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Commentary

Significance of *In Vitro* Fertilization (IVF) In Women Having Polycystic Ovary Syndrome (PCOS)

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DESCRIPTION

Polycystic Ovary Syndrome (PCOS) is the most common hormonal abnormality in reproductive aged women, affecting up to 10% of them. It is distinguished by an excess of the androgen testosterone, irregular menstruation, and enlarged ovaries containing multiple small follicles (polycystic ovaries). PCOS not only affects women chances of becoming pregnant, but it also makes them three times more likely to miscarry than women who do not have PCOS. They are also more likely to have preeclampsia, gestational diabetes, a larger baby, and a premature birth. This could cause complications during delivery or necessarily require a caesarean section. There are numerous causes and contributing factors that can lead to fertility issues, particularly in older people. With incredible advances in *In Vitro* Fertilization (IVF), it is now possible to overcome a wide range of problems. Infertility can be caused by either the issue with man or the woman, or by a combination of the two. Infertility is caused by Polycystic Ovary Syndrome (PCOS) in 8-10% of women, while 30% of the time infertility is caused by the male partner, and in many cases the cause is treatable. Weight, erectile dysfunction, and low sperm mobility do not have to be the end of any hope of having a family.

In Vitro Fertilisation (IVF) is the most effective fertility treatment available for PCOS patients when it comes to overcoming PCOS for a successful pregnancy. IVF has the highest success rate than any other assisted reproductive technologies present. Indeed, with IVF, the live birth rates for PCOS patients and women tend to match those of women who ovulate normally without PCOS. As a result, IVF provides a fighting chance against PCOS to complete the family.

Although PCOS can reduce fertility, many women can still become pregnant with Intra Uterine Insemination (IUI) or IVF. IVF is a multi-week/month procedure in which eggs are removed from a female's ovaries, fertilized with sperm in a petri dish, grown in a lab for several days (usually 3-5), and then transferred into the female's uterus to develop for the remainder of the foetus. Women should continue to manage PCOS while pregnant. Maintaining normal blood sugar levels prior to becoming pregnant is also beneficial. The women should take essential supplements like folic acid.

The first PCOS infertility treatment option that doctor will recommend is ovulation-inducing medication. Ovulation can be controlled with oral medications such as letrozole and clomiphene citrate (clomid). If oral medications fail, injection-delivered fertility medications are the next best option. Women who have PCOS and have higher levels of Anti-Mullerian Hormone (AMH) may have difficulty conceiving. There are measures in place to maintain better results. The most common cause of PCOS is a family history of diabetes or insulin resistance. Cysts form as a result of abnormal weight gain and irregular menstrual cycles.

Injection-based fertility medications are extremely effective at stimulating egg growth in patients. However, continuous medical supervision is required because it can result in the production of multiple eggs, increasing the risk of multiple births. For PCOS patients, IVF is used in conjunction with a variety of medication protocols to induce ovulation and produce more and higher quality eggs, embryos, and a receptive uterine lining. PCOS women are at an increased risk of diabetes, hypertension, and other pregnancy complications. As a result, any PCOS woman who wishes to conceive should seek medical advice to improve her chances of having a normal pregnancy.

In general, IVF success rates are excellent in cases of PCOS-related infertility. A PCOS IVF protocol combining metformin, oral contraceptive pills, and the lupron down-regulation stimulation protocol is typically used. Recent advances in IVF technology have enabled us to maintain high success rates while minimizing multiple pregnancy risks. Blastocyst embryo transfer is an alternative to standard IVF treatment that can help control multiple birth risks. As a result, women who have Polycystic Ovary Syndrome (PCOS) in their teens and twenties may have more eggs in their thirties without the syndrome, giving them a better chance of conception.

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