Uterocervical angle and cervical length as predictors for preterm birth in low-risk women

Abstract:

Background:

Cervical length measurement is 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.

Objectives:

To evaluate the role of the uterocervical angle compared to the cervical length measurements in preterm birth prediction.

Study design:

This prospective cohort study was carried out on 120 asymptomatic primigravida women at low risk of preterm labor attending the Gynecology and Obstetrics department at Fayoum University Hospital. Uterocervical angle and cervical length were measured by transvaginal ultrasound. Maternal history and pregnancy data were recorded. Delivery data were subsequently collected.

Results:

The mean age, BMI, and gestational age at delivery were 21.79 ± 3.3, 24.6 ± 5.8, and 38.46 ± 1.98, respectively. Fifteen out of 120 women (12.5%) experienced preterm birth. The uterocervical angle was significantly larger among the preterm group than the term group (110.17 ± 14.93 vs. 125.00 ± 15.35, $p<0.001$). The cervical length was significantly shorter among preterm women as compared with term. An inverse linear moderate correlation existed between gestational age and the uterocervical angle ($r= -0.370$, $p<0.001$). A positive linear moderate correlation existed between gestational age and the CL-one line ($r= 0.260$, $p=0.004$). Also, a positive linear strong correlation between GA and CL-two lines ($r= 0.716$, $p<0.001$).

Conclusions:

The uterocervical angle is a potential novel screening tool for predicting preterm birth better than cervical length.