Quantitative cervicovaginal fluid fetal fibronectin is predictive of intra-amniotic infection

Lertrut W, Warintaksa P, Bumrungpuet S, Yuenyongdechawat N, Pongchaikukl P, Mongkolsuk P, Settacomku R, Vivithanaporn P, Chaemsaithong P

Mahidol University, Bangkok, Thailand

Objective

To determine whether quantitative cervicovaginal fluid (CVF) fetal fibronectin (fFN) can identify the presence of intra-amniotic infection/inflammation in women presenting with preterm labor symptoms with intact membranes.

Methods

This prospective study included 60 patients with preterm labor and intact membranes who had a sample collected for quantitative fFN measurement and underwent amniocentesis for the evaluation of intra-amniotic infection/inflammation. Amniotic fluid culture and 16S Sanger sequencing were performed to identify microorganism in the amniotic cavity. Intra-amniotic inflammation was defined as an amniotic fluid interleukin-6 concentration ≥2.6 ng/mL.

Results

The frequency of intra-amniotic infection/inflammation was 25% (15/60); 2); 2) The higher the fFN concentration, the greater the risk of intra-amniotic infection/inflammation; 3) A fFN concentration ≥195 ng/mL had an area under the curve of 0.96 (95%CI: 0.91-1.0) in the identification of intra-amniotic infection/inflammation. This test had 100% sensitivity at 92.3% specificity with a positive likelihood ratio of 13 for the prediction of intra-amniotic infection/inflammation; 4) fFN cut-off of 195 ng/mL had a higher predictive performance than the traditional cut-off (50 ng/mL) for the prediction of intra-amniotic infection/inflammation.

Conclusion

The higher the concentration of fFN, the greater the risk of intra-amniotic infection/inflammation. CVF fFN had a high predictive performance and it can be used as a non-invasive bedside test for the prediction of intraamniotic infection/inflammation in preterm labor.