

ABSTRACT

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Title of Thesis: Selected factors of the complement system in the diagnosis of intraamniotical inflammation in a patient with preterm prelabor rupture of fetal membranes (PPROM)

Objective: The aim of the study was to evaluate concentrations of selected markers in amniotic fluid in pregnancies complicated by PPRM with respect to the presence of the microbial invasion of the amniotic cavity (MIAC), intraamniotical inflammation (IAI) and intraamniotical infection. Among the evaluated biomarkers were complement component C8, terminal complement complex (TCC), the regulatory protein of the complement system protectin (CD59).

Methods: One hundred sixty-four women with singleton pregnancies complicated by PPRM were included in this study. Amniotic fluid samples were obtained by transabdominal amniocentesis. Concentrations of selected molecules were determined by enzyme immunoassay test (ELISA). MIAC was detected by a polymerase chain reaction. Interleukin 6 levels were determined in amniotic fluid of patients by immunochromatographic assay. IAI was defined as an amniotic fluid interleukin-6 concentration ≥ 745 pg/ml. Intraamniotical infection was characterized as the presence of both MIAC and IAI.

Results: Elevated concentrations of TCC and CD59 were found in patients with respect to the presence of the intraamniotical inflammation and intraamniotical infection. The concentration of complement component C8 was not changed with respect to the presence MIAC, IAI or intraamniotical infection.

Conclusions: TCC and the regulatory protein CD59 are promising biomarkers for the detection of IAI or intraamniotical infection of women with pregnancies complicated by PPRM.

Key words: preterm labor, PPRM, intraamniac inflammation, complement component C8, terminal complement complex, protectin