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PATIENT FACT SHEET

Side Effects of Gonadotropins

There are many types of gonadotropins used alone or in combination for ovulation induction or superovulation. They include **hMG** (human menopausal gonadotropin – Pergonal[®], Humegon[®], or Repronex[®]); **hFSH** (human follicle stimulating hormone – Metrodin[®] or Fertinex[®]); **rFSH** (recombinant follicle stimulating hormone – Gonal-f[®], or Follistim[®]); and **hCG** (human chorionic gonadotropin – Profasi[®], Novarel[®], Pregnyl[®] or Ovidrel[®]). During the use of these drugs, careful monitoring is required to minimize the risk of side effects, which are discussed below.

1. **Ovarian Hyperstimulation (OHSS).** OHSS can either be mild or severe. The mild form occurs in 10 to 20 percent of cycles and results in some discomfort but almost always resolves without complications. The severe form occurs approximately 1 percent of the time. The chance of OHSS is increased in women with polycystic ovarian syndrome and in conception cycles. When severe, it can result in blood clots, kidney damage, ovarian twisting (torsion), and chest and abdominal fluid collections. In severe cases, hospitalization is required for monitoring but the condition is transient, usually lasting only a week or two. Occasionally, drawing fluid out of the chest or abdominal cavity decreases symptoms. The best prevention is to withhold hCG administration and prevent ovulation when ultrasound or hormone testing indicates a high risk for severe OHSS. The use of ultrasounds and/or serum estradiol levels will enable your physician to predict your risk.
2. **Multiple Gestation.** Up to 20 percent of pregnancies which result from gonadotropin cycles are multiple, in contrast to a rate of 1 to 2 percent without fertility medications. While most of these pregnancies are twins, a significant percentage (up to 5 percent) are triplets or higher. High order multiple gestation pregnancy is associated with increased risk of pregnancy loss, premature delivery, infant abnormalities, handicap due to the consequences of very premature delivery, pregnancy induced hypertension, hemorrhage, and other significant maternal complications.

3. **Ectopic (Tubal) Pregnancies.** While ectopic pregnancies occur 1 to 2 percent of the time in the general population, in gonadotropin cycles the rate is slightly increased. Ectopic pregnancies can be treated with medicine or surgery. Combined tubal and intrauterine pregnancies (heterotopic pregnancies) occasionally occur with hMG and need to be treated with surgery.
4. **Adnexal Torsion (Ovarian Twisting).** Less than 1 percent of the time, the stimulated ovary can twist on itself, cutting off its own blood supply. Surgery is required to untwist or remove the ovary.
5. **Gonadotropins and Ovarian Cancer.** The link between the use of gonadotropins and the development of ovarian cancer is unknown and is the subject of ongoing research. While there is a theoretical basis for an association, to date, no medical study has conclusively linked the use of any 'fertility agent' to ovarian tumors or cancer.