Dengue (DENV) is an arthropod-borne emerging viral disease with clinical manifestations ranging from asymptomatic to severe forms including severe plasma leakage, bleeding and hypovolemic shock in affected individuals. Patients with severe disease often exhibit a ‘cytokine storm’, with high serum levels of cytokines and chemokines which may exacerbate pathogenesis. Cytokines may act either as inflammatory mediators or modulatory molecules during severe dengue and the role of cytokines in disfunctions of vascular endothelial cells that lead to plasma leakage has been already described. However, the role of immuneactivation in clinical outcome is still unclear. Herein, we investigated the cytokine profile in the blood of DENV positive patients with different clinical manifestations as a tool for early prediction of disease severity. A total of 30 dengue patients were enrolled in this study. From these, 8 were classified as dengue without warning signs (DwoWS), 16 as dengue with warning signs (DwWS) and 6 as severe dengue (SD), following the new dengue classification. Plasma levels of 17 different types of cytokines, chemokines, adhesion molecules and growth factors were assessed by multiplex fluorescent microbead immunoassay and compared between the diferente patients groups. Association between levels of cytokines and clinical parameters such as platelet counts and hematocrit were also determined. Increased levels of IL-1β, MIP-1β, MCP-1, TNF-α, IL-6, IL-17 were observed among patients with DwWS and/or SD (p<0.05). Moreover, MIP-1β levels were negatively correlated with platelets counts (p<0.01) and hematocrit (p<0.05) both in severe dengue patients. The cytokine profile described here is important to better understand the role of immuneactivation in the DENV pathogenesis and may help to define biomarkers to identify patients at risk of developing severe dengue disease and to contribute to the establishment of more attention and therapeutic/hospitalization.