

Intrauterine Insemination - An Excellent First Line Treatment for Infertility

Insemination procedures are utilized to improve fertility. Initially, inseminations were done by placing the semen sample on the cervix (cervical insemination). It worked well for patients needing donor sperm insemination or insemination of partner's sperm due to intercourse or ejaculation problems, but it was less successful in patients with infertility diagnoses.

A research study in the 1980s compared intrauterine insemination (IUI) to intercourse in women undergoing fertility therapy. This research study showed higher pregnancy rates in the IUI group. Since this time, IUI has been more popular than cervical insemination as fertility therapy. An IUI involves several steps:

1. Collection of a sperm sample by masturbation or into a semen collection device (a special collection condom);
2. Sperm processing (a sperm wash procedure); and
3. Placing the "washed" sperm sample through the cervix into the uterus with a small catheter.

IUI is an effective first line therapy for the treatment of many causes of infertility. In contrast to in vitro fertilization (IVF), an IUI costs less and is less invasive even though it has lower pregnancy rates when compared to IVF. It may also be covered by health insurance.

Indications for IUI Procedures

IUI is an excellent first line therapy for women with coital disorders, unexplained infertility, minimal endometriosis, mild male factor infertility, and donor sperm inseminations. In order to have good success with inseminations, at least one fallopian tube must be open and there should be an adequate semen sample.

Risks of IUI

The risk for complications with IUI is very low. The woman could develop an infection in the uterus and tubes from bacteria that originated in the semen sample or through contamination of the sterile catheter in the cervix. This is very rare.

IUI Procedure

An IUI is similar to a Pap smear. When you arrive at the office, you will be asked to empty your bladder. The laboratory staff brings the "washed" sperm sample and confirms its identification with you. After the speculum is inserted into the vagina, the cervix is visualized. A small catheter is used to load the sperm sample which is then inserted through the cervical canal. In about 10% of inseminations, it is difficult to pass the catheter into the uterus. Sometimes we have to use a different catheter and rarely may we need to use an instrument called a tenaculum to pull the cervix to straighten the cervical canal.

IUI in Women Who Do Not Ovulate

Numerous studies have evaluated the use of IUI with fertility drugs in patients who do not ovulate. Compared to intercourse, inseminations do not improve the chance of pregnancy in women who do not ovulate as long as the partner's semen analysis is normal. Women who have failed to conceive after two or three cycles of fertility drugs with intercourse may move on to IUI.

Timing Inseminations

There are two popular methods for timing inseminations. One is by the use of an injection of hCG (Ovidrel, Novarel, Profasi or Pregnyl) and the other is by the use of ovulation predictor kits. Studies have shown that the pregnancy rates in IUI timed cycles using an LH kit versus hCG are equal (as long as you are picking up your LH surge correctly). Getting the correct day for an LH surge with an ovulation kit can be stressful. We have found that using the hCG trigger when we are doing ultrasound monitoring of ovulation makes timing easier for patients and decreases stress that the surge may be missed.

IUI With or Without Drugs

Studies have shown that pregnancy rates are improved in women undergoing IUI for infertility if the IUI is coupled with fertility drugs. These drugs include clomiphene, Letrozole, or human menopausal gonadotropins. IUI without fertility drugs is not an effective treatment for infertility unless they are used for intercourse disorders. In women doing IUI who are not infertile (i.e. those using donor sperm insemination), the fertility drugs are not necessary for the first treatments.

In summary, IUI coupled with fertility drugs is a good treatment option for many patients with infertility. The individual success depends on age, patency of the fallopian tubes, and the partner's sperm count and motility.