Gonadotropin Injections

What are Gonadotropins?

Gonadotropins are medications that are given by injection to stimulate the ovaries to develop one (or multiple) follicles to maturity. They include: pure FSH (Gonal F, Follistim, Bravelle) and hMG, a combination of FSH and LH, (Menopur, Repronex). These medications are given to women to help them ovulate or to women who are trying to increase their chances of conceiving if they are already ovulatory. In other words, with the use of gonadotropin injections, several mature follicles, each with an egg inside of it presumably, will grow to maturity and be ovulated. These medications are also used to stimulate multiple eggs to grow to maturity for in vitro fertilization (IVF) treatment.

Before starting gonadotropins, you will have blood work and an ultrasound exam to determine if this is a good cycle to start the medication. Specifically, we want to ensure that there aren't any large cysts (>2 cm) on the ovary. Also, women with a high FSH or estradiol level should consider delaying their treatment start to another month.

We will monitor your response to gonadotropins with serial blood tests and ultrasound exams. Each woman will respond differently to gonadotropin medications and we want to ensure a safe, appropriate response to treatment. After four days of gonadotropin injections you will need to return to the office to assess your response. Usually, you will return every other day (or possibly daily), until you are ready to ovulate. With monitoring, we will be able to optimize ovulation to when the eggs are mature. We will then use human chorionic gonadotropin (hCG) to induce you to ovulate. This will ensure that you ovulate 36-40 hours from the time of the hCG injection and will enable us to properly time your intrauterine insemination (IUI) or intercourse.

Side Effects

While many women do not have any side effects while taking gonadotropin injections, some do. The most common side effects include breast tenderness, mood swings, abdominal bloating, tiredness and ovarian cyst formation. Usually these side effects resolve as soon as you finish taking the medication. Ovarian cyst may persist beyond one menstrual cycle. Occasionally, a woman will need to rest between treatment cycles to enable her body to resolve a cyst.

Risks

Gonadotropin injections increase the chance of pregnancy and is associated with a 25% chance of twins. This is more commonly seen in women who produce several mature follicles while taking the medication. The incidence of triplets is less than 5% and for higher order multiples it is less than 1%. If you produce multiple, mature follicles during the cycle, you will be counseled about the potential increased risk of a multifetal gestation. Options to prevent a multiple pregnancy included canceling the treatment cycle (and abstaining from intercourse until you get your menstrual period) or converting to an IVF cycle.

Ovarian hyperstimulation syndrome is a syndrome where the blood estrogen level gets high (>1500 pg/ml) and multiple follicles reach maturity. Women develop abdominal bloating (due to water retention in the pelvis), nausea and decreased urination. This syndrome is usually preventable. Ovarian hyperstimulation syndrome occurs in less than five percent of patient treatment cycles. Monitoring with blood work and ultrasound exams will enable us to assess your response to medication. To avoid ovarian hyperstimulation syndrome we may decrease your dose of gonadotropins. Also, you may need to be monitored more closely with daily visits. If you are at high risk for developing ovarian hyperstimulation we may recommend canceling the treatment cycle or converting to IVF treatment.

The incidence of birth defects, stillbirths and miscarriage is not increased by taking gonadotropins to conceive. The overwhelming weight of evidence does not support any increased risk of ovarian or breast cancer, premature menopause or pregnancy complications by taking gonadotropins to conceive.