Tumor necrosis factor- sebagai prediktor terjadinya anemia pada ibu hamil di wilayah endemis malaria

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Abstrak

Ibu hamil yang berada di daerah endemis malaria sangat rentan terhadap infeksi malaria selama kehamilan. Gejala malaria pada kelompok ini sering asimptomatik atau bahkan tidak terdeteksi sama sekali karena adanya efek imunitas protektif melalui infeksi yang berulang. Adanya peningkatan kadar tumor necrosis factor-alpha (TNF-) dapat dijadikan indikator terjadinya infeksi malaria. TNF- berperan penting dalam respons imun pada malaria akut yang menghambat terjadinya eritropoesis. Penelitian ini bertujuan untuk mengetahui hubungan antara kadar TNF- dengan kejadian anemia pada ibu hamil didaerah endemik malaria vivax. Penelitian ini menggunakan desain potong lintang, dilakukan pada bulan Januari - Februari 2014 di lima wilayah kerja puskesmas Kota Bengkulu. Sampel penelitian adalah ibu hamil di daerah endemis malaria vivax yang diambil secara accidental sampling. Dilakukan pengambilan darah untuk pemeriksaan mikroskopis malaria, kadar TNF- dan kadar hemoglobin (Hb). Hasil penelitian menunjukkan seluruh ibu hamil memiliki riwayat pernah terinfeksi malaria vivax, walaupun hasil pemeriksaan slide negatif. Terjadi peningkatan kadar TNF- dengan rerata 6,90 ± 2,48 pg/mL dan penurunan kadar Hb dengan rerata 9,75 ± 0,88 g%. Uji korelasi Spearman didapatkan korelasi negatif yang kuat (r = -0,734) dan bermakna (nilai p < 0,05) antara Kadar TNF- dengan kadar Hb. Terdapat hubungan yang bermakna antara kadar TNF- dengan kejadian anemia.
<hr>Pregnant mothers living in malaria - endemic area are very susceptible to malaria infection during pregnancy. Malaria symptoms in this group are often asymptomatic or even not detected at all due to protective immunity effect through repeated infections. Any elevation of tumor necrosis factor-alpha (TNF-) level can be used as indicator of malaria infection. TNF- takes an important role in immune response on acute malaria that hinders occurence eritropoesis process. This study aimed to find out relations between TNF- level and anemia occurrence among pregnant women living in malaria vivax - endemic areas. The study used cross-sectional design conducted on January to February 2014 in five working areas in Bengkulu city. Sample of study was pregnant mothers in malaria vivax - endemic areas which was taken through accidental sampling. Blood was taken for malaria-microscopic examination, TNF- and haemoglobine (Hb) level. The results showed that all of pregnant mothers have malaria vivax - infected record, although slide examination showed negative result. Any TNF- level elevation with average 6.90 ± 2.48 pg/mL and decrease of Hb level with average 9.75 ± 0.88 g%. Spearman correlation test showed strong negative correlation (r = -0.734) and significant (p value < 0.05) between TNF- level and Hb level. There was significant relation between TNF- level and anemia occurrence.