CONSENT FOR INJECTABLE GONADOTROPINS FOR OVULATION INDUCTION

Gonadotropins include Follistim, Gonal-F, and Menopur. Gonadotropins act directly on the ovaries and stimulate follicle (egg) development.

DESCRIPTION

Gonal-F and Follistim are FSH (follicle stimulating hormone) products. Follistim and Gonal-F are dispensed either in vials that have to be reconstituted with diluent or in ready to use cartridge pens. Menopur is a mixture of FSH and LH (luteinizing hormone). When used for purpose of inducing ovulation, all of the brands essentially have similar effectiveness. All of these products are given by subcutaneous injection.

MODE OF ACTION

Gonadotropins act directly on the ovaries to stimulate the growth of follicles but do not trigger ovulation (the release of eggs). Therefore human chorionic gonadotropin (HCG) must be administered when the eggs are mature to mimic the hormonal surge that causes ovulation.

INDICATIONS

Gonadotropin therapy is indicated in the following situations:

1. Women who fail to ovulate or conceive after optimal doses of Clomid or Femara.
2. Couples with infertility and normal tubal anatomy who have failed simpler forms of therapy. In this situation it is often combined with intrauterine insemination.

MONITORING AND ADMINISTRATION

Call with the first full flow day of your period, and take your weight prior to starting injections.
Monitoring the patient's response to gonadotropin therapy is essential in order to adjust dosage and to minimize the possibility of adverse reactions. A combination of both ultrasonography and estradiol measurements provides the practitioners with an acceptable method of monitoring gonadotropin therapy. Estradiol is an indirect indicator of follicular maturity, while ultrasonography visualizes the number and size of developing follicles.
Ultrasound/estradiol monitoring is usually begun after 3-4 days of gonadotropin therapy. These are done in the morning and you will then be contacted by the staff in the afternoon after the doctor has reviewed the results. Your gonadotropin dosage may be changed pending the interpretation of ultrasound and estradiol results. If a pregnancy does not occur and menses begins, a baseline ultrasound will be done to rule out cyst development before restarting gonadotropins.

GONADOTROPIN DOSAGE

All injections should be given the same time each day, usually in the early evening. This ensures accurate measurement of the patient's estradiol response. Dosages will vary from patient to patient, depending upon individual response. When the dominant follicles reach 18-20mm in diameter, HCG will be given to trigger egg release.

HCG DOSAGE AND ADMINISTRATION

Because most patients do not ovulate with gonadotropin treatment alone, ovulation is triggered with subcutaneous injection of 10,000 units of HCG when the eggs are mature. HCG acts like the LH surge and causes ovulation, which should occur about 36 hours after the injection. Other names for HCG are Novarel, Pregnyl, and Ovidrel.

ADVERSE REACTIONS

Side effects associated with gonadotropin therapy include local irritation at the site of the injection and excessive ovarian stimulation. Other reported side effects, such as dizziness, nausea, headaches, irritability, and hot flashes may be associated with increased estrogen levels. Applying warm, moist heat to irritated areas can provide relief to local irritation.

OVARIAN HYPERSTIMULATION

Mild to moderate uncomplicated ovarian hyperstimulation, which may be accompanied by abdominal distension and/or abdominal pain, occurs in approximately 20% of patients treated with gonadotropins and HCG. It generally regresses without treatment within two to three weeks. However, if a pregnancy occurs, it may persist several weeks into the pregnancy. Patients experiencing mild to moderate ovarian enlargement usually report pelvic fullness and some abdominal

pain and discomfort, usually about four to ten days after administration of HCG. The degree of hyperstimulation is related to both the estradiol level and the number of eggs.

Mild	10-20% patients	-minimal pelvic discomfort -bloating or lower abdominal discomfort -weight gain, less than 5 pounds
Moderate	1-3% patients	-abdominal distension (slight) -nausea, vomiting, diarrhea, ascites may be present -weight gain 5-10 pounds
Severe	Less than 1%	-nausea, vomiting, dehydration -hypovolemia, hemoconcentration, oliguria, electrolyte imbalance, hypercoagulation -ascites and pleural effusion, hemoperitoneum with rupture of ovarian cyst -weight gain more than 10 lbs -hospitalization

If there is a concern about hyperstimulation, please follow the instructions below and report the following:
-weight gain of 5 lbs or greater
-severe pelvic pain
-decrease in urine output

Also, refrain from the following:
-intercourse
-strenuous activity
-letting anyone perform a pelvic exam
-running/jumping type exercise

If your estradiol goes about 2000 and you develop many eggs, your cycle may be cancelled due to the fear of severe hyperstimulation. If this happens, HCG will not be given and you may be placed on birth control pills.

<u>MULTIPLE BIRTHS</u>
The incidence of multiple gestation is approximately 20% and less than 5% of all gonadotropin pregnancies results in triplets or greater. Multiple pregnancies can be complicated by premature delivery, hypertension, and diabetes. If there is a significant concern of multiple births, then HCG and intercourse can be withheld.

<u>PREGNANCY RATE</u>
Obviously, the pregnancy rate depends on the indication for gonadotropins.

1. The woman who has failed clomiphene citrate therapy and has no other cause for infertility stands roughly 25% change of conception per cycle.
2. The couple with unexplained infertility or endometriosis stands a roughly 10-20% chance of conception per cycle.

If conception does not occur after four cycles of gonadotropins, you should meet with your physician for a re-evaluation.

<u>COSTS</u>
The expense of treatment includes:
-Gonadotropins (approximately $85 per vial, 8-15 vials per cycle)
- IUI package – $1500, this includes all ultrasounds, lab work and IUI for the current cycle
There is some concern that the use of ovulation induction agents may increase a person's risk of developing ovarian cancer. One in 424 women will develop ovarian cancer before the age of 40. There is, however, no conclusive evidence that the use of gonadotropins of HCG increases a woman's risk of ovarian cancer. Women with a history of infertility, independent of their use of gonadotropins or other ovulation induction agents, do have a higher incidence of ovarian cancer. Pregnancy and past use of oral contraceptives, appear to have a protective effect.

SCHEDULING IS AN ESSENTIAL PART OF THERAPY, FOR OFFICE VISITS INCLUDING ULTRASOUNDS AND ESTRADIOL LEVELS.

NOTE

I have read this information, and questions I have had have been answered to my satisfaction. I agree to the administration of gonadotropins with the benefits and risks, and I realize that I am able to stop or continue ovulation induction with gonadotropins at any time and this decision will not alter my future care or relationship with my physician and staff.

Patient: ____

Witness: ____

Date: __________________________

Main Office and IVF Lab:
3821 Forrestgate Drive
Winston-Salem, NC 27103
tel: 336.448.9100
fax: 336.778.7995
toll free: 844.468.6234

Greensboro Office:
311 West Wendover Avenue
Greensboro, NC 27408
tel: 336.448.9100
fax: 336.778.7995
toll free: 844.468.6234

Charlotte Office:
2614 E. 7th Street, Ste. C
Charlotte, NC 28204
tel: 980.256.2233
fax: 980.256.2234
toll free: 844.686.2233