

Polycystic Ovarian Syndrome Conference

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Clinical and embryologic in vitro fertilization (IVF) outcomes in polycystic ovary syndrome (PCOS) based on body mass index

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Considering that 50% of PCOS patients are not obese, characterizing associations of a range of BMI with IVF outcomes could inform management of PCOS patients. Specifically, characterizing relationships between BMI and ovarian hyper-stimulation syndrome (OHSS) would lay the groundwork for investigation of BMI-dependent dosing of gonadotropins to reduce morbidity due to OHSS, a serious disease for which PCOS patients are at elevated risk. This retrospective cohort study included 101 IVF cycles from 79 women <40 years old with a clinically-documented diagnosis of PCOS. Participants were stratified by BMI calculated within three months of cycle start: Lean (18.7-24.9 kg/m², n=51), overweight (25-29.9 kg/m², n=19), and obese (≥30 kg/m², n=31). Linear, logistic, and Poisson regression were used to estimate the effect of a range of BMI on IVF outcomes while adjusting for potential confounders. Obese PCOS women had 69% lower odds of clinical pregnancy per cycle start [odds ratio (OR=0.31), 95% confidence interval (CI=0.11-0.86), p=0.02] and 77% lower odds of clinical pregnancy per embryo transfer (OR=0.23, 95% CI=0.08-0.68, p=0.008) compared to lean PCOS women. Among obese PCOS women, the odds of live birth were 71% lower per cycle start (OR=0.29, 95% CI=0.10-0.84, p=0.02) and 77% lower per embryo transfer (OR=0.23, 95% CI=0.07-0.71, p=0.01) compared to lean PCOS women. There was a trend toward decreased OHSS incidence with increasing BMI among women with PCOS: 19.6% in lean, 10.5% in overweight and 3.2% in obese. In conclusion, PCOS is a broad syndrome with our results demonstrating two distinct populations, lean and obese, which have different IVF outcomes including OHSS risk profiles.

Biography

Amelia Purser Bailey is the Director of Minimally Invasive Surgery at Fertility Associates of Memphis. She is trained in Reproductive Endocrinology and Infertility from Brigham and Women's Hospital. While in Boston, she was a Clinical Instructor at Harvard Medical School and conducted joint research projects between Boston Children's Hospital and the Massachusetts Institute of Technology. She has attended the University Of Mississippi School Of Medicine and completed Residency in Obstetrics and Gynecology at the University of Virginia Health System. In addition to treating infertility, her special interests include polycystic ovary syndrome, minimally invasive techniques and congenital reproductive abnormalities.

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