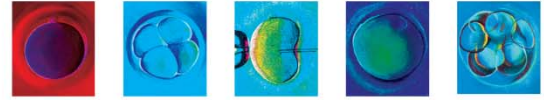


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POLYCYSTIC OVARY SYNDROME

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in reproductive age women. Women with PCOS most commonly have irregular menstrual periods, elevated androgen levels, and ovaries with many small follicles. The irregular menstrual cycles are due to the fact that women with PCOS do not ovulate every month, so the uterus does not receive the proper hormone signaling to initiate a menstrual period. The elevated androgen levels (most commonly testosterone) can cause many women with PCOS to have excess hair growth on their chin, chest, abdomen, and thighs. The ultrasound finding of multiple small follicles on the ovaries is related to anovulation and these follicles/cysts are not dangerous and do not need to be removed surgically.

Women with PCOS may also have insulin resistance and difficulty with weight loss. Both of these factors can contribute to an overall increased lifetime risk of developing diabetes. Maintaining a healthy body weight is one of the main ways to decrease the risk of diabetes.

There are many theories on why some women develop this syndrome, but at this time, there is no clear explanation. There may be a genetic predisposition but not all women with PCOS have other family members with the same symptoms.

In women with PCOS, failure to ovulate is the most common reason for not conceiving.

TREATMENT OF PCOS

In cases where ovulation is irregular or absent, medication can be used. The most common agent used to induce ovulation is clomiphene citrate (Clomid) that is generally taken daily for 5 days early in the menstrual cycle. Ovarian follicular growth is usually monitored with a combination of home urinary LH testing and an office ultrasound examination. An intrauterine insemination (IUI) is frequently advised because of clomiphene citrate's adverse effect on a woman's cervical mucus. Additionally, endometrial support may be promoted using progesterone. There is a mildly increased rate of multiple pregnancy with clomiphene citrate (5-8%) but there is no increased risk of birth defects. The majority of women who conceive on clomiphene citrate will do so in the first 4 cycles.

If clomiphene citrate fails to induce ovulation or pregnancy, then injectable hormones, known as gonadotropins, may be used. Treatment includes daily injections of follicle stimulating hormone (FSH) with careful monitoring of ovarian follicle development by serum estradiol hormone measurements and pelvic ultrasound examinations. When optimum growth and development of the follicles has occurred, HCG is administered to stimulate release of the eggs from follicles. The risk of multiple pregnancy is increased with gonadotropin therapy (16-18%). Women with PCOS given gonadotropins are at an increased risk of Ovarian Hyperstimulation Syndrome (OHSS). This syndrome arises if an excessive number of follicles are stimulated. Avoidance of OHSS is best achieved by careful monitoring of ovulation induction. This is the reason that virtually all fertility specialists are available 365 days a year for an office ultrasound and clinical monitoring for all patients on gonadotropins.

Despite all these measures to reduce the risks involved, those patients with PCOS due to insulin resistance have been difficult to treat. These patients are less likely to ovulate using clomiphene citrate or may have more complications such as OHSS with gonadotropins. Within the past several years, medications used to treat patients with diabetes mellitus have been used to treat these insulin-resistant PCOS patients with great success. Using medications such as metformin (Glucophage) to lower the circulating level of insulin in conjunction with clomiphene citrate or gonadotropins may be beneficial to some women with PCOS. Some patients report some adverse effects, such as abdominal cramping and loose stools, but these are usually limited to the first 2 weeks of taking the medications.

In Vitro Fertilization (IVF) may also be offered to women with PCOS who wish to conceive after other treatment strategies have not been successful. Success (pregnancy) rates with IVF with PCOS patients are generally excellent, although there is a higher risk of OHSS, especially in IVF patients who become pregnant.

In summary, PCOS is the most common cause of menstrual irregularity in reproductive-age women and its occurrence may be associated with a variety of clinical symptoms, including infertility. There are long-term health risks associated with PCOS. As a result, patients with this condition are advised to seek medical assistance since current treatment may improve the chances of conceiving in the near term, and reduce the long-term risk of cardiovascular disease. Behavior modification remains the cornerstone of all these treatment regimens and may delay the onset of these long-term sequelae.