in late preterm births (34–36 weeks), and 65% of term births (37–42 weeks) ($P < .001$). Previable births constituted approximately 28% of total infant mortalities in white newborns and 45% of infant mortalities in black infants in Ohio during the study period (Figure).

Conclusion

There is a significant racial disparity in previable preterm births, with black mothers incurring a 3- to 6-fold increased relative risk compared with white mothers, most of which are spontaneous in nature. This may explain much of the racial disparity in infant mortality because all live-born previable preterm births result in death. Focused efforts on the prevention of spontaneous previable preterm birth may help to reduce the racial disparity in infant mortality. ■

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The impact of fetal growth restriction on latency in the setting of expectant management of preeclampsia

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Background

Fetal growth restriction is a common complication of preeclampsia. Expectant management for qualifying patients has been found to have acceptable maternal safety while improving neonatal outcomes. Whether fetal growth restriction influences the duration of latency during expectant management of preeclampsia is unknown.

Objective

The objective of the study was to determine whether fetal growth restriction is associated with a reduced interval to delivery in women with preeclampsia being expectantly managed prior to 34 weeks.

Study Design

We performed a retrospective cohort of singleton, live-born, non-anomalous deliveries at the University of Cincinnati Medical Center between 2008 and 2013. Patients were included in our analysis if they were diagnosed with preeclampsia prior to 34 completed weeks and if the initial management plan was to pursue expectant management beyond administration of steroids for fetal lung maturity. Two study groups were determined based on the presence or absence of fetal growth restriction. Patients were delivered when they developed persistent neurological symptoms, severe hypertension refractory to medical therapy, renal insufficiency, nonreassuring fetal status, pulmonary edema, or hemolysis elevated liver low platelet syndrome or when they reached 37 weeks if they remained stable without any other indication for delivery. Our primary outcome was the interval from diagnosis of preeclampsia to delivery, measured in days. Secondary outcomes included indications for delivery, rates of induction and cesarean delivery, development of severe morbidities of preeclampsia, and select neonatal outcomes. We performed a multivariate logistic regression analysis comparing those with fetal growth restriction with those with normally grown fetuses to determine whether there is an association between fetal growth restriction and a shortened interval to delivery, neonatal intensive care unit admission, prolonged neonatal stay, and neonatal mortality.

Results

A total of 851 patients met the criteria for preeclampsia, of which 199 met inclusion criteria, 139 (69%) with normal growth, and 60 (31%) with fetal growth restriction. Interval to delivery was significantly shorter in women with fetal growth restriction, median (interquartile range)

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TABLE
Logistic regression analysis of study outcomes

Outcome measure	Normal growth (referent) (n = 139)	FGR (n = 60)	OR	95% CI	aOR	95% CI
Interval of < 1 wks, n, %	79 (58.1)	47 (79.3)	1.62	1.14–2.29	1.66	1.12–2.47
Neonatal care unit admission	106 (78.5)	58 (96.7)	2.81	1.35–5.87	1.74	0.80–3.78
Neonatal length of stay > 4 d, n, %	94 (72.9)	45 (93.8)	2.36	1.28–4.37	1.51	0.76–2.97
Neonatal mortality, n, %	6 (4.4)	8 (13.3)	1.82	1.05–3.17	1.06	0.53–2.13

Regression model maternal race, tobacco use, underlying chronic hypertension, gestational age at delivery, severe preeclampsia, fetal sex, odds ratio, adjusted odds ratio, and 95% confidence intervals are presented.

aOR, adjusted odds ratio; *CI*, confidence interval; *FGR*, fetal growth restriction; *OR*, odds ratio.

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of 3 (1.6) days vs normal growth, 5 (2.12) days, $P < .001$. The association between fetal growth restriction and latency less than 7 days remained significant, even after post hoc analysis controlling for confounding variables (adjusted odds ratio, 1.66 [95% confidence interval, 1.12–2.47]). There were no differences in the development of severe disease (85.9 vs 91.7%, $P = .26$), need for intravenous antihypertensive medications (47.1 vs 46.7%, $P = .96$), and the development of severe complications of preeclampsia (51.1 vs 42.9%, $P = .30$) in normally grown and growth-restricted fetuses, respectively. Fewer women with fetal growth restriction attained their scheduled delivery date, 3 of 60 (5.0%), compared with normally grown fetuses,12 of 139 (15.7%), $P = .03$. Admission to the neonatal intensive care unit, neonatal length of stay, and neonatal mortality were higher when there was fetal growth restriction; however, after a logistic regression analysis, these associations were no longer significant (Table).

Conclusion

Fetal growth restriction is associated with a shortened interval to delivery in women undergoing expectant management of preeclampsia when disease is diagnosed prior to 34 weeks. These data may be helpful in counseling patients regarding the expected duration of pregnancy, guiding decision making regarding administration of steroids and determining the need for maternal transport. ■

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