The levels of endotoxinemia and anti-endotoxin immunity in pregnancy complicated by fetoplacental insufficiency

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The aim of the study was to assess the level of endotoxinemia and the state of anti-endotoxin immunity in relation to indicators of cytokine profile, the severity of the liver acute-phase response in pregnancy complicated by fetoplacental insufficiency during therapeutic interventions. The serum cytokine levels (IL-1β, IL-2, IL-6, IL-8, IL-10, IFNγ, IL-18), LPS and anti-endotoxin factors LBP, BPI, soluble form of CD14, and C-reactive protein (CRP) were investigated in 20 pregnant women on admission to obstetric hospital and post-treatment. The development of fetoplacental insufficiency was associated with an increased plasma levels of factors of innate immunity (BPI, sCD14) suggesting a strengthening of anti-endotoxin immunity in pathological pregnancy. The change of cytokine status in pregnancy complicated by fetoplacental insufficiency, was characterized by an imbalance of opposition pools upwards of proinflammatory cytokines, which have a tropho-destructive effect. In this regard, the development of fetoplacental insufficiency may be considered as a variant of obstetrical manifestations of «endotoxic aggression». (Cytokines and Inflammation. 2011. Vol. 10. № 4. P. 66–70.)

Key words: endotoxinemia, immunity, pregnancy, fetoplacental insufficiency.