Objectives: To evaluate the evolution of the cervix during pregnancy and the risk of preterm delivery. Methods: This is a cohort study including 117 pregnant/newborns. The pregnant women were evaluated at the 12th, 20th and 32th week (evaluation of the uterine cervix by transvaginal ultrasonography on the Samsung WS80 Elite) and immediately after delivery to determine the gestational age at birth. A variance analysis was performed to determine the association between uterine cervix measurement at the 12th, 20th and 32th weeks and prematurity, the paired T-test to evaluate the evolution of the uterine cervix at two times and the analysis of variance for repeated measurements was used to evaluate the association between longitudinal cervical follow-up and the risk of prematurity. The project was approved by the Ethics Committee.

Results: A total of 117 pregnant women, with a frequency of 10.1% of prematurity, were evaluated. The mean of the cervix at week 12 was $3.9 \pm 0.52$ cm, $3.5 \pm 0.43$ cm at week 20 ($p = 0.57$) and $2.8 \pm 0.80$ cm at week 32 ($p = <0.0001$). The mean of the cervix at the 12th was $3.9 \pm 0.51$ cm vs $4.00 \pm 0.50$ cm, $p = 0.73$ (term vs premature), at the 20th week of $3.8 \pm 0.41$ cm vs $3.3 \pm 0.61$ cm, $p = 0.04$ (term vs premature), at the 32th was $3.2 \pm 0.65$ cm vs $2.8 \pm 0.80$ cm, $p = 0.64$ (term vs premature). We did not observe an association between the evolution of the cervix during gestation and prematurity ($p = 0.61$).

Conclusions: A physiological reduction of the cervix was observed with the progression of gestation, with no association between the evolution of the cervix and the presence of prematurity. Association was observed between prematurity and uterine cervix evaluation at the 20th week.