IN VITRO FERTILIZATION
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In vitro fertilisation (IVF) is a process of fertilisation where an egg is combined with sperm outside the body, in vitro ("in glass"). The Latin term in vitro, meaning "in glass", is used because early biological experiments involving cultivation of tissues outside the living organism were carried out in glass containers, such as beakers, test tubes, or Petri dishes. Today, the scientific term "in vitro" is used to refer to any biological procedure that is performed outside the organism in which it would normally have occurred, to distinguish it from an in vivo procedure (such as in vivo fertilisation), where the tissue remains inside the living organism in which it is normally found.

IVF is a major treatment for infertility when other methods of assisted reproductive technology have failed. IVF is a type of assisted reproductive technology used for infertility treatment and gestational surrogacy. A fertilised egg may be implanted into a surrogate's uterus, and the resulting child is genetically unrelated to the surrogate

Procedure

IVF usually involves the following steps:

1. Suppressing the natural menstrual cycle

The woman receives a drug, usually in the form of a daily injection for about 2 weeks, to suppress their natural menstrual cycle.

2 Super ovulation

Fertility drugs containing the fertility hormone follicle stimulating hormone (FSH) are given to the woman. FSH makes the ovaries produce more eggs than usual. Vaginal ultrasound scans can monitor the process in the ovaries.

3. Retrieving the eggs

The eggs are collected through a minor surgical procedure known as "follicular aspiration." A very thin needle is inserted through the vagina and into an ovary. The needle is which is connected to a suction device. This sucks the eggs out. This process is repeated for each ovary.

Frozen or donated eggs may also be used.

4. Insemination and fertilization

The eggs that have been collected are placed together with male sperm and kept in an environmentally controlled chamber. After a few hours, the sperm should enter the egg.

Sometimes the sperm is directly injected into the egg. This is known as an intracytoplasmic sperm injection (ICSI).

Frozen sperm, retrieved through testicular biopsy, may be used. This is believed to be as effective as fresh sperm in achieving a successful pregnancy.

The fertilized egg divides and becomes an embryo.

One or two of the best embryos are selected for transfer.

The woman is then given progesterone or human chorionic gonadotrophin (hCG) to help the lining of the womb receive the embryo.

5. Embryo transfer

Sometimes, more than one embryo is placed in the womb. Normally, only transfer more than one embryo if no ideal embryos are available.

The transfer of the embryo is done using a thin tube, or catheter. It enters the womb through the vagina. When the embryo sticks to the lining of the womb, healthy embryo growth can begin.

Side Effects Of IVF

IVF has some risks and possible side effects. These include:

- bloating
- cramping
- breast tenderness
- mood swings
- headaches
- bruising from shots
- allergic reaction to medicines
- bleeding
- infection