



What is OHSS?

OHSS is Ovarian Hyperstimulation Syndrome.

Any patient worried that she is developing symptoms of OHSS should call MFS on 01922 455911 any time of day.

Successful IVF depends on controlled ovarian hyperstimulation because the more healthy eggs retrieved at egg collection, the more likely the patient is to become pregnant. Even if a fresh embryo transfer does not result in a pregnancy, frozen embryos give another chance to conceive.

Unfortunately, the drugs used to help a woman's ovaries to produce multiple follicles can cause problems if they work 'too well'. Also, the temporary high hormone levels that follow from producing too many eggs may make pregnancy less likely to occur if a fresh embryo transfer is undertaken.

The blood tests and scans performed during 'baseline' tests are designed to optimise the prescribed dose of stimulating drugs and achieve an adequate, but not excessive number of eggs.

If too many eggs are produced, then the woman can develop the symptoms of OHSS.

For many women, this is no more than a minor nuisance with mild symptoms such as abdominal 'bloating', slight nausea and thirst. But, in some cases, the symptoms can be more serious and patients are asked to contact the unit if they develop any severe abdominal pain, swelling or breathlessness.

Severe OHSS is a rare but serious complication of the use of fertility drugs such as Merional, Fostimon, Menopur or GonalF. It occurs in less than 1% of treatments at MFS, and happens so rarely because the clinical staff monitor the stimulation cycles very closely with scans and blood tests. Despite such vigilance, OHSS cannot always be predicted, but it is more likely to occur in young women, women who are very slender, women with PCOS (polycystic ovarian syndrome) and women of Asian ethnicity.

OHSS usually occurs when too many follicles (usually more than 20) develop. This is usually prevented by using the

lowest possible dose of drugs so that the patient produces enough eggs to give a reasonable chance of pregnancy, with some to spare, but without the danger of producing too many.

However some people may respond unpredictably to drugs and either do not respond at all or over-respond. When too many follicles develop there are three choices:

- to reduce the dose of the stimulating drug
- possibly 'coast' for a few days without stimulation
- to continue to egg collection, and then freeze all the suitable embryos for future use

Occasionally a woman may develop symptoms of OHSS after embryo transfer - known as 'secondary OHSS'. This is an indication that the embryo is producing hCG (the pregnancy hormone). Symptoms of secondary OHSS may last for the first few weeks of pregnancy and should be discussed with the clinical team at MFS at the next scan.

What are the symptoms of OHSS?

Symptoms usually begin about three to five days after the late-night injection of hCG (Choragon, Gonasi, or Pregnyl) with pain or swelling in the abdomen.

When ovaries respond too well, follicles make lots of the natural hormone oestrogen, which has many effects, including making blood more likely to clot inside blood vessels. As well as this, each follicle can hold as much as a cupful of fluid, which means that many follicles together can drain lots of fluid from the blood-stream, compress the abdominal organs and cause pain.

Problems occur when the fluid retained by enlarged ovaries, or which leaks into the abdominal cavity, leads to blood 'sludging' or fluid seeping into the lungs. As the ovaries grow, the patient may start vomiting, or she may produce less urine as her kidneys stop working so well. This 'sludging' could lead to blood clots but may be reduced by **drinking more water** or dilute juice and taking gentle exercise. Some mild discomfort is usual for a few days after egg collection and needs only mild painkillers. Most cases of OHSS settle with paracetamol, **drinking more fluid** and gentle exercise.

Ovarian Hyperstimulation Syndrome



In more severe cases, abdominal distension and pain, vomiting, diarrhoea, shortness of breath, dizziness and headaches may happen. The most serious complication is loss of water from the woman's circulation which, if not treated, could lead to kidney failure, or blood clots in her blood vessels (venous thrombosis) which could result in a stroke.

Preventing, identifying and treating OHSS

The first step is to prevent the problem by identifying patients at increased risk of OHSS. If a patient develops too many follicles the MFS nurse or doctor will warn her well before there is any risk, and discuss adjusting the treatment. After egg collection, if she has abdominal pain that increases rather than settles in a day or two, she should notify MFS, especially if she feels sick or starts to vomit. If this happens, she should return to MFS. If the clinic detects mild overstimulation, she may be offered medical treatment to help the symptoms such as painkillers, anti-nausea medicine or IV fluids (a 'drip'). If the condition is severe, MFS may suggest she be admitted to hospital.

Drink lots of fluid such as water or dilute fruit juice - 'isotonic' sports fluid like that taken by athletes are ideal. Tea, coffee, and alcohol can all make dehydration worse. The patient should be passing normal amounts of urine because dark, concentrated urine is a sign of dehydration.

Paracetamol is a safe and suitable painkiller. A patient taking low-dose aspirin before egg collection should continue with this as it helps to reduce the risk of blood clots. If these measures don't help the symptoms, she should seek medical advice, especially if she is unable to keep down fluids without being sick. Gentle exercise, such as walking, helps keep blood flowing through the veins and kidneys and will improve general health.

Hyperstimulation does not mean treatment has not worked, and, because it may get worse if the patient conceives immediately, MFS may suggest delaying pregnancy by freezing embryos rather than transferring them in the days after egg collection. If so, MFS will continue to monitor the patient and once her ovaries have returned to normal her embryos may be transferred. There is no additional charge when embryos are frozen for the patient's safety and with modern freezing techniques the chance of pregnancy for embryos that were frozen at a very early stage to avoid the risks of OHSS are the same as with a fresh transfer.

Any patient worried that she is developing symptoms of OHSS should call MFS on 01922 455911. Out of hours, the MFS telephone is diverted to a senior member of staff. Patients' GPs are advised of a patient's treatment and will be informed if there is a significant risk of OHSS and can, if necessary, refer her to hospital.

Further information

Please visit midlandfertility.com and search for 'Treatments' or read the following MFS infosheets:

- Counselling
- Giving Injections
- Egg Collection and Fertilisation
- Embryo Transfer and the 2 Week Wait
- Embryo Freezing
- Frozen Embryo Transfer

(downloadable from midlandfertility.com by searching for 'MFS Treatment Literature', or in hardcopy from MFS).