Korelasi kadar antibodi anti protein disulfida isomerase trombositdan kejadian trombositopenia dengan titer anti-NS1 pada infeksi dengue = Correlation of antibodies of anti protein disulfide isomerase platelet level and trombocytopenia with anti-NS1 titer on dengue infection / Sari Mariyati Dewi Nataprawira

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Abstrak

ABSTRAK
Latar belakang: Patomekanisme trombositopenia pada infeksi Dengue hingga saat ini masih belum jelas. Cheng dkk mendapatkan adanya mimikri molekul antara protein disulfida isomerase permukaan trombosit dengan protein NS1 virus Dengue, sehingga anti-NS1 mengenali PDI. Penelitian ini bertujuan untuk mengetahui adanya korelasi antara anti-NS1 dan anti-PDI permukaan trombosit sebagai salah satu mekanisme trombositopenia pada infeksi Dengue.

Metode: Penelitian dengan disain potong lintang terhadap darah 19 pasien infeksi Dengue yang diambil pada demam hari ke 3, 5 dan 7. Jumlah trombosit dicatat, anti-NS1 dideteksi menggunakan metode ELISA phase padat, anti-PDI dideteksi menggunakan metode MAIPA direk, dan eksplorasi pengenalan antibodi serum pasien terhadap protein trombosit menggunakan western blot.

Hasil: Didapatkan korelasi lemah antara OD anti-NS1 dengan jumlah trombosit. Pada analisis kinetika anti-NS1 dan anti PDI secara individual didapatkan pola yang bervariasi. Analisis pada 2 kelompok sampel didapatkan korelasi positif lemah yang kemudian menjadi korelasi negatif lemah pada demam hari ke5 dan ke7. Pada eksplorasi antibodi pada serum pasien ditemukan adanya kemungkinan pengenalan antibodi terhadap GPIIb, GPIIIa, dan ERp57.

Kesimpulan: Terdapat korelasi negatif lemah antara OD anti-NS1 dan jumlah trombosit, ada korelasi positif lemah antara OD anti-NS1 dan anti-PDI trombosit, serta adanya kemungkinan pengenalan antibodi serum pasien terhadap GPIIb, GPIIa dan ERp57.
<hr><i>ABSTRACT
Background: Patomechanism thrombocytopenia in Dengue infection still not clear. Cheng et all demonstrated molecular mimicry mechanism between PDI on platelet and region protein NS1-DV, so anti-NS1 recognize PDI on platelet and act like anti-PDI. In this study, we observed the correlation of anti-NS1 and anti-PDI on platelet as one of the mechanism of trombositopenia in Dengue infection

Materials and Method : We observed nineteen patients with Dengue infection by a cross sectional study. Patients blood were collected on day 3, 5 and 7 after the onset of fever. We collected data of platelet count, anti-NS1 were determined by using solid phase ELISA method, anti-PDI platelet were determined by using Direct MAIPA method, and the exploration of antibody activities in patient sera against PDI platelet were done using Western Blot method.

Result : There was no significant weak correlation between OD anti-NS1 and platelet count. In individually analysis of the kinetics of anti-NS1 and anti-PDI shows variation of patterns. Correlation analysis between 2 sampel group (>1x105/µl and ≤1x105/µl) we have weak correlation, but on 5th day after fever onset the correlation become weak negative correlation on 5th day and on 7th day after fever onset. Western blot analysis shows antibodies activity in patient serum that recognized GP IIb, GP IIIa, dan ERp 57, which is moleculer that content PDI.

Conclusion : We have weak negative correlation between OD anti-NS1 with platelet count that stronger in day 5th after the onset of fever. There was weak positive correlation between OD anti-NS1 and OD anti-PDI that the correlation change to negative correlation in day 5th after the onset of fever in IgG anti-Dengue positive (+) group. The recognize antibody in patient serum to GP IIb, GP IIIa, dan Erp 57, still not clear yet.</i>