbentuknya aloantibodi dan autoantibodi pada penderita thalassemia, yang kemungkinan menyebabkan hemoglobin tidak bertahan pasca transfusi.

Tujuan. Penelitian ini bertujuan untuk mencari faktor-faktor yang berhubungan dengan kegagalan mempertahankan hemoglobin pasca transfusi pada penderita thalassemia, terkait dengan terbentuknya aloantibodi dan autoantibodi terhadap eritrosit.

Metodologi. Studi potong lintang di poliklinik Hematologi Onkologi Medik IPD RSCM bulan Juli-September 2012 pada penderita thalassemia dewasa yang tergantung transfusi, tanpa penyakit autoimun lain. Dilakukan pemeriksaan sampel darah dengan teknik column gel agglutination untuk melihat adanya aloantibodi dan autoantibodi. Sebelas sel panel reagen digunakan untuk mendeteksi dan mengidentifikasi aloantibodi. Aloantibodi dan autoantibodi positif didefinisikan sebagai pemeriksaan IAT dan DAT yang positif. Dilakukan analisis bivariat antara aloantibodi dan autoantibodi dengan jenis kelamin, jenis rhesus, kadar feritin, jenis kelasi besi, dan aloantibodi.

Hasil. Dari 88 subjek, didapatkan 37,5% subjek nilai hemoglobin pasca transfusi tidak bertahan seperti yang diharapkan. Dari 33 subjek tersebut didapatkan aloantibodi dan autoantibodi positif masing-masing 78,6% dan 72,7%. Dari 24 pasien dengan autoantibodi didapatkan 25% dengan derajat hemolitik yang secara klinis bermakna. Aloantibodi positif berhubungan dengan terbentuknya autoantibodi ($p < 0,000$). Aloantibodi positif [odds ratio (OR) = 26,32; $p < 0,000$], autoantibodi positif (OR = 11,99; $p < 0,000$), dan feritin > 3000 ng/ml (OR = 6,36; $p < 0,042$) berhubungan dengan kegagalan mempertahankan hemoglobin pasca transfusi.

Simpulan. Proporsi hemoglobin pasca transfusi tidak bertahan sesuai dengan yang diharapkan pada penderita thalassemia dewasa sebesar 37,5%. Proporsi terbentuknya aloantibodi dan autoantibodi pada kelompok tersebut sebesar 78,6% dan 72,7%. Faktor yang berhubungan dengan kegagalan mempertahankan hemoglobin pasca transfusi adalah aloantibodi positif, autoantibodi positif, dan feritin > 3000 ng/ml. Aloantibodi positif berhubungan dengan terbentuknya autoantibodi.

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ABSTRACT

Background. In transfusion dependent thalassemia patients who has got repeated transfusion for a period of time, the haemoglobin level after transfusion could not be maintained appropriately to be expected. The production of erythrocyte alloantibody and autoantibody in transfusion dependent thalassemia patients has been reported before. These antibodies were probable related to the failure on maintaining haemoglobin level after transfusion.

Objective. To find related factors of failure on maintaining haemoglobin level after transfusion in adult transfusion dependent thalassemia patients related to erythrocyte alloantibody and autoantibody production.

Material and Methods. Cross sectional study of adult transfusion dependent thalassemia patient without others autoimmune disease at Haematology and Medical Oncology outpatient clinic in Cipto Mangunkusumo hospital from July to September 2012 was done. The specimen was subjected to erythrocyte alloantibody and autoantibody evaluation by column gel agglutination technique. Eleven cell reagent panel were used in screening and identification of alloantibody and autoantibody respectively. Positive alloantibody is defined as positivity of indirect antiglobulin test and positive autoantibody is defined as positivity of direct antiglobulin test. Statistic analysis between erythrocyte alloantibody and autoantibody positivity and sex, type of rhesus, ferritin level, type of iron chelation, and alloantibody were done.

Results. From 88 subjects, there were 37,5% thalassemia patients that did not maintain haemoglobin level after transfusion. From 33 of those subjects, there were 78,6% subjects with alloantibody and 72,7% subjects with autoantibody. From 24 patients with autoantibody, there were 25% subjects with severe hemolytic anemia that clinically significant. Positive alloantibody related to autoantibody production ($p < 0,000$). Positive alloantibody [odds ratio (OR) = 26,32; $p < 0,000$], positive autoantibody (OR = 11,99; $p < 0,011$), and ferritin level > 3000 ng/ml (OR = 6,36; $p < 0,042$) related to failure on maintaining haemoglobin level.

Conclusion. The proportion of failure on maintaining haemoglobin level in adult thalassemia patients were 37,5%. The proportion alloantibody and autoantibody production in adult thalassemia patients that failure on maintaining haemoglobin level were 78,6% and 72,7% respectively. Related factors of those were positive alloantibody and autoantibody, and ferritin level > 3000 ng/ml. Positive alloantibody related to autoantibody production.