

OBJECTIVE: The aim of this study was to determine the obstetric and perinatal outcome in subsequent pregnancies after early previsible premature rupture of membranes (PPROM) in pregnant women treated with and without elective cervical cerclage.

STUDY DESIGN: A retrospective cohort study from a single tertiary center of all deliveries between 2011 to 2021. Inclusion criteria included spontaneous rupture of membranes before 24 week's gestation and a subsequent birth until 2021. Exclusion criteria included: cases with missing data; PPRM or preterm birth (PTB) in previous gestation; and emergency cerclage or multifetal gestation in subsequent pregnancy. Maternal and neonatal outcomes were determined in women with and without elective cervical cerclage in the subsequent pregnancy.

RESULTS: During the study period, 194 women presented with previsible PROM and 72 (37.1%) met inclusion and exclusion criteria.

In pooled analysis, median gestational age in the following pregnancy was 38+3 weeks (IQR 37.1-39.2). Seven (9.7%) women had recurrent premature PROM, two of which (2.8%) were previsible.

Seventeen (23.6%) women underwent elective cervical cerclage and were compared controls (n=55). Women with cerclage had a higher rate of PTB [9 (52.9%), vs 7 (12.7%); $p < 0.001$] and preterm PROM recurrence [5 (29.4%), vs 2 (3.6%); $p < 0.01$]. Median gestational age at delivery was 36.6 (IQR 35.2-38.4) and 38.3 (IQR 37.5-39.2) in the study and control groups, respectively ($p=0.01$).

Rates of major obstetric or perinatal morbidity did not differ between groups. Logistic regression analysis revealed elective cerclage remained significantly associated with higher rates of PTB [adjusted OR 6.4 (95% CI, 1.7-23.5)] after adjustment for maternal uterine anomalies and betamethasone treatment.

CONCLUSION: Elective cerclage based only on a history of previsible PROM in singleton pregnancies is associated with increased risk of PTB in subsequent pregnancy. Thus, a meticulous clinical assessment of pregnant women with previsible PPRM should be conducted in order to tailor the optimal treatment in the subsequent pregnancy.

281 Racial Disparities and Risk for COVID-19 Among Pregnant Patients: Results from the Michigan Statewide Collaborative

Inara Ismailova¹, Robert J. Sokol², Dereje W. Gudicha³, Yasmin G. Hasbini⁴, Adi L. Tarca³, Pooja M. Green⁵, Theodore Jones⁶, Gregory Goyert⁷, Lisa Thiel⁸, Youssef Youssef⁹, Courtney Townsel¹⁰, Shyla Vengalil¹¹, Paige Paladino¹², Amy Wright¹³, Mariam Ayyash⁷, Gayathri Vadlamudi¹⁴, Marta Szymanska¹⁵, Sonia Sajja¹⁶, Grace Stenberg¹⁷, Michael Baracy Jr. Jr.¹⁸, Karlee Grace¹², Kaitlyn Houston¹², Jessica Norman¹³, Ray Bahado-Singh¹⁹, Sonia S. Hassan²⁰

¹Wayne State University School of Medicine, Oak Park, MI, ²Wayne State University School of Medicine, Department of Obstetrics and Gynecology, W Bloomfield, MI, ³Perinatology Research Branch, Division of Obstetrics and Maternal-Fetal Medicine, and Division of Intramural Research, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, US Department of Health and Human Services, Bethesda, MD and Detroit, MI, Detroit, MI, ⁴Office of Women's Health, Division of Research, Wayne State University, Detroit, MI, ⁵St. Joseph Mercy Ann Arbor, Trinity Health, Ypsilanti, MI, ⁶Beaumont Hospital Dearborn, Dearborn, MI, ⁷Henry Ford Health System, Detroit, MI, ⁸Division of Maternal Fetal Medicine Spectrum Health Hospital System,

Michigan State University Associate Professor and Research Team, Grand Rapids, MI, ⁹Hurley Medical Center/Michigan State University, Flint, MI, ¹⁰University of Michigan, Ann Arbor, MI, ¹¹St. John Hospital and Medical Center, Detroit, MI, ¹²Ascension Macomb-Oakland Hospital, Warren, MI, ¹³St. Joseph Mercy Oakland, Trinity Health, Pontiac, MI, ¹⁴Henry Ford Hospital, Ypsilanti, MI, ¹⁵Detroit Medical Center/Wayne State University, Detroit, MI, ¹⁶Beaumont Health, Troy, MI, ¹⁷Department of Obstetrics and Gynecology Spectrum Health Hospital System, Michigan State University Research Team, Grand Rapids, MI, ¹⁸Ascension St John Hospital and Medical Center, Detroit, MI, ¹⁹Beaumont Hospital/Oakland University William Beaumont School of Medicine, Royal Oak, MI, ²⁰Office of Women's Health, Division of Research, Wayne State University Wayne State University School of Medicine, Department of Obstetrics and Gynecology, Detroit, MI

OBJECTIVE: Previous studies have looked at COVID-19 outcomes in pregnancy and racial disparities among patients with COVID-19, but few have studied racial disparities among pregnant patients with COVID-19. Our goal in this study is to analyze the relationship between race and disparate COVID-19 risk in pregnancy.

STUDY DESIGN: A retrospective cohort analysis was performed on data collected as part of the COVID-19 in Pregnancy and The Newborn: State of Michigan Collaborative, a database of pregnant patients admitted to 14 institutions in Southern Michigan. Cases were defined as patients with a positive SARS-CoV-2 test result. Controls, those with suspicion of COVID-19 prior to universal screening or a negative PCR test, were matched to cases on the same unit within 30 days of each case. For this analysis, the two primary groups of interest were non-Hispanic Black (Black) vs. non-Hispanic White (White) patients. Potential covariates were age, body mass index (BMI), chronic hypertension, diabetes, asthma, substance use, and smoking; the dependent variable was COVID/non-COVID in a robust Poisson regression model. In addition, 18 symptoms and disease severity (mild/moderate/severe) were compared between the Black and White groups using the same statistical method.

RESULTS: Of 1,131 gravidas, 42.9% (n=485) were Black. These patients were at two-fold greater risk for COVID-19 compared with their White counterparts [35.9% vs. 18.3%, RR=1.96(1.6-2.4)]. After adjusting for obesity and diabetes, the risk of COVID-19 in Black patients remained higher compared to the risk among White patients (aRR=2.46 [1.87-3.24]). There were no differences in symptoms nor severity of disease presentation between the groups.

CONCLUSION: In our population, Black patients are more likely to be diagnosed with COVID-19 infection during pregnancy. This finding is not explained by a range of covariates. Other factors, such as social determinants of health, may be important to understand this disparity and warrant further examination.

282 Estimating gestational latency among individuals with a twin gestation undergoing physical exam-indicated cerclage

Ashish Premkumar¹, Kiki Ogu², Nikita Sinha², Emily S. Miller³

¹John H. Stroger, Jr. Hospital of Cook County, Chicago, IL, ²Northwestern University, Chicago, IL, ³Northwestern University Feinberg School of Medicine, Chicago, IL

OBJECTIVE: A recent randomized trial supports the efficacy of physical exam-indicated cerclage (PEIC) in twin gestations. Quantifying gestational latency PEIC is an important part of shared decision making and informed consent. Thus, our objective was to create a model for estimating gestational latency in the setting of PEIC in twin gestations.

STUDY DESIGN: This single-site retrospective cohort included all people with a twin gestation between 1985 and 2016 who underwent

