

Ovulation Induction for Assisted Conception (Superovulation)

This may involve any one or more of the following measures:

- a preliminary course of tablets (either the combined contraceptive pill or else some progesterone-like hormones) to reduce the risk of the formation of 'cysts' on the ovaries in response to the treatment and also to reduce the likelihood that a treatment cycle may have to be abandoned after the start of injections;
- a nasal hormone spray (Nafarelin or Buserelin), depot injection (Prostap), or series of daily injections (Buserelin or Cetreotide) to improve the numbers and quality of the eggs which develop;
- a course of FSH hormone injections (Puregon, Menopur or Gonal-F) to cause one or more eggs to develop. These are given on either a daily or alternate day basis for 1-2 weeks in the first half of the woman's menstrual cycle. Very often the woman may be taught to perform her own injections using special 'home-care' kits;
- ultrasound scans of the ovaries to monitor how many potential eggs have developed and to what stage;
- one or more blood tests to help predict how well the eggs are developing and the risk of overstimulating the ovaries;
- a precisely timed injection (HCG or Profasi) to try to ensure that the egg or eggs mature at a predetermined moment;
- further injections, tablets or hormone pessaries to try to ensure that the environment in the womb is favourable for implantation;

When a decision is made to go ahead with treatment a 'planning' appointment is made with the nurse-co-ordinator and a written schedule of the injections and the timing of an ultrasound scan or scans is given. A prescription for the drugs is also issued. The ampoules for the injections should be kept in a cool (refrigerator would do, but NOT freezer) place until needed. The couple should liaise with their General Practitioner's surgery if they wish him or her to prescribe the drugs and/or give any of the injections. Not all GPs will necessarily be willing or able to prescribe the drugs.

The following should be noted:

- a good response to the hormone treatment is not guaranteed. A preliminary hormone blood-test from the woman (the 'FSH' test, usually performed during the first five days of her menstrual cycle) may give a general indication as to the likelihood of a good or poor response;
- an individual treatment cycle might have to be called off if an ultrasound scan or blood test shows that either too few or too many eggs may develop;
- superovulation drug treatment may be expensive. Within our clinic we can only prescribe it on the NHS for approved NHS treatments and then only within constraints of a budget allocated specifically for this purpose for residents of our local Health District. As a consequence there may be a waiting-list for treatment and we may be unable to provide NHS treatment for patients who reside outside our Health District unless the drugs are prescribed or funded by their own GP or

Health Authority. For NHS patients we are required to comply with criteria for eligibility that are set by local Health Funding Organisations which, for residents of Devon & Cornwall have been determined in 2005 as follows:

- a) the woman must be a non-smoker and her partner advised likewise
- b) not beyond the woman's 40th birthday
- c) neither the man nor the woman should have any existing children
- d) the woman must not be substantially over or underweight (body mass index <19 or >30);

Many GPs are unable to prescribe drugs for superovulation because either they are forbidden to do so on cost grounds by their Health Authority, or else they may have reservations about taking (or delegating) responsibility for such complex and specialised treatment.

POSSIBLE RISKS OF FERTILITY DRUG TREATMENT

MULTIPLE PREGNANCY

Since more than one egg may develop, assisted conception procedures carry an increased chance of multiple pregnancy. Approximately one in five are twins, and one in twenty-five triplets. Procedures such as IUI which do not involve the removal and replacement of a known number of eggs or embryos (always restricted to a maximum of three) might rarely even result in more than three babies being conceived. Multiple pregnancy may have profound consequences for the couple concerned because of possible increased risks of medical problems to the woman; premature birth; failure of all the babies to survive; survival of one or more babies with handicap; and, difficulty for the couple to provide the babies with adequate care and attention.

OVARIAN CANCER

Recent studies have raised the possibility of an association between the long-term use of ovulation induction drugs and an increased risk of ovarian cancer later in life. There is at present no direct evidence of a causal effect, and concerns relating to FSH injection hormone treatment in particular are based on isolated case reports of ovarian cancer developing after fertility drug treatment and theoretical considerations which may relate the risk to the number of times a woman ovulates during her lifetime. It is not at all clear if the drugs may actually be directly involved or whether it is an association due to other factors (for example long term use of the contraceptive pill reduces the number of ovulations and is believed to protect against ovarian cancer. It may therefore be that those women who take fertility drugs the most are also those who have used the pill the least). It is only fair to keep you informed about such concerns and you may especially wish to consider this if you have a strong family history of breast or ovarian cancer.

INFECTIOUS AGENTS

Some of the drugs used in fertility treatment are derived from human and animal sources - in some cases involving the culture of cells that have been Genetically Modified. There are stringent screening and purification processes which are believed to eradicate all viruses and other known agents which may transmit disease, but there is a slight theoretical possibility that some as yet undiscovered agents may come to light in the future;

OVARIAN HYPERSTIMULATION SYNDROME

The drugs used for many subfertility treatments, and IVF in particular, have the purpose of causing one or more eggs to develop on the ovaries. The developing eggs form in small fluid-filled sacs called follicles. When the follicles grow beyond a certain size they may be called 'cysts'. Small cysts very often come and go naturally on the ovaries and may be of no significance. Sometimes however, as a result of the drugs to stimulate ovulation, a large number of large cysts may develop. This condition is called 'ovarian hyperstimulation syndrome' (OHSS). It may cause

*** abdominal swelling; * discomfort; * nausea; * shortness of breath;**

The condition only develops in the second half of the menstrual cycle after ovulation (or up to three weeks after egg recovery, in the case of IVF), but if

these symptoms develop it is important to get in touch with the clinic through the emergency telephone number. In the event of an emergency and if for any reason it is not possible to make contact with the clinic the standard emergency on-call medical service should be contacted (e.g. general practitioner, ambulance or hospital emergency department). Sometimes there are early indications that the condition may be developing during IVF treatment after egg recovery and before embryo transfer. In such situations it may be best to freeze all the suitable embryos to allow the condition to settle down and then to undertake frozen embryo transfer at a future date.

If the woman is not pregnant the condition gets better when her period arrives. If the woman is pregnant the condition can be especially severe and may last for a few weeks. It may be necessary to be in hospital for much of that time with intravenous infusions and possibly procedures to tap fluid from the abdomen and/or lungs. Fortunately the condition is uncommon - occurring in approximately 3-5% of stimulated cycles.

EMERGENCY TELEPHONE NUMBER

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If for any reason medical treatment in another department or hospital is necessary during the first few weeks after fertility drug treatment please be sure to inform the medical staff concerned about your treatment and, if possible, show them this leaflet. This is especially important if an abdominal operation is planned, since in general the cysts of ovarian hyperstimulation should not be operated on. Our clinic's staff would be happy to liaise with any medical staff concerned with your treatment if necessary