

Medications a Reproductive Endocrinologist Might Prescribe For Egg Donor Patients During a Donor Egg Cycle.

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The medications prescribed for a potential donor egg recipient in preparation for the transfer of fertilized donor eggs, during the cycle itself, and during the early stages of pregnancy are determined by the treating physician. The protocol varies to some degree from clinic to clinic, and also from patient to patient depending on factors such as ovarian function, diabetes, immune response, and other medical issues. Blood tests and ultrasound scans are performed throughout the cycle to ensure that dosing of medications is appropriate and adjustments are made as necessary.

This article provides an overview of the medications that might be prescribed during the donor egg process. It is not meant to replace advice from one's treating physician nor the prescribing information provided with the drugs themselves. Bring any questions or concerns to the attention of your healthcare provider.

Medication List

Anticoagulants

Anticoagulants (low-dose aspirin, low-dose heparin, or Lovenox[®]) are sometimes prescribed for recipients who have had recurrent miscarriages or in women who may have or are being treated for problems with their immune system. Low-dose aspirin (baby aspirin) may also be prescribed for older women to increase blood flow to the uterus.

Birth Control Pills

Birth control pills or oral contraceptive pills (ethinyl estradiol; Yaz[®]; Yasmin[®]) combine an estrogen and progestin similar to the naturally produced hormones (estrogen and progesterone). Birth control pills are often prescribed for egg donor recipients to suppress their ovaries before a cycle as well as to synchronize their uterine cycle with the ovarian cycle of the egg donor. The use of birth control pills is also useful for patients with irregular menstrual cycles, making it possible to properly time the dosing of other medications.

Common side effects associated with birth control pills include headache, weight gain, light menstrual periods, mid-cycle spotting, or elevated blood pressure.

Dexamethasone

Dexamethasone is used to suppress androgens in women with polycystic ovaries (PCO) and for certain immune problems. For some patients, this may increase the chance of pregnancy after embryo transfer.

Side effects of Dexamethasone include weight gain, blurred vision, or increased thirst.

Dexamethasone may increase insulin resistance.

Doxycycline

Doxycycline (Adoxa[®] ; Alodox[™] ; Atridox[™] ; Doryx[®] ; Doxal[™] ; Monodox[®] ; Vibramycin[®]) is an oral antibiotic prescribed for recipients to decrease the risk of infection and prevent the transmission of sexually transmitted disease at the time of embryo transfer.

The most common side effects associated with Doxycycline include diarrhea, loss of appetite, nausea, or vomiting.

Estradiol

Estradiol (Climara[®] ; Delestrogen[®] ; Estrace[®] ; Estraderm[®] ; Menostar[™] ; Vivelle-Dot[®]) is a form of estrogen that is normally produced in women with active menstrual cycles. Estrogens increase secretions from the cervix and growth of the lining of the uterus. Estradiol is used to increase estrogen levels when a woman's ovaries do not produce enough estrogens naturally.

Estradiol is available as a transdermal patch. A few days after the recipient starts her period, she will start using estradiol patches, which applied to the abdomen or buttocks and changed every other day or weekly, depending on the brand and formulation prescribed. When the donor and recipient's cycles have been synchronized, the estrogen dose will be increased as the donor is stimulated to produce more follicles and continued until the embryo transfer. If the results of the pregnancy test taken 9 to 12 days after the transfer are positive, then estradiol patches may be continued up until the twelfth week of pregnancy.

Common side effects of the estradiol patch include headache, breast pain, irregular vaginal bleeding or spotting, stomach or abdominal cramps and bloating, nausea and vomiting, or hair loss. Some patients may also experience sodium or fluid retention.

Ganirelix Acetate

Ganirelix acetate (Antagon[™] ; Organon, Inc., West Orange, NJ) is a gonadotropin releasing hormone (GnRH)-antagonist used to inhibit premature luteinizing hormone (LH) surges in women undergoing controlled ovarian hyperstimulation. By acting as an antagonist of gonadotropin, Ganirelix acetate causes GnRH to be released to help prevent premature ovulation. This drug is similar to Lupron[®] but it is newer on the market and has the added benefit of shortening the cycle.

Side effects of Ganirelix acetate may include abdominal pain, headache, ovarian hyperstimulation, vaginal bleeding, injection site reaction, nausea, or gastrointestinal discomfort.

Leuprolide

Leuprolide (Lupron[®]) is a GnRH-antagonist used to suppress the normal menstrual cycle in recipients. It is usually started a few days before the recipient expects her period to start. Leuprolide is continued while the donor and recipient's cycles are synchronized and up until the

day before the embryo transfer, when it is stopped. Leuprolide is injected subcutaneously.

For recipients who do not experience spontaneous menstrual cycles or have complete ovarian failure, Leuprolide is not necessary.

Side effects of Leuprolide may include moodiness, hot flashes, or irregular vaginal bleeding. Patients may also experience a redness and discomfort at the injection sight.

Methylprednisolone

Methylprednisolone (Dep-Medrol[®]; Medralone[®]; Medrol[®]; Dep-Medrol[®]) is a steroid that is taken daily for 4 days during the cycle to assist with pre-embryo implantation. It is a glucocorticoid that is used therapeutically primarily as an anti-inflammatory agent.

Side effects associated with methylprednisolone may include diarrhea or constipation; dizziness or drowsiness; hives; nausea or vomiting; rash; stomach ache; dry mouth; headache; loss of appetite; or stomach upset.

Nafarelin Acetate

Nafarelin acetate (Synarel[®]) is a GnRH analog similar to Lupron[®] that is administered as a nasal spray. Like Lupron, Nafarelin acetate is used to suppress the normal menstrual cycle in recipients.

Side effects of Nafarelin acetate may include moodiness, hot flashes, or irregular vaginal bleeding. Patients may also experience nasal stuffiness.

Progesterone

Progesterone (Crinone[®] or Prometrium[®]) are progesterone hormone replacements used to keep progesterone levels elevated during the luteal phase. The major function of progesterone is to prepare the lining of the uterus to enable a fertilized egg to implant and grow. Usually, progesterone is started on the day of or the day after the eggs are retrieved from the donor. Progesterone is continued until the first pregnancy test about 9 to 12 days after the embryo transfer. If the pregnancy test is positive, then your physician may recommend continuing progesterone for several more weeks or as long as the twelfth week of pregnancy.

Although progesterone has historically been administered as an intramuscular injection, other routes of administration are becoming more common including vaginal gel (Crinone[®]), suppository, and oral formulations.

Progesterone in oil (PIO) is natural progesterone suspended in oil and administered as an intramuscular injection. This formulation is often recommended over synthetic forms of progesterone for infertility treatment. Before using this medication, it is important to inform your doctor if you are allergic to progesterone or sesame oil or have any other allergies.

Side effects of progesterone therapy include bloating, cramps, constipation or diarrhea, dizziness, drowsiness, headache, nausea, breast pain or swelling, or pain during intercourse.

Serious side effects associated with progesterone therapy may include pain, swelling, or redness of an arm or leg; one-sided muscle weakness; vision problems; trouble breathing; fainting; itching; or skin rash. Women taking progesterone during a cycle should be aware that many of the side effects of progesterone mimic the symptoms of pregnancy.

Additional Information

For more information on these medications, check out the following resources:

- David OK. The medical aspects of egg donation. Available at: http://www.resolve.org/site/PageServer?pagename=lrn_wamo_deg. Accessed on: 21 October 2008.
- Drugs commonly used in fertility treatment. Available at: <http://www.fertilityplus.org/faq/infertility.html#sect9.3>
- SART. Donor oocyte. Available at: http://www.sart.org/Guide_DonorOocyteTherapy.html. Accessed on 21 October 2008.

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