

## ABSTRAK

Demam berdarah dengue merupakan penyakit endemik di Indonesia. Infeksi virus dengue (DENV) menyebabkan teraktivasi respon imun innate yang diantaranya adalah protein mannose binding lectin (MBL). Protein MBL mengenali envelop virus dengue dan mengaktifkan sistem komplemen jalur lektin menghasilkan molekul sitokin. Mekanisme tersebut beresiko mencetuskan respon imun seluler terhadap DENV yang mengakibatkan trompositopenia dan kebocoran plasma sebagai indikasi DBD derajat 2. Penelitian ini ingin diketahui hubungan kadar protein mannose binding lectin terhadap nilai trombosit dan hematokrit penyakit DBD derajat 2. Penelitian dilakukan dengan metode cross-sectional terhadap 50 pasien DBD derajat 2 di Rumah sakit Cipto Mangunkusomo dan Rumah sakit Cijantung, Jakarta pada bulan mei s.d oktober 2014. Hasil penelitian menunjukkan nilai rata-rata kadar protein pada pasien DBD derajat 2 pada kelompok anak-anak  $3138.1 \pm 1833.52 \text{ ng/mL}$  dan kelompok dewasa  $3437.32 \pm 1509.67 \text{ ng/mL}$ . Protein mannose binding lectin tidak memiliki hubungan terhadap nilai trombosit dan nilai hematokrit. Kesimpulan dari penelitian ini menunjukkan bahwa protein MBL diproduksi pada fase akut infeksi DBD derajat 2 dan tidak memiliki hubungan terhadap trompositopenia dan kebocoran plasma yang merupakan tanda klinis penyakit DBD derajat 2

**Kata Kunci** : Protein Mannose Binding Lectin (MBL), Virus Dengue (DENV), DBD derajat 2, Nilai Trombosit dan Nilai Hematokrit.

## ABSTRACT

Dengue hemorrhagic fever is an endemic disease in Indonesia. Dengue viruses (DENV) infection can activate innate immune response such as mannose binding lectin (MBL) protein. MBL can recognize envelope protein of dengue virus. Binding MBL protein with DENV envelope can activate lectin complement pathway producing cytokine molecules. This molecule can trigger movement of inflammatory cells that are at risk of triggering cellular immune responses on DENV which can cause thrombocytopenia and plasma leakage in DHF degree 2. In this study we want to know a relationship between mannose binding lectin protein levels toward platelets and hematocrit values in DHF grade 2. The study was used cross-sectional methods toward 50 patients with DHF grade 2 in Cipto Mangunkusumo Hospital and Cijantung Hospital, Jakarta from May until October 2014. The results showed average MBL protein levels in patients with DHF degree 2 in children group  $3138.1 \pm 1833.52$  ng / mL and adult groups  $3437.32 \pm 1509.67$  ng / mL. Mannose binding lectin protein has no relationship with platelets and hematocrit values. The conclusion of this study indicates that MBL protein produced in the acute phase of DHF grade 2 and has no relationship with thrombocytopenia and plasma leakage on clinical signs of DHF grade 2.

**Keywords:** Protein Mannose Binding Lectin, Dengue Viruses (DENV), DHF Degree 2, Platelets and Hematocrit values.