

Profil hematologi pasien TB Paru BTA positif kasus baru sebelum dan sesudah pemberian obat anti tuberkulosis kategori I fase intensif = Hematology profile of new pulmonary tb patients afb positive before and after administrated with anti tuberculosis drug category I intensive phase

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Abstrak

LATAR BELAKANG: Tuberkulosis (TB) hingga saat ini masih menjadi masalah kesehatan di dunia. Berdasarkan tuberculosis global report 2013 insidens TB pada tahun 2012 di seluruh dunia tidak jauh berbeda dibandingkan tahun sebelumnya, yaitu sekitar 8,6 juta. Berbagai penelitian menunjukkan bahwa TB mempunyai kaitan erat terhadap gangguan hematologi seperti anemia, leukositosis, neutrofilia, peningkatan laju endap darah (LED), trombositosis atau trombositopenia. Menurut WHO anemia merupakan indikator yang buruk terhadap status nutrisi dan tingkat kesehatan pasien dengan TB paru. Status nutrisi sendiri mempunyai peran terhadap seluruh fungsi sistem tubuh termasuk sistem imunitas terhadap berbagai penyakit infeksi dan status nutrisi pada pasien TB paru ditemukan secara bermakna lebih rendah dibandingkan orang sehat. Kedua keadaan ini saling berkaitan satu dengan lainnya, malnutrisi dapat menjadi predisposisi terjadinya penyakit TB dan TB itu sendiri dapat menyebabkan malnutrisi.

TUJUAN: Penelitian ini untuk mengetahui hubungan antara perubahan nilai pemeriksaan hematologi (DHb, DLeukosit, DLED) dan status gizi (DAAlbumin, DIMT) pasien TB paru BTA (+) kasus baru sebelum dan sesudah pemberian OAT kategori I fase intensif dengan usia, jenis kelamin, konversi sputum dan perubahan gambaran foto toraks.

METODE: Penelitian dengan desain uji klinik pre dan post study sejak bulan Januari-Juni 2014. Sebanyak 114 subjek penelitian terpilih sesuai kriteria inklusi dan bersedia mengikuti penelitian hingga akhir fase intensif.

HASIL: Dari 114 orang subjek penelitian, 13 orang subjek dikeluarkan karena tidak dapat menyelesaikan penelitian. Terdapat 101 orang subjek penelitian yang bisa menyelesaikan penelitian dengan kelompok usia yang terkecil antara 23-46 tahun. Subjek penelitian terbanyak laki-laki (67,3%) dengan pendidikan terbanyak menengah (40,6%) dan bekerja sebagai pegawai swasta (41,5%). Sebagian besar subjek mengalami konversi sputum (81,2 %) dan perbaikan foto toraks (63,4%). Parameter hematologi mean Hb ($0,78 \pm 1,08$), median Leukosit [1.760 (-8.948,93 - 17.738,96)], median LED [-24,00 (-85 - 83)]. Parameter status gizi median Albumin [0,50 (0 - 2)] dan median IMT [0,93 (-2,34 - 3,51)].

KESIMPULAN: Terdapat hubungan yang bermakna antara parameter hematologi (leukosit) terhadap konversi sputum ($p=0,038$) dan parameter status gizi (IMT) terhadap konversi sputum ($p=0,004$).

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BACKGROUND: Up to now, tuberculosis is still becoming a world health problem. Based on tuberculosis global report 2013, the incidence of TB in 2012 was not far different from the previous years that was about 8,6 millions. Various studies have showed that TB is closely related to the disturbance of hematology such as anemia, leucocytosis, neutrophilia, increasing of blood sedimentation rate, thrombocytosis or thrombocytopenic. According to WHO, anemia becomes bad indicator to nutritional and health status in

patient with TB. While the nutrition status it self has an important role to the whole function of the body system including immune system to avoid various infectious diseases. The nutritional status in patients with TB significantly found lower compared to the healthy persons. These two factors are closely related to each other. Malnutrition cause predisposition of TB whereas TB it self can cause.

PURPOSE: This study is aimed to know the relationship between hematology parameter changes (Hb, Leucocyte, and erythrocyte sedimentation rate/ESR) and the nutritional status (Albumin, BMI) in patients with TB, AFB (+) new case before and after treatment with antituberculosis drugs category I during intensive phase based on age, sex, sputum conversion, and thorax radiology changes.

METHOD: This method uses clinically design for Pre and post study from January up to June 2014. Around 114 persons have been selected according to inclusion criteria and agree to join this study until the end of intensive phase.

RESULT: From 114 persons used as subjects, 13 are excluded due to the unfinished study. There are 101 subjects who are able to complete this study with the lowest age are 23 to 46. The largest subjects are male (67.3%) with their education are senior high school (40.6%) and working as private employees (41.5%). Most subjects have sputum conversion (81,2%) and radiological improvement (63.4%). In hematology parameter, the mean Hb is (0.78 ± 1.08), the Leucocyte median is [1,760 (-8,948.93 - 17,738.96)], the ESR median is [-24.00 (-85 - 83)]. In nutritional status parameter, the median for Albumin is [0.50 (0-2)] and BMI is [0.93(-2.34 - 3.51)].

CONCLUSION: Statistically, there are significant relationship between hematology parameter (Leucocyte) to sputum conversion ($p=0.038$) and nutritional status (BMI) to sputum conversion ($p=0.004$).