

Is the measurement of the cervical length an accurate predictive method (PTD) for preterm delivery in women with history of PTD

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Objective

To determine whether sonographic cervical length is an effective predictive tool in women with threatened preterm labor (PTL) who are in a high risk for preterm delivery (PTD) due to a history of PTD.

Methods

A retrospective cohort study of all women with singleton pregnancies and PTL <34 weeks underwent sonographic measurement of the cervical length in a tertiary medical center between 2007 and 2012. The accuracy of the cervical length in predicting PTD was compared between women with and without history of PTD.

Results

1, 023 women were included, 136 with a history of PTD (Past-PTD group) and 887 with no risk factors for PTD (Low-Risk group). The rate of PTD was significantly higher for women with a history of PTD (36. 8% vs. 22. 5%, $p < 0. 001$) and the cervical length was significantly correlated with the examination to delivery interval only in low risk women ($r = 0. 32$, $p < 0. 001$) but not in women with past PTD ($r = 0. 07$, $p = 0. 4$). On multivariable analysis, cervical length was independently associated with the risk of preterm delivery only for women in the low-risk group but not for women with past PTD. For women with previous PTD who were threatened PTL the cervical length failed to distinguish between those who are at high or low risk for PTD (area under the ROC curve 0. 413-0. 545). Using standardized thresholds, the sensitivity and specificity of cervical length for the prediction of PTD were significantly lower in women with previous PTD compared with women with no risk factors for PTD.

Conclusion

The value of the cervical length to predict PTD appears to be limited among women with history of PTD in previous pregnancy.