

Summary

Preterm prelabor rupture of membranes before 37. weeks of gestation (PPROM) is responsible for approximately one third of all preterm deliveries. Infection-related complications in PPRM are represented by the presence of microbial invasion of the amniotic cavity (MIAC), intra-amniotic inflammation (IAI) and histological chorioamnionitis (HCA). The presence of these complications is found in approximately 20-50% of all cases of PPRM and is associated with worse neonatal outcomes.

The first specific aim was to evaluate whether maternal serum CRP has a diagnostic value for diagnosis of MIAC and HCA. The study population consisted 386 women. CRP level was the highest in PPRM pregnancies complicated with MIAC and HCA.

The second specific aim was to evaluate short-term neonatal outcome in women with PPRM before 34 weeks of gestation. The study population consisted 122 women with PPRM at gestation age 24⁺⁰-34⁺⁰ weeks. In neonates was evaluated the influence of MIAC and HCA on neonatal outcome. The presence of both MIAC and HCA increased the risk of early onset sepsis.

The third and fourth specific aim was evaluation of an association between periodontal status and infection-related intra-amniotic complications in pregnancies complicated by PPRM and/or evaluation of association between the local inflammatory response in gingival crevicular fluid and maternal and intra-amniotic inflammatory responses, respectively. The study consisted 78 women with PPRM. In both studies was not proven the association between periodontium and intraamniotic environment and/or maternal inflammatory response.

The main findings of the thesis are that (i) the presence of both MIAC and HCA is associated with the highest maternal inflammatory response, measured by CRP, and increased the risk of early onset sepsis in pregnancies complicated by PPRM, (ii) the periodontal status is not related to the infection-related and inflammatory intra-amniotic complications in women with PPRM.