IndiaIVF
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IN VITRO FERTILIZATION (IVF) INFORMATION PACKAGE

Welcome to India IVF Clinic ; In Vitro Fertilization (IVF) Program.

It contains information about IVF which you must read prior to completing and signing your IVF Consents. If you have further questions about the IVF process, please speak to your nurse or book an appointment with your doctor to discuss the IVF cycle.

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PREGONCEPTION & PRENATAL SEX DETERMINATION , DISCLOSURE AND SELECTION OF FETUS IS NOT DONE. IT IS PROHIBITED AND PUNISHABLE UNDER LAW . SEEKING AND ASKING FOR IT IS PUNISHABLE UNDER LAW THIS PROCEDURE DOESNOT GUARANTEE A CHILD AND THE OVERALL SUCCESS RATE ALSO VARIES FROM CASE TO CASE

1- PATIENT CHECKLIST FOR IVF

There are a number of steps which are needed before you are ready to begin your IVF cycle. Please check with your doctor or nurse if you are unsure which investigations may be required in your situation. Female partner Blood tests results (takes 2-3 wks) Male Partner Blood tests (if applicable) (takes 2-3 wks). Male partner Sperm Assessment , Male partner to freeze sperm sample for back-up (if couple chooses).Uterus Test: Hysteroscopy or Sonohysterogram .Other investigations ordered by your doctor.

Submit one couple photograph, identity proof of couple stating that you are in a married relationship, identity proof of couple with address and signature in it.

Review IVF Information Package Consent package- Consents must be witnessed by a third party. Book an appointment with a nurse if you have questions about the consent forms, or if you require a third party witness.

Call to check if results have been received or if you have questions about IVF in general or your specific treatment. Call , A nurse will review your chart and inform you if any further steps are needed. If you would like to discuss IVF further before you start your treatment, book an appointment with your doctor. Once the above steps are completed, you are ready to start your IVF cycle.

To start your IVF cycle, call the clinic on the day 1 of your period (first day of bleeding). Call , State and spell your name, and that is your day 1 and you would like to start your IVF cycle. A nurse will call you back by the next day to review your next steps and book your appointments. Call your Doctor s office at the start of your IVF cycle to book a review appointment, if not already booked, planned for after the IVF cycle to review the IVF cycle.

2- IN-VITRO FERTILIZATION (IVF)

Normal reproduction occurs when an egg joins with sperm in the fallopian tube to form an embryo. The embryo then attaches to the uterus (womb) for pregnancy.

In IVF, eggs are removed from the woman s body, and eggs and sperm are joined in the laboratory to form embryos. These embryos are then placed into the uterus for pregnancy. In-vitro Fertilization IVF treatment usually requires the stimulation of ovaries to produce multiple eggs using fertility medications, an egg retrieval procedure to remove eggs from the ovaries, fertilization (joining) of eggs and sperm in the laboratory to form embryos, growth and assessment of embryos for 2 to 5 days and finally the placement of embryo(s) into the woman s uterus to achieve a pregnancy.

Ovarian Stimulation: In a usual menstrual cycle, a woman will only produce one mature egg each month. To increase the chances of success in IVF, women are given hormonal medications to stimulate the ovaries to produce and grow more eggs, which can be removed for the IVF process. Fertility medications are injections which must be given daily for approximately 2 weeks. You will also be given an injection medication to prevent your natural ovulation. During this time period, frequent blood tests and ultrasounds are required in order to monitor the effects of the medications.

Egg Retrieval: The egg retrieval is performed by a doctor. The doctor will use an ultrasound to see your follicles and place a needle through the top of the vagina into the ovary. All of your follicles will be drained, and the fluid

will be sent to the embryology lab to identify the eggs. Shortly after the retrieval you will be told the number of eggs that were retrieved. The egg retrieval will be performed with general anesthesia. Medications will be given through an intravenous (IV) during the procedure to relax you and for pain relief.

Sperm Sample: A sperm sample is required on the day of the egg retrieval. This may be obtained by: - Fresh ejaculate by the male partner - Frozen sperm sample - Donor sperm sample - Sperm retrieval procedure performed by a urologist (for men without ejaculated sperm) Please inform a doctor or nurse if you are concerned about producing a fresh sperm sample. Couples may choose to freeze a sample before the egg retrieval day which can be used as a back-up in case a fresh sample cannot be produced on the day of the actual egg retrieval.

Fertilization: After the egg retrieval, the embryology lab will fertilize the eggs by IVF or ICSI. Fertilization is the process where the egg and sperm join together to form an embryo. Typically, it is expected that approximately 70-80% of mature eggs should fertilize. Your doctor will discuss which option for fertilization would be best in your situation based on your history and test results. IVF is a process where small sample of sperm is placed with each egg to allow the sperm to naturally fertilize the egg.

ICSI (Intra cytoplasmic sperm injection) is a procedure in which a sperm is chosen and mechanically placed into an egg for fertilization. ICSI is used when sperm counts are low, sperm quality is poor, previous failed fertilization with IVF, unexplained infertility, pre-implantation genetic diagnosis (PGD) or when there are other concerns about fertilization.

Embryo Development and Assessment: Embryos will be placed in an incubator and checked by the embryology team. You will receive a regular report about the number of embryos which are growing. Over the first few days, embryos will start to grow and divide. By the 3 rd day, they should be between 6-10 cells. By the 5-6 th day, they should have developed into a blastocyst and will contain hundreds of cells and a fluid cavity.

Blastocyst culture means that the embryos will be grown from day 3 to day 5 in the laboratory. We only expect half of all embryos to survive during this time. Blastocyst culture allows us to pick the best embryos by picking the ones that are growing the best on day 5.

Embryo Transfer: The embryo transfer will occur either on day 2,3 or day 5 after the egg retrieval. You will have a discussion with the doctor and embryology team about your embryos. A final decision will be made about the number of embryos which will be transferred, based on the woman s age, the couple s medical history and the number and quality of the embryos. As women get older, more of their eggs and embryos may be abnormal. Therefore, more embryos may be transferred in women in their late 30s and 40s. In younger women <35, usually only 1 or 2 embryos will be transferred. The embryo transfer is performed by the doctor. An ultrasound is used to see the uterus, and the embryos are placed in the uterus using a small catheter (tube) through the cervix.

Pregnancy Test: You will be instructed when to do a pregnancy test to see if the IVF was successful. If the pregnancy test is positive, you will be asked to repeat the test 2 days later to confirm the pregnancy is growing appropriately. A vaginal medication (progesterone) is started after the egg retrieval to help the uterus prepare for implantation. The medication should be taken until the pregnancy test is done and will be continued if the woman is pregnant.

Embryo Freezing : Some couples will produce more embryos than will be transferred during the fresh IVF cycle. Sometimes, for various medical reasons, it will be advised not to proceed with a fresh embryo transfer and to freeze all of the embryos. Embryos that are good quality can be frozen (cryopreserved) until you are ready to use them in the future. Frozen embryos avoid the need to repeat the entire IVF cycle. Embryos can be frozen for long time periods and still have a good chance to lead to pregnancy. Embryos must be of good quality and have developed to certain stages before they can be frozen. About 25% of patients will have extra embryos which can be frozen Embryo cryopreservation involves several steps to allow the embryo to be frozen. Embryos are dehydrated with cryoprotectants, cooled and placed into straws and stored in liquid nitrogen. Embryos arelabeled with your information and double checks are done at each stage to prevent mix-ups. There is an 80-90% chance an embryo will survive the freezing and thawing process. This will not be known until the lab thaws the embryos for your frozen embryo transfer. A frozen embryo cycle involves preparing the uterus for implantation. This may involve medications and/or monitoring by ultrasound to determine the appropriate timing to transfer the embryo(s). The embryo(s) will only be thawed when it is determined that the uterus is ready for embryo transfer. The embryo transfer usually occurs about 2 weeks into the menstrual cycle. Studies have not shown any increased risk of birth defects with embryo freezing. Your doctor will discuss if other investigations are needed before the frozen embryo transfer. In addition, you will discuss the number of embryos which will be thawed each time.

Research and training is important to continue to improve the success of IVF. During an IVF cycle, you may have excess eggs, sperm, follicular fluid, granulosa cells or embryos that cannot be used to establish a pregnancy, but may be used for research and training. We encourage the donation of excess biologic material to help aid in improving IVF in the future.

OUTCOMES We track the outcomes of all IVF treatment cycles, including information about pregnancies and births. This information helps us to continue to improve our treatments and patient care. You may be contacted in the future and asked to provide information regarding your pregnancy and outcomes.

3- IVF OUTCOMES AND RISKS MEDICATION RISKS

Most women will experience some bloating and fullness in the lower abdomen with the IVF cycles. This is a normal reaction to the medications and often indicates the medications are stimulating egg development. Side effects of the medications may include bruising and soreness at the injection site, allergic reaction, gastrointestinal distress, headaches or mood changes. It is important to discuss with your doctor if you experience any reactions to the medications. Currently there is no definite evidence directly linking fertility medications to breast or ovarian cancer. Women with infertility, regardless of exposure to fertility medications, have a higher risk for ovarian cancer. However, further long-term studies are needed to determine if there is an association between fertility treatments and breast or ovarian cancer.

OVARIAN HYPERSTIMULATION Ovarian hyperstimulation syndrome (OHSS) is a condition where a woman overresponds to medications and develops a large number of follicles and very high hormone (estrogen) levels. In severe cases, women will have fluid (water) build up in their abdomen and lungs and develop blood clots. The fluid may need to be removed with a needle and women may need to be admitted to the hospital for management. Severe OHSS can occur in 1-3% of women undergoing IVF. Rarely, an ovary that has been stimulated may twist (ovarian torsion), which may require surgery (<1%).

PROCEDURE RISKS Risks associated with the egg retrieval include: discomfort during the procedure, bleeding, infection or puncture of bowel. Infections are rare, but severe infections may require antibiotics or rarely surgery. The risks of conscious sedation include being too sedated, breathing and/or heart rate complications.

CYCLE CANCELLATION In some situations, your IVF cycle may be cancelled before the egg retrieval. Approximately 10% of IVF cycles may be cancelled. Reasons for cancelling an IVF cycle may include: - Woman s ovaries not responding to medications (too few follicles developing) - An unusual response to medications (follicles developing too quickly or too slowly) - Hormone levels too high or too low - Findings on ultrasounds or blood tests that would decrease the chance of pregnancy - Ovarian hyperstimulation When there are a low number of follicles developing, there is a very low chance of pregnancy. Because of the risks and costs associated with an egg retrieval and IVF procedure, a doctor may advise cancelling the cycle if it is felt, yet your chances of pregnancy are small. If your cycle is cancelled, a review appointment will be booked with your primary physician. If your cycle is cancelled, a portion of your costs will be refunded based on the treatments/procedures which have already occurred. In some cases, it may be possible to perform an insemination when the IVF treatment has been cancelled. The chances of pregnancy with insemination are lower than an IVF treatment, but the treatment is less invasive and less costly.

MULTIPLE PREGNANCY The goal of IVF is to produce one healthy baby. Multiple pregnancies are pregnancies with more than one baby (such as twins or triplets). This risk of having a multiple pregnancy is increased with IVF, especially when more than one embryo is placed during the IVF cycle. Approximately 1 out of every 5 pregnancies after IVF is a multiple pregnancy. For women under 35, this risk can be much higher in some situations. Even twin pregnancies can have many risks to the mother and the babies. Risks with multiple pregnancies include miscarriages, premature delivery, or long-term health and developmental problems such as cerebral palsy. There are also increased risks to a mother carrying a multiple pregnancy. This includes higher risks of high blood pressure and diabetes. You may also require bed rest or time off work much earlier. There is also an increased risk of problems with bleeding and problems at the time of delivery. Parents of multiples also face psychological, social and economic challenges unique to multiple pregnancies. Parenting multiples is morephysically challenging and parents often require help. The costs of raising multiples is more. In addition, there may be additional financial costs if there are long-term health problems. If you are pregnant with a multiple pregnancy, you should discuss your options with your doctor. In some cases, a pregnancy naturally reduces the number of fetuses early in the pregnancy. In other cases, you may discuss the option of a selective reduction. This is a procedure performed around 3 months by a specialist to reduce the number of fetuses in a multiple pregnancy. This is a difficult decision for couples, and couples would be referred to a high-risk pregnancy clinic to discuss this option with a specialized team.

PREGNANCY RISKS All pregnancies have a small risk that the babies can have a birth defect. The general risk for all pregnancies is approximately 3-5%. The risk in babies born after IVF is not statistically different from infertile couples who conceive without the use of fertility treatments. This is an issue which continues to be studied. Other problems which can occur in pregnancy may also occur in an IVF pregnancy. In particular, miscarriages (spontaneous abortions) occur in approximately 15%-30% of IVF pregnancies (depending on age) and ectopic pregnancies (pregnancy in the fallopian tube) will occur in about 2% of IVF pregnancies. Studies have also shown that babies conceived with IVF may be born slightly earlier (premature), and have lower birth weight than babies conceived without IVF. There is no evidence that children born from IVF have neurological or health effects, although further long-term studies are needed.

4- SPECIAL CIRCUMSTANCES EGG DONORS /SPERM DONORS/ GESTATIONAL CARRIERS

Sperm donation is a treatment for men who are unable to produce good quality sperms themselves. Sperm donation must be by an anonymous donor.

Egg donation is a treatment for women who are unable to produce good quality eggs themselves. Egg donation must be by an anonymous donor.

Gestational carrier(Surrogacy) may be required for women who are unable to safely carry a pregnancy (permitted as per Indian law only in married heterozygous Indian couples , details can be sought from our clinic). Gestational carriers are women who become pregnant and carry a

fetus throughout pregnancy and deliver a child for another couple. The gestational carrier has no genetic link to the fetus .

We do not recruit sperm donors , egg donors or gestational carriers; therefore, intended parents have to take it through registered ART banks as per ICMR guidelines. All parties must have independent legal and psychological counseling as well as a medical assessment prior to treatment.

5- FERTILITY PRESERVATION

Some patients are diagnosed with an illness before they have had the chance to start or complete their family. Unfortunately, infertility is a possible side effect of a variety of treatments, most commonly cancer treatment. As a result, many patients may want to consider the option of preserving their fertility through gamete (egg or sperm) or embryo freezing before starting treatment. Fertility preservation options are often limited for patients who have already started treatment. To preserve the full range of options, fertility issues should be discussed as early as possible when planning any sort of potentially fertility-compromising treatment. We expedite referrals for males in the oncology sperm banking program, and for females wanting to receive a medical consultation to discuss their medical and cancer-associated fertility risks and fertility preservation options. We encourage male and female cancer patients to access us.