DETERMINING PRETERM LABOUR THROUGH CERVICAL BIOMETRICS AND FETAL FIBRONECTIN

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Problem statement

The main problem for fetal morbidity and mortality in twenty first century is still the premature delivery. In 2014 year 14.835.606 (12.654.938–16.728.926) babies were born before 37 complete weeks of gestation or approximately 10.6% of all live births [1]. It`s very highly searched how to predict which women will give preterm labour.

According to the WHO Global Preterm Birth Estimates, the percentages of premature labour are slightly increasing no matter all efforts and screening programs that are promoted worldwide [1].

The most widely used method of ultrasound cervical length measurement can determine the patients at highest risks, but there is no stable cutoff. Therefor were found some clinical biomarkers in the cervico-vaginal fluid – one of them is the fetal fibronectin (fFN). The aim of the study was to evaluate the predictive value of measuring the cervical length plus a quality test of fFN.

Material and methods

A prospective, cross-sectional study was designed, dividing pregnant women between 24 and 32 weeks: Group A patients with clinical symptoms of preterm birth and Group B patients without symptoms. All patients that were included had a test of fFN performed followed by a transvaginal measurement of the cervix. The results from the fFN were blinded, all patients received same management, respectably, the patients from Group A were administrated tocolytic and steroid therapy. The pregnancy outcome was collected to be analyzed.

Results

63 patients took part in the research. All patients from group A that were positive on fFN and had shortening of the cervix less than 25 mm, delivered in 2 weeks no matter the strong tocolytic therapy. The results from Group B show false positive predictable value. The test showed high predictive value when negative result. When applying the used biochemical test in combination with cervical biometrics, the risk of preterm can be determined by more than 95% of the cases.

Conclusion

The modern obstetrics cannot afford to skip the problem of the premature. Even so, the currently used methods for prediction are showing unsatisfactory predictive efficacy if used one by only. What we really need is to either find new methods for screening or improve those we have. The results from many studies are proving that the more markers are combined in one protocol, the better prognosis, the bigger the sensitivity and specificity, the best pregnancy outcomes.

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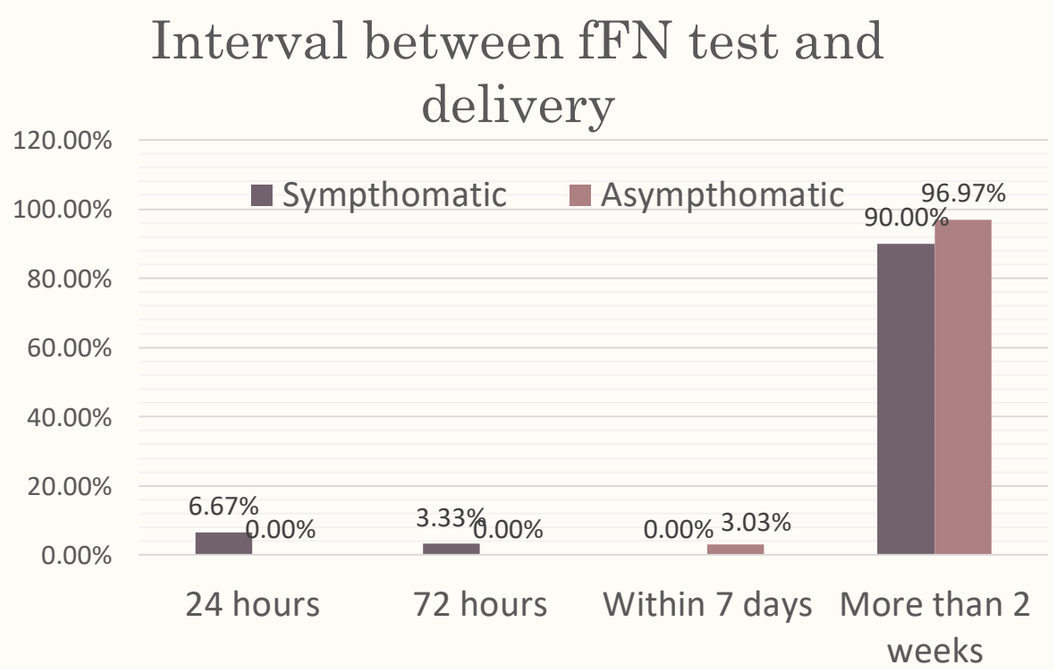

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