Role of uterocervical angle, cervical length, and cervicovaginal fetal Fibronectin in the prediction of preterm birth

Abstract:

Background:
Cervical length measurement and fetal fibronectin are widely used to estimate the risk of preterm birth. Another potential predictor of preterm birth is the uterocervical angle and this additional measurement may improve the risk assessment. This study aimed to predict the onset of labor in women who present with preterm labor through cervical length, uterocervical angle, and fetal fibronectin.

Methods:
A prospective cohort study was carried out on 90 symptomatic women at high risk of preterm labor attending the Gynecology and Obstetrics department at Fayoum University Hospital. FFN in the cervicovaginal fluid was assessed by ELISA technique. The uterocervical angle and cervical length were measured by transvaginal ultrasound. Maternal history and pregnancy data were recorded. Delivery data were subsequently collected.

Results:
The average age was 21.79 ±3.3 years, and the average BMI was 24.6 ±5.8 kg/ m2. The mean GA was 32.83 ± 2.3 weeks. Twelve women in our cohort reported previous preterm labor. The cervical length and fetal fibronectin showed better sensitivity and specificity compared to the uterocervical angle in predicting preterm birth. Logistic regression analysis demonstrated that preterm birth depended only on the cervical length and quantitative fetal fibronectin.

Conclusions:
The combination of fetal fibronectin and cervical length could improve preterm birth prediction accuracy.