

# PROGNOSTIC FACTORS IN PRETERM BIRTH

## - abstract -

**Introduction:** Preterm birth represents nowadays the main cause of perinatal morbidity and mortality, and its prevention continues to be one of the most difficult and complex issue in obstetrics. In spite of the spectacular progress of medicine, the incidence of preterm birth has remained unchanged in the recent decades, even more, there was recorded a slight increase of it and all these, in a period when there were introduced numerous strategies, but generally ineffective.

**The aim of this study** is to analyze various socioeconomic, behavioral, hereditary, pathological factors as well as some diagnostic tests as germ cultures used to highlight the cervico-vaginal and urinary infections, transvaginal ultrasonographic measurement of the cervix, determination of fetal fibronectin in cervico-vaginal secretions in order to establish ways of identifying the pregnant women who are at risk of preterm birth.

The study is structured in two parts: the general part includes theoretical considerations and the special part consists of personal contribution.

The general part includes data about the preterm birth from specialty literature, its economic and social impact, epidemiological data, characteristics of preterm labor, causes and risk factors, as well as data about the therapeutic attitude in such a case. The special part includes the results of the performed studies, discussions on the above mentioned issues and the conclusions.

**Material and method:** The study group was consisted of 529 patients with preterm birth within 5 years (2007-2011) in the Clinics of Obstetrics and Gynecology No. 2, Targu Mures. The control group was consisted of a sample of 759 women who gave birth at term in the same clinic and period.

**Results:** From all the analyzed risk factors, the followings were associated with a high risk of premature birth: country side origin ( $p=0,0006$ ), unemployed pregnant women ( $p=0,0001$ ), pregnant women with low education level ( $p=0,0001$ ), the ones with

a history of 3 or 4 births ( $p=0,01$  and  $p=0,0009$ ), the twin pregnancies, the dystocic presentations, abortion on demand in history ( $p=0,05$ ), preterm births in history ( $p=0,0001$ ), dead fetuses in history, bleeding in the first quarter of pregnancy ( $p=0,03$ ), abruptio placentae ( $p=0,0002$ ), unmarried women ( $p=0,0001$ ), from ethnicity ( $p=0,0001$ ), smoking ( $p=0,0001$ ), lack of administration of folic acid and multivitamins during pregnancy ( $p=0,04$  and  $p=0,03$ ), the lack of a pregnancy book ( $p=0,0001$ ), no medical record at a general practitioner ( $p=0,0001$ ), lack of a specialized obstetrical examination during pregnancy ( $p=0,0001$ ), low maternal height and weight ( $p=0,0001$ ), low maternal weight gain ( $p=0,0001$ ), AB blood group ( $p=0,05$ ), *Trichomonas vaginalis* ( $p=0,01$ ).

On a group of 55 patients, in the 24<sup>th</sup>-32<sup>nd</sup> weeks of pregnancy there were performed determinations of fetal fibronectin in cervico-vaginal secretions and also length transvaginal ultrasonographic measurements of the cervix. In the case of fetal fibronectine determination there was noticed a sensitivity of 66,67%, a specificity of 82,14% and in the case of length transvaginal ultrasonographic measurements of the cervix a sensitivity of 77,78% and a specificity of 75%. Cumulating the two methods, there was obtained a sensitivity of 59, 26% and a specificity of 92, 86%.

**Conclusions:** Pregnant women with a high risk of preterm birth are the ones with a low standard of living, low education level, unmarried, unemployed, from ethnicity, without any prenatal medical examination, without vitamin supplements during pregnancy.

*Trichomonas vaginalis* infection was associated in most of the cases with the preterm birth.

Echographic cervical length measurement presents a higher sensitivity in comparison with fetal fibronectin determination and both of the investigations have a higher specificity than the two tests separately.

**Key words:** preterm birth, cervix infection, cervical length, fetal fibronectin.