



## Fetal fibronectin detection for preterm birth prediction

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**ABSTRACT.** To study preterm birth prediction based on fetal fibronectin (fFN) in pregnant women, we randomly selected 124 patients. Vaginal posterior fornix secretions were analyzed using fFN quick test strips. Leucorrhea routine samples were collected to detect bacterial vaginosis, mycoplasma, and chlamydia. Delivery data at 7 days, 14 days, 34 weeks, and 37 weeks were documented and the sensitivity, specificity, positive predictive value, and negative predictive value were analyzed. Of the 124 cases, we found 2, 4, 10, and 18 cases of maternity within 7 days, 14 days, 34 weeks, and 37 weeks, respectively. The sensitivity, specificity, positive predictive value, and negative predictive value were as follows: 100, 77.8, 6.9, and 100% for 7 days; 75, 78.3, 10.3, and 98.9% for 14 days; 50.0, 78.9, 17.2, and 94.7% for 34 weeks; 33.3, 78.3, 20.7, and 87.4% for 37 weeks, respectively. Except for 18 preterm births, 23 cases were fFN-positive, 17 cases had lower genital tract infection. Eighty-

three cases were fFN-negative, of which 18 cases had the lower genital tract infections. This difference was statistically significant ( $P < 0.05$ ). Eighteen cases (14.5% of the pregnant women) had preterm birth. Ten cases delivered within 34 weeks. The negative predictive value and recent predictive value of fFN testing were higher; the positive predictive value was limited due to the impact of lower genital tract infection. The fFN-positive patients need timely clinical processing. During the pregnancy, monitoring of fFN changes and early detection of abnormalities help to reduce perinatal morbidity and mortality.

**Key words:** Premature prediction; Fetal fibronectin; Negative predictive value