2007–2020. Cases of PAS were validated by two independent reviewers using FIGO clinical and pathologic diagnostic criteria. Samples were matched +/-1 week of gestation at sampling. CMPs were isolated via a unique size-exclusion chromatography process followed by protein identification using liquid chromatography mass spectrometry. To classify PAS, regularized (L1) regression was used to define a restricted set of candidate markers from the superset of all identified CMP proteins. From these candidate proteins, a panel with high predictive potential was identified using an iterative cross-validation procedure. Panels were ranked by mean area under the curve (AUC).

RESULTS: Thirty-five cases and 70 controls were analyzed including 27 cases of grade 1, 7 cases of grade 2, and 1 case of grade 3b PAS. Within the 24-week samples, five CMP proteins distinguished PAS from controls with a mean AUC of 0.83. These proteins included heat shock proteins, histone related proteins, and proteins with activity in extracellular matrix adhesion, cell motility and placental specific angiogenesis. For the top 34-week panel, the mean AUC was lower at 0.78. Proteins with placentation activity were common to both panels but those involved with DNA damage repair and inflammatory activity were specific to the latter panel.

CONCLUSION: This is the first time CMP proteins obtained from maternal plasma have been used to classify PAS and represents the best predictive characteristics for PAS biomarkers of any kind in the contemporary literature. While some proteins are common to both second and third trimesters, there are differences in the activities of members of the respective panels. This suggests an evolution of PAS with increasing gestation and that the second trimester may be more informative for antenatal PAS detection.

42 Early versus Expectant Artificial Rupture of Membranes Following Foley Catheter Ripening: A Randomized Controlled Trial
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OBJECTIVE: Early amniotomy (AROM) shortens the duration of spontaneous labor, but the use of AROM intervention following labor induction remains understudied. Our objective was to evaluate whether early amniotomy reduces the duration of labor among individuals undergoing combined Foley catheter and misoprostol (FC-M) labor induction (IOL).

STUDY DESIGN: A randomized clinical trial was conducted from November 2020 through May 2021 comparing amniotomy with one hour of Foley catheter expulsion (early AROM) to expectant management. Randomization was stratified by parity. Labor management was standardized among participants. Individuals undergoing IOL at ≥37 weeks with a singleton gestation and cervical dilation ≤2cm were included. Our primary outcome was time to delivery. Kruskal-Wallis, Pearson chi-square and Cox survival analyses with intent-to-treat principles were performed.

RESULTS: 160 patients (79 Early AROM, 81 expectant management) were randomized. Early AROM achieved a faster median time to delivery compared to expectant management, (Early AROM: 86% vs Expectant: 70%, p=0.03). There was no difference in the cesarean delivery rate between the two groups (Early AROM: 22% vs Expectant: 31%, p=0.25). Individuals were 1.5 times more likely to deliver following early AROM after censoring for Cesarean delivery and adjusting for parity, (Hazard Ratio [HR] 1.5, 95% confidence interval [CI] 1.4-1.7). There were no significant differences in maternal and neonatal outcomes.

CONCLUSION: We found that early AROM was superior to expectant management following combination FC-M induction. Early amniotomy resulted in twice the chance of delivering compared to expectant management. Therefore, early AROM should be the preferred method of labor management in term IOL.

43 Expression and actions of Adrenomedullin at the uterine-placental interface
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