

#### MEDICAL UPDATE

# At the Forefront of Reproductive Medicine: Improving Protocols and Methodologies Creates Safer and More Efficient Ways of Helping Patients Overcome Infertility

This year's Scientific Congress of the American Society for Reproductive Medicine (ASRM) celebrated 75 Years of History and Innovation. The program featured scientific, postgraduate, and video presentations as well as plenary lectures addressing the most pressing clinical and basic-science issues in reproductive medicine. The meeting drew nearly 10,000 attendees from 94 countries to share their clinical research and study findings from the past year.

For the past 28 years, the physicians at Shady Grove Fertility (SGF) have placed a high value on conducting clinical research and remain a leader in the field. We are one of only a few private practice fertility centers in the country to employ a full-time dedicated research team who perform under the direction of Director of Research, Kate Devine, M.D., board certified reproductive endocrinologist.

Prioritizing patient safety and maximizing outcomes for live birth rates is the foundation for our research. Research is carried out as a way to offer tremendous insights into the best fertility practices for the population at large. Our commitment to continual improvement keeps us at the forefront, innovating and refining, which ultimately provides better outcomes—not just the treatment of our patients but of those across the country.

Research remains one of the key pillars at SGF. It is, after all, the only way we can understand how to provide better treatment that yields successful outcomes.

-- Eric A. Widra, M.D., Chief Medical Officer

SGF Physician Research Team



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### **New Study Offers Promise for Women with Endometriosis Who are Trying to Conceive**

Endometriosis Does Not Impact Live Birth Rates in Frozen Embryo Transfer (FET) of Euploid Blastocysts

LA Bishop M.D., Kate Devine M.D., J Gunn, B Slocum, R Saunders, Eric A. Widra M.D., A Decherney, MJ Hill M.D.

FOR YOUR PATIENTS

treatment as those who don't.

Women with endometriosis who are trying

to conceive have similar success with IVF

#### THE STUDY

According to the American College of Obstetricians and Gynecologists, 10 percent of women have endometriosis and almost 40 percent of women with infertility have endometriosis.

To understand why endometriosis may decrease a couple's chances of having a baby from IVF, as it may affect those trying to

conceive naturally, a study was completed looking at three subsets of patients comparing what infertility factors were likely to be present and to determine if women with endometriosis had statistically similar rates of pregnancy and live birth compared to the other groups.

This retrospective study looked at 472 frozen embryo transfers (FET) in patients at SGF from January 2016 through March 2018 using chromosomally normal blastocysts (as indicated by preimplantation genetic testing for aneuploidy [PGT-A]). Three subsets of patients were included: women with surgically proven endometriosis, patients with isolated male factor infertility, and non-infertile patients electing genetic testing for a single gene disorder. The male factor infertility and single gene groups of patients were selected for comparison, as they typically yield strong pregnancy and delivery rates using IVF and because neither egg nor uterine infertility factors were likely to be present. The population from the study excluded: patients with multiple infertility diagnoses, gestational carriers, and donor oocyte cycles.

#### THE RESULTS

The results from the study revealed that women with endometriosis had no difference in pregnancy and live birth outcomes compared to the other groups. Further, when patients with endometriosis were compared to each control group, there was no difference in the number and frequency of chromosomally normal blastocysts with PGT-A.

FINDINGS (per transfer)				
	ENDOMETRIOSIS (n=59)	MALE FACTOR (n=362)	PGT-M (n=51)	P VALUE
No. Embryos Transferred	1.05	1.09	1.06	0.97
Positive hCG	80%	74%	80%	0.44
Clinical Pregnancy	73%	65%	63%	0.43
Spontaneous Abortion	10%	14%	10%	0.63
Live Birth	63%	53%	51%	0.34

The percentage of live birth rates in women with endometriosis suggests an overall good prognosis with a euploid blastocyst in a FET cycle.

By controlling embryo quality using euploid FET cycles, the study showed no difference in pregnancy outcomes in patients with endometriosis compared to those with male factor and non-infertile patients.

"I'm encouraged for women and what this means for how we treat endometriosis. It's very possible to build their family with the right treatment and timely care," shared Devine.



# Making Non-Invasive IUI Treatment Safer without Compromising Success Rates

Choosing the Optimum Medication and Dose in Ovulation Induction Intrauterine Insemination Cycles (OI-IUI) to Avoid Multiple Gestation Pregnancies

M. Blake Evans, D.O., Micah J Hill, D.O., Kate Devine, M.D., Peter Lindner, M.D., Alan DeCherney, M.D., Natalie C. Stentz, M.D., M.S.C.E.

#### THE STUDY

This retrospective study evaluated 8,911 patients who underwent 15,453 oral ovulation induction-IUI (OI-IUI) cycles from 2004 to 2018 at SGF.

The research evaluated the optimal oral medication type (letrozole compared to clomiphene citrate) and dose in controlled ovarian hyperstimulation/intrauterine insemination (COH/IUI) cycles to increase clinical pregnancy rates (CPR) while lowering risk of multiple gestation, i.e., twins or triplets.

#### THE RESULTS

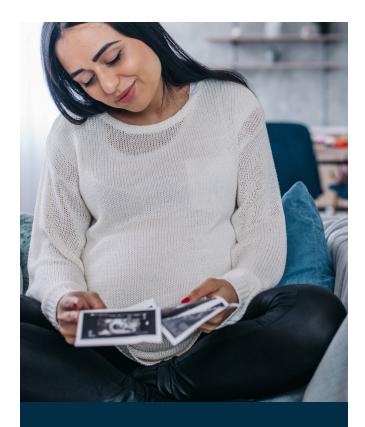
The data suggested that in ovulatory women, an initial dose of 50mg of clomiphene citrate provides a greater chance of a singleton gestation than a higher starting dose. Simply put, more medication doesn't always mean better success rates, and a higher dose increases a woman's risk of multiples.

Further, in the overall population, clinical pregnancy rates were comparable between patients who received letrozole and women given clomiphene citrate. However, in women who are anovulatory specifically, there was a lower chance of a multiple pregnancy when given letrozole compared to clomiphene citrate. In women who are ovulatory, neither medication showed a higher risk of multiples or a higher clinical pregnancy rate than the other.

"Our research sheds important light on this popular treatment approach, making it safer for women by lowering their chances of high-risk, multiple gestation pregnancies while optimizing pregnancy rates," states Devine. To maximize clinical pregnancy rates while minimizing the chance of multiples in oral ovulation induction/intrauterine insemination cycles, medication and dose should be chosen carefully.

#### FOR YOUR PATIENTS

A starting dose of 50mg of clomid provides a greater chance of a singleton gestation than a higher starting dose. For anovulatory women, letrozole may be a better option in IUI treatment to reduce the risk of multiple gestation.



## Improving Treatment Outcomes in Patients at High Risk for Ovarian Hyperstimulation Syndrome (OHSS)

An additional SGF research study presented at the 2019 ASRM conference suggested that when hCG luteal support cannot be given due to high OHSS risk, a freeze-all strategy should be strongly considered for this type of patient.

Patients receiving a gonadotropin trigger who did not receive hCG post-retrieval had lower clinical pregnancy and live birth rates from fresh embryo transfer despite intensive luteal support. This was largely due to implantation failure as pregnancy loss was similar in all treatment groups.

By committing to safety as the main priority in patient care, SGF is greatly reducing the risk of hyperstimulation in your patients and remains dedicated to the healthiest outcomes.



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#### MEDICAL UPDATE

### **Challenging Decades of Fertility Myths**

ASRM 2019: SGF Research Creates Safer & Improved Outcomes for Your Patients

New research conducted in partnership with the National Institutes of Health's (NIH) National Institute of Child Health and Human Development (NICHD) has shown that endometriosis may not negatively impact chances of delivering a baby with IVF treatment.

SGF researchers also evaluated which dose and choice of medication optimized pregnancy rates while lowering risk of multiples in women undergoing and ovulation-induced intrauterine insemination (IUI) cycle.

Look inside for an in depth view into some of SGF's recent research presented at the American Society for Reproductive Medicine's (ASRM) 2019 Scientific Congress and Expo. Our commitment to research and innovation means safer and more efficient ways of helping your patients overcome infertility.



#### **TOP FINDINGS**

New Study Shows Women with Endometriosis Achieve Equal Success Using Frozen Embryo Transfers

Making Non-Invasive IUI Treatment Safer without Compromising Success Rates

Findings inside ▶▶▶