



Neupogen Patient Information And Consent

Granulocyte colony stimulating factor (G-CSF) is a natural cytokine (chemical messenger) which is normally found in the body and Neupogen (filgrastim) is a synthetic (recombinant) form of G-CSF. Higher levels of natural G-CSF seem to be found in follicles which go on to produce healthy eggs compared to follicles which produce poor eggs. Higher levels of G-CSF are expressed in healthy embryos and in healthy placenta, so it is a marker of embryonic/placental viability that seems to have a role in communicating with the endometrium to allow implantation. It is suggested that it may improve lining thickness and egg quality (although the number of patients he has tried it out on for egg quality is apparently very small), as well as placental growth and may permit a successful live birth for ladies who have previously had reproductive failure.

Neupogen is licensed in the UK to treat severe neutropenia (low neutrophil (a type of white blood cell) count). Studies on giving G-CSF to pregnant animals showed that pregnancy outcomes (for mother and baby) were much better for neutropenic patients who remained on the drug.

Two significant studies have been performed by doctors in Rome and Munich. In the Rome study, patients with unexplained repeat miscarriage, who were trying to conceive naturally and who were given G-CSF from 6 days post ovulation until the onset of the period (if unsuccessful) or until 9 weeks of pregnancy had a live birth rate was 83% compared to the control group's live birth rate of 49%.

In the Munich study G-CSF was administered every 3 days from egg collection onwards in fresh IVF patients who were shown to have a genetic defect (absence of 3 killer cell-like immunoglobulin activator receptors) after 5 or more failed IVF cycles or several years of unexplained infertility. This study showed a very high pregnancy rate 74% but also a high miscarriage rate (38%) – although potentially that might have been because the G-CSF therapy was stopped on test day. However, although the incidence of the KIR defect (3 missing activators) was very high, (78% of the patient group who had 5 or more failed IVF or an average duration of unexplained infertility of 6.8 years – this compares to about 30% of the typical population), when the same G-CSF therapy was used with patients who did not have the KIR defect, the pregnancy rate was much lower (only 10%). This suggests that although about 3/4s of patients with 5 or more failed IVFs or long term unexplained infertility may benefit from G-CSF due to the faulty gene, the other 1/4 may get no benefit from G-CSF.

I understand and consent:

1. Treatment with Neupogen.
2. I understand that I need to keep the medicine refrigerated.
3. At least one dose will be placed into my uterus during a procedure much like a smear test, around the time of ovulation.
4. After this I will self-inject the Neupogen into my abdomen every fourth day as directed by Dr Gorgy.
5. Currently the evidence available about the efficacy of Neupogen in reproductive immunology is inconclusive and the medicine is not licensed for this purpose but prescribed on a named patient basis (off label).

Patient name:

Signature:

Date:

Clinician Name:

Signature:

Date: