Medications used in Infertility

AUSTRALIAN CONCEPT FERTILITY CENTRE

Medications that stimulate egg development

FSH (Puregon, Gonal-F)

Both Puregon and Gonal-F are pure Follicle Stimulating Hormone injections which have been produced using genetic engineering. These medications along with Elonva act directly on the ovary, inducing follicle growth. The difference with Elonva is that it lasts longer in the blood so only needs to be given as a single injection lasting for 7 days, whilst Puregon and Gonal F require daily injections

Side Effects: skin redness, pain, itching or swelling over the injection site, tiredness, abdominal pain or bloating, breast tenderness, hot flushes, mood swings, nausea, Ovarian Hyperstimulation Syndrome (OHSS). Also as the ovaries swell to accommodate the follicles, some patients may notice an increased pelvic pressure. If the ovaries are bound down by adhesions the pressure may be felt as pain which may continue into the luteal phase of the cycle and if pregnant, for up to three (3) months.

Very rarely the ovary might rotate and twist or may bleed. These complications may produce severe pelvic pain and lead to the requirement for further surgery.

FSH and LH (Menopur)

This injection contains both the hormones FSH and Luteinising Hormone (LH) to increase the number of growing follicles and stimulate their development.

Side effects: skin redness, pain, itching or swelling over the injection site, abdominal pain or bloating, headache, breast tenderness, nausea and vomiting, OHSS. As above, possible pain due to increased pelvic pressure and adhesions and the rotation, twisting or bleeding of the ovary.

LH (Luveris)

This injection Contains Luteinising Hormone given to some women with low natural levels of LH to help encourage growth of follicles.

Side effects: skin redness, pain, itching or swelling over the injection site, abdominal pain, headache, breast tenderness, nausea and vomiting, OHSS

Clomiphene (Clomid, Serophene)

This oral medications acts on the pituitary gland, forcing it to release more FSH and LH than it normally would. This encourages your ovaries to produce follicles, which grow and develop so they can be released via ovulation.

Side Effects: hot flashes, dizziness, mood swings, abdominal pain or bloating, temporary visual disturbances, OHSS. There is a slightly greater chance of having twins when taking Clomid because the extra stimulation of the ovaries may make two eggs develop.

Some patients who have used Clomid have suffered breast and ovarian cancers in later life but there is no proven association between the use of Clomid and cancer. **NOTE:** Women who delay child bearing until later in life or those who do not have children also have a higher incidence of breast and ovarian cancer in later life and Clomid users are in these groups.

Letrozole (Femara)

This oral medication reduces the production of oestrogen, hence stimulating the body to produce more of the hormones FSH and LH that are needed to stimulate the ovaries. It is useful in women who do not ovulate or to increase the number of developing follicles.

Side effects: hot flashes, breast tenderness, headache, tiredness,

Medications that stop the release of eggs

GnRH Analogues (Lucrin, Decapeptyl, Synarel)

These medications prevent ovulation in IVF/ICSI. They work by initially stimulating then suppressing the pituitary gland's production of hormones FSH and LH so that ovulation does not occur which allows the eggs to mature properly. They are administered intranasally (synarel) or by injection (lucrin / decapeptyl). They can cause a reversible reduction in oestrogen levels, resulting in menopausal type side effects while the patient is using them.

Side effects: mild headache, hot flashes, mood swings, decreased libido, vaginal dryness, skin redness, pain, itching or swelling over the injection site (lucrin / decapeptyl only).

GnRH Antagonists (Orgalutron, Cetrotide)

These injections are used to prevent ovulation during an IVF / ICSI cycle. They work by suppressing the pituitary gland from producing FSH and LH so that ovulation does

not occur and it gives the eggs time to develop properly. They are administered by daily injection once a vaginal ultrasound demonstrates the largest follicle has reached 14mm.

Side effects: skin redness, pain, itching or swelling over the injection site, headache and nausea

Medications that trigger the release of eggs

HCG (Pregnyl, Ovidrel)

These injections contain the hormone human chorionic gonadotropin (hCG). The influence of this medication is to complete the final maturation of the eggs and to "trigger" ovulation (release of the eggs). In an egg collection cycle the eggs are collected BEFORE ovulation can occur but the medication is still required for the final maturation process of the eggs.

It is biologically very similar to LH and mimics the natural LH surge at mid-cycle. It is often referred to as the "trigger" injection as it triggers the release of eggs (ovulation).

It may also be used in insemination or timed intercourse cycles to assist with ovulation.

Side effects: Abdominal pain, headache, nausea and vomiting, skin redness, pain, itching or swelling over the injection site, OHSS

Medications that support the implantation of the embryo

Progesterone Preparations (Progesterone Pessaries / Crinone gel), HCG (Pregnyl)

These drugs are used to prepare the lining of the womb to receive a fertilised egg. The progesterone medications are self-administered by placing the preparation into the vaginal canal or rectum depending on your doctor's orders. Progesterone is normally produced by the human ovary in the second half of the menstrual cycle and in early pregnancy so it is continued for a period of time after a positive pregnancy result.

HCG (Pregnyl) can also be used to assist in the thickening of the endometrium in the uterus. This is an injection and is used in the luteal phase (after egg collection / ovulation). It may be used in conjunction with the progesterone support. For women who experience reactions to progesterone preparations, they may prefer to use this injection.

Side Effects: Vaginal irritation, thrush, constipation, nausea, bloating, breast swelling/pain, mood swings, headache.

Some people feel drowsy when using these medications so be careful driving or operating machinery until you know how it affects you.

Other medications

Cabergoline (Dostinex)

This oral medication is sometimes used to decrease the 'thickness' of the blood and reduce the risk of OHSS, particularly in women with a large number of follicles or high levels of oestradiol. OHSS causes fluid to shift from within the blood stream into the abdominal cavity which causes the blood to become "thicker" and more prone to clotting. Cabergoline blocks the release of factors within the blood vessels that allows this fluid shift to occur.

Side effects: gastrointestinal side effects such as nausea and vomiting, dizziness, drowsiness, dry mouth, constipation. Most side effects are mild. Blood pressure may fall and some people notice swelling of feet or hands. Palpitations or chest pain can occur, but rarely.

Azithromycin

This is an antibiotic that Concept believes will be of benefit in the following situations:

- In reducing the chance of pelvic infection during oocyte aspiration.
- Protecting the embryo from cervical or vaginal bacteria after embryo transfer.
- Protecting the embryo from bacteria in the semen sample during fertilization.

Side effects: Nausea, vomiting or diarrhea, abdominal cramps and increased chance of vaginal thrush.

DHEA

These are hormones that come in the form of lozenges given to women to improve the quality of their eggs. They are usually used for 2-3 months prior to starting IVF. It is particularly useful for women with a low ovarian reserve.

Side effects: facial hair growth, acne, oily skin, stomach upset, deepening of the voice, menstrual irregularities

Oestrogen hormones (Progynova)

This is an oestrogen supplement used to thicken the lining of the womb in preparation for embryo transfer.

Side effects: headaches, breast tenderness, bloating, nausea and vomiting

Progesterone hormones (Provera, Primolut N)

These tablets contain progesterone hormones to help induce a period in women who do not get regular period, usually before starting a treatment cycle.

Side effects: stomach upset, irregular vaginal spotting, breast tenderness

Folic Acid

A deficiency of this vitamin may be responsible for neural tube defects (eg. Spina bifida). All Concept patients are advised to supplement their diet with folic acid before ART treatment.