Explanation about pre-implantation screening (PGT-A, PGS)

1. Details

〔What is pre-implantation screening?〕

- PGT-A stands for Preimplantation Genetic Testing for Aneuploidy (or PGS; Preimplantation Genetic Screening) (hereinafter referred to as this method). It is a test done on fertilized oocytes.
- Chromosomes are examined using cells of blastocysts (fertilized oocytes 5 to 7 days after fertilization). You can see the presence or absence of numerical abnormalities in the chromosomes as well as the gender based on chromosomes.
- The main purpose of this method is to prioritize the embryos to be transplanted.
  ※ Test results do not 100% match the karyotype of the child born, and an amniocentesis test is essential to diagnose the presence or absence of chromosomal abnormalities in the child. For details, please refer to "Disadvantages" below.

〔 Advantages 〕

- Increased pregnancy rate, decreased miscarriage rate
  Many miscarriages are caused by chromosomal abnormalities in fertilized oocytes (embryos). If the presence or absence of chromosomal abnormalities is known in advance, embryos that are unlikely to lead to pregnancy can be excluded from the candidates for transplantation, increasing the success rate of transplantation and reducing the rate of miscarriage.
- Reduce time and cost for fertility treatment
  By selectively transplanting embryos that are most likely to be born, the time and cost of fertility treatment can be minimized.
- Reduced risk of birth defects caused by chromosomal abnormalities
  If prenatal testing reveals a serious congenital disorder during pregnancy, you may have to make a difficult decision to give birth or not, but for congenital disorders caused by abnormal chromosome numbers, PGT-A can reduce the risk of being in this situation to begin with.
- High-precision sex selection is possible
  By checking the sex chromosome pattern and selecting the embryo to be transplanted, you can select the desired sex with a success rate of almost 100%.
  ※ It may not be possible to diagnose in rare cases such as a mosaic of sex chromosome abnormalities (a state in which cells with chromosomal abnormalities and cells without chromosomal abnormalities coexist in one blastocyst).

〔 Drawbacks 〕

- Potential damage to blastocysts
  The possibility of damage to the blastocyst (crushing, stunting, etc.) due to the collection of TE cells is rare but cannot be ruled out.
  ※ PGT-A does not induce chromosomal abnormalities.
- Frozen-thawed embryo transfer is essential
  Blastocysts that undergo this method cannot be freshly transplanted. Since the analysis takes about 3 to 4 weeks, the blastocysts from which TE cells have been collected are cryopreserved, and based on the results, embryos are selected and thawed embryos are transferred.
- Inspection limits
  Since this method is a test performed using some of the cells of the blastocyst, if there is an abnormality in a part other than the cells used in the test, it cannot be detected.
  Even if an embryo that is judged to be normal by this method is transplanted and leads to pregnancy, the child may have chromosomal abnormalities. Likewise, due to the way embryos and babies grow, it is possible for embryos that could lead to healthy birth to be judged unsuitable for transplantation and discarded.
- Cost
  In addition to the usual medical expenses such as in vitro fertilization, a separate examination fee is required.

As O.G.M.S. is not a medical institution, the examination fee paid to us is not covered by insurance or government subsidies.

2. Method

We will take the TE cells removed during TE removal at a medical institution, pretreat them, and send them to the laboratory for analysis. Please see our website for details.

- Application

  Please apply by e-mail BEFORE the day of oocyte collection and submit the "Consent Form for Preimplantation Genetic Diagnosis (PGT-A, PGS)" at that time. If you do not receive the application email by the day of oocyte collection, we will not be able to receive TE cells from the medical institution.

  ※ **Please be sure to fill in the consent form fully, as there is a column for selecting whether or not you wish to see the gender. If you do not fill in the form, the gender will not be included in the test result report.**

- Payment
  - We will send you an invoice when the test result is available (about one month after receiving the sample).
  - We will send you the address label for sending the test result report and the reply envelope together with the invoice. Please enter the address and name of the recipient of the inspection result report on the address label and return it to us. This is for your security.
- Sending inspection result report

  After confirming payment, we will mail the inspection result report and receipt using the returned address label.

  ※ The test result report will indicate whether or not there is an abnormality in the number of chromosomes, and if any abnormality is found, the details. As a general rule, gender is not displayed. Gender will be stated only if the consent form clearly states that you wish to display the gender when applying.
- Counseling

  We accept inquiries regarding this test. If you have any questions or concerns, please contact us by phone or email. We will provide basic counseling free of charge.

  ※ Medical institutions cannot discuss this information. They will not be able to record the results in your file. Please keep the information privately and simply tell the institution what embryo you want to use based on the test.

3. Fees

Please refer to the price list (attached sheet).

※ Pretreatment will be performed when we receive the TE cells. Cancellation is not possible after pre-processing.

4. Other

- If you apply for this method, we will obtain the client's couple's name, date of birth, and blastocyst information from the medical institution. In addition, as reference information, we will acquire patient information (address, telephone number, medical records related to ART, etc.) The acquired information will be used only for the purposes of this test method.
- All information related to this will be managed in compliance with the Personal Information Protection Law, related laws and guidelines, and with due consideration of confidentiality.
- Policies may not be enforced due to disasters such as earthquakes, power outages, fires, or accidental reasons.
- Information on testing and results may be statistically analyzed and published. In addition, surplus samples may be used for research purposes. All samples and information will be anonymized.