Fungsi fagositosis monosit pada pasien thalassemia mayor "tinjauan khusus pada splenektomi dan kadar feritin" = Phagocytosis function of monocyte in patients with thalassemia major special review on splenectomy and ferritin level

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Abstrak

[ABSTRAK
Latar Belakang: Infeksi merupakan penyebab kematian yang penting pada thalassemia. Peningkatan risiko infeksi disebabkan oleh banyak faktor antara lain karena kelebihan besi dan splenektomi. Penelitian ini bertujuan mengetahui perbedaan fungsi fagositosis monosit pada pasien thalassemia mayor pasca splenektomi dan non splenektomi serta mengetahui hubungan fungsi fagositosis monosit dengan kadar feritin serum.
Metode: Penelitian dilakukan di Departemen Patologi Klinik RSCM, Jakarta pada September 2013 ? Februari 2014. Desain penelitian potong lintang, dengan subjek penelitian pasien thalassemia mayor, terdiri dari 58 subjek pasca splenektomi dan 58 subjek non splenektomi yang telah dilakukan macthing umur dan jenis kelamin. Dilakukan pemeriksaan fagositosis monosit menggunakan E.coli yang telah diopsonisasi dan dilabel FITC sebagai target, (PhagotestTM) dan diperiksa dengan flow cytometry BD FACSCalibur. Kadar feritin serum diperiksa dengan Cobas e 601.
Hasil: Median fagositosis monosit pada 58 subjek pasca splenektomi 5,03 (0,17 ? 22,79) %, dan pada 58 subjek non splenektomi 7,09 (0,11 ? 27,24) %, dan nilai p > 0.05. Kadar feritin serum pada subjek pasca splenektomi 6.724 (644,60 ? 21.835) ng/mL dan subjek non splenektomi 4.702,50 (1.381 ? 14.554) ng/mL, dan nilai p < 0.05. Hasil uji korelasi fungsi fagositosis monosit dengan kadar feritin didapatkan r = 0.13 (nilai p = 1.00).
Kesimpulan: Tidak terdapat perbedaan bermakna antara fungsi fagositosis monosit pada pasien thalassemia mayor pasca splenektomi dan non splenektomi. Kadar feritin serum pada pasien thalassemia mayor pasca splenektomi lebih tinggi secara bermakna dibandingkan non splenektomi. Tidak didapatkan hubungan antara fagositosis monosit dengan kadar feritin serum.
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ABSTRACT
Background : Infection is an important cause of death in thalassemia. Increase of risk of infection could be due to iron overload and post-splenectomy. The study aimed to determine the difference of phagocytosis function of monocyte between post-splenectomized and non- splenectomized patients with thalassemia major, and the correlation of phagocytosis function of monocyte and serum ferritin level.
Methods : The study was conducted in Department of Clinical Pathology Cipto Mangunkusumo hospital, Jakarta, in September 2013 ? Februari 2014. It was a cross sectional study. The study subjects consisted of 58 post-splenectomized patients and 58 non-splenectomized patients with age and sex matching. Phagocytosis function of monocyte was determined using E.coli opsonized and labelled with FITC as target, (Phagotest TM) and was measured by flow cytometry BD FACSCalibur. Serum ferritin level was measured using Cobas e 601.

Result : Median phagocytosis of monocyte was 5,03 (0,17 ? 22,79) %, in 58 post- splenectomized subjects and 7,09 (0,11 ? 27,24) % in non-splenectomized subjects; p value > 0.05. Serum ferritin level was 6.274 (644,60 ? 21.835) ng/mL in post-splenectomized subjects and 4.702,50 (1.381 - 14.554) ng/mL in non-splenectomy subjects; p value < 0.05. The correlation between phagocytosis function of monocyte and serum ferritin level was r = 0.13 (p value = 1.00).
Conclusion : There was no statistical difference of phagocytosis function of monocyte between post-splenectomized subjects and non-splenectomized subjects. Serum ferritin level in post- splenectomized was higher than non-splenectomized subjects. There was no correlation between phagocytosis function of monocyte and serum ferritin level.;Background : Infection is an important cause of death in thalassemia. Increase of risk of infection could be due to iron overload and post-splenectomy. The study aimed to determine the difference of phagocytosis function of monocyte between post-splenectomized and non-splenectomized patients with thalassemia major, and the correlation of phagocytosis function of monocyte and serum ferritin level.
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