

## **USEFULNESS OF SELECTED CERVICO-VAGINAL CYTOKINES CONCENTRATIONS MEASUREMENTS AMONG PREGNANT WOMEN AS AN EARLY MARKER OF SUBSEQUENT PRETERM DELIVERY.**

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**Objectives:** Some cytokines might play a crucial role in the mechanism of preterm labour and delivery. The main aim of this prospective study was to evaluate the usefulness of selected cytokines (IL-1 $\alpha$ , IL-1 $\beta$ , IL-6 and IL-8) measurements in cervico-vaginal fluid of pregnant women as an early marker of preterm delivery.

**Materials and Methods:** Cervico-vaginal fluids were obtained from 107 pregnant women at 22 to 34 weeks gestation including 61 women with threatened preterm labour (TPL) and 46 women with physiologic course of pregnancy (reference group). Those samples were analyzed for the concentrations of selected cytokines using standard enzyme-linked immunosorbent assay technique (ELISA). Lower genital tract microbiology was diagnosed using Gram stain method and by culture.

**Results:** Mean gestational age at the time of sampling was 28,6 weeks. Mean time between sampling and delivery was 8,24 weeks in TPL group and 10,2 weeks in reference group. BV was diagnosed in 25,2% of subjects under study. Out of 107 women 15 (14,0%) delivered before 37<sup>th</sup> week of gestation. The rate of preterm delivery was significantly higher in threatened preterm labour group - 21,3% as compared to reference group - 4,3%. Median cervico-vaginal concentration of IL-1 $\alpha$ , IL-1 $\beta$ , IL-6 and IL-8 did not differ between preterm and term delivery group. Women with lower genital tract infection and IL-1 $\alpha$  or IL-1 $\beta$  low concentration (below 25<sup>th</sup> percentile) presented a higher risk of preterm delivery- OR=2,91. If two cytokines had low concentrations the risk of preterm delivery was 4,65. The highest risk was noted for women with lower genital tract infection and low cervico-vaginal concentrations of IL-1 $\alpha$  and IL-8 - OR=8,0 (3,20-20,01).

**Conclusions:** The early gestation cytokines measurement in cervico-vaginal fluid of pregnant women could be useful for prediction of preterm delivery only among women with lower genital tract infection.