P-0250 | POSTER | Mechanisms for preterm labor and fetal injury

EVALUATION OF PAMG-1 FOR THE PREDICTION OF PRETERM BIRTH IN PATIENTS SYMPTOMATIC OF PRETERM LABOR

Lotfi, G.; Faraz, S.; Al Swalhee, N.; Nasir, R.; Somini, S.; Abdeldayem, R.; Koratkar, R.; Ammar, A.
Dubai Health Authority, Duba Latfa Hospial, United Arab Emirates

Abstract:
Purpose: Traditional methods for assessing the risk of preterm birth in patients with threatened preterm labor (PTL) are inadequate. Several studies to-date have reported high positive (PPV) and negative predictive values (NPV) for the placental alpha microglobulin-1 (PAMG-1) test, commercially known as PartoSure, and have suggested it as a solution to address this problem. However, none of these studies have evaluated the test in a multi-national setting as diverse as the United Arab Emirates, which is represented by over 200 different countries.
Methods: PTL symptomatic patients between 24 and 37 weeks gestation, cervical dilatation ≤3 cm, no sexual intercourse within 24 hrs of presentation, and no evidence of ROM were recruited. The PartoSure specimen was collected without a speculum prior to any other testing. The attending clinician remained blinded to its results when managing the care of the patient, as this was a prospective observational study. Sensitivity (SN), specificity (SP), PPV and NPV of PartoSure for predicting delivery within 7 and 14 days of presentation was calculated.
Results: 175 patients were recruited between April 2014 and April 2015. 24 (16%) were excluded from the final analysis for failure to meet study criteria; 13 of these 24 (i.e. 54% of excluded patients) were excluded due to either labor augmentation or a cesarean section delivery before active labor was diagnosed as regular contractions every 10 minutes or less, lasting more than 40 seconds, with cervical effacement more than 80 percent and dilation of 2cm (or 3cm). Therefore, 151 patients were included in the final analysis. The rate of delivery within 7 days of presentation was 6%. 71% of patients presented at <34 completed weeks of gestation. Over 50 nationalities were represented. For prediction of imminent spontaneous preterm birth, the PartoSure test had SP of 99% and 99%, SN of 67% and 54%, PPV of 75% and 88%, and NPV of 98% and 96%, for 7 and 14 days, respectively.
Conclusion: Our large study of over 150 patients from different nationalities, reinforces the important role of a predictor test, as the PAMG-1 test, in foreseeing preterm birth in symptomatic patients, particularly with respect to imminent spontaneous delivery within 7 and 14 days. The level of SP and NPV exceeds that of current methods allowing a significant reductions in the unnecessary administration of drugs and hospitalization in this patient group. Further studies are suggested to evaluate its use in combination with cervical length measurement.