

10:45 AM–10:55 AM

THIRD PRIZE

Mothers at Risk Maternal Mental Health Outcomes After Perinatal Death

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INTRODUCTION: Stillbirth and infant death are traumatic events with profound and lasting effects on bereaved families. Mothers with perinatal loss are at high risk for poor mental health, although this has not been well-assessed in a representative epidemiologic cohort. There are also virtually no data on loss among African-American women.

METHODS: The Michigan Mother's Study is a 2-year longitudinal survey of all mothers with stillbirth and infant death, matched with live-birth controls. The study assessed mental, physical, and reproductive health outcomes and screened for depression, post-traumatic stress disorder (PTSD), panic disorder, social phobia, and obsessive compulsive disorder.

RESULTS: Three hundred seventy-eight bereaved and 232 live-birth mothers responded to the 6-month mailing (44% response rate). Nineteen percent of those bereaved were African-American compared with 8% of those with live birth. Bereaved mothers compared with live-birth mothers had dramatically higher rates of positive screens for depression (23% compared with 8%, $P<.001$), PTSD (41% compared with 12%, $P<.001$), general anxiety disorder (19% compared with 7%, $P<.001$), social phobia (19% compared with 6%, $P<.001$), and panic disorder (12% compared with 6%, $P=.011$). Rates were similar for mothers with stillbirth compared with infant death. Although African-American mothers showed similar levels of distress, they were significantly less likely than white mothers to have received treatment.

CONCLUSION: This is the first population-based study of mental health outcomes among perinatally bereaved mothers. Results show extraordinarily high rates of depression and anxiety and limited treatment, particularly among African-American mothers, who face the highest risk for adverse pregnancy outcomes in the United States.

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11:50 AM–12:00 PM

Trends and Correlates of Monozygotic Twinning After Assisted Reproductive Technology

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INTRODUCTION: Monozygotic twinning, associated with increased infant morbidity and mortality, is more common after assisted reproductive technology (ART) than in the general population. Although multiple factors have been proposed as contributors, studies seeking to define causality have been underpowered or inconclusive. We evaluated trends of monozygotic twinning in ART and its association with patient and treatment factors.

METHODS: We analyzed 392,136 pregnancies resulting from fresh, nondonor embryo transfers conducted between 2000 and 2011 and reported to the National ART Surveillance System. We examined trends of monozygotic twin pregnancies (defined as those in which number of fetal heart tones on first trimester ultrasound exceeded number of embryos transferred) using the Cochrane-Armitage test and subsequently compared monozygotic twins with (1) singleton pregnancies (one fetal heart) and (2) other multiple-gestation pregnancies (more than one fetal heart but not more than number of embryos transferred). Modified Poisson regression models were used to estimate adjusted risk ratios (aRRs) for monozygotic twinning association with assisted hatching for both comparison groups, stratified by day-3 and day-5 transfer.

RESULTS: Incidence of monozygotic twinning after ART increased from 2000 to 2011 ($P<.001$ for trend), with greater incidence in day-5 (1.72%) than day-3 (0.48%) embryo transfers. Monozygotic twinning was associated with assisted hatching among day-3 embryo transfers when compared with both singleton (aRR 2.19, confidence interval [CI] 1.93–2.48) and other multiple-gestation (aRR 2.27, CI 2.00–2.57) pregnancies and among day-5 embryo transfers when compared with other multiple-gestation pregnancies (aRR 1.18, CI 1.05–1.32).

CONCLUSIONS: Monozygotic twin pregnancy incidence after ART has increased over the past decade. Day-5 transfer and assisted hatching are associated with increased monozygotic twinning risk.

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