

Infertility: — It is the inability to produce children in spite of unprotected sexual cohabitation.

causes: — may be physical, disease, drug immunological or even psychological.

specialised health-care units called infertility clinics could help in diagnosis & corrective treatment of some of these disorders.

The infertile couple could be assisted to have children through certain special techniques called assisted reproductive technologies (ART) which are as follows:—

Test-tube-Baby Programmes.

In this method, ova from the wife/donor (female) and sperms from the husband/donor (male) are collected & induced to form zygote under simulated conditions in the laboratory. — process is called *in vitro* fertilisation (IVF).

The zygote or early embryo with up to 8 blastomeres is transferred in to fallopian tube (ZIFT) and embryo with more than 8 blastomeres is transferred in to uterus (IUT)

In females who cannot conceive, embryos formed by fusion of gametes in another female (in vivo fertilisation) are transferred.

4.5 INFERTILITY

A discussion on reproductive health is incomplete without a mention of infertility. A large number of couples all over the world including India are infertile, i.e., they are unable to produce children inspite of unprotected sexual co-habitation. The reasons for this could be many physical, congenital, diseases, drugs, immunological or even psychological.

In India, often the female is blamed for the couple being childless, but more often than not, the problem lies in the male partner. Specialised health care units (infertility clinics, etc.) could help in diagnosis and corrective treatment of some of these disorders and enable these couples to have children. However, where such corrections are not possible, the couples could be assisted to have children through certain special techniques commonly known as assisted reproductive technologies (ART).

✓ In vitro fertilisation (IVF fertilisation outside the body in almost similar conditions as that in the body) followed by embryo transfer (ET) is one of such methods. In this method, popularly known as test tube baby programme, ova from the wife/donor (female) and sperms from the husband/donor (male) are collected and are induced to form zygote under simulated conditions in the laboratory. The zygote or early embryos (with upto 8 blastomeres) could then be transferred into the fallopian tube (ZIFT zygote intra fallopian transfer) and embryos with more than 8 blastomeres, into the uterus (IUT intra uterine transfer), to complete its further development. Embryos formed by in-vivo fertilisation (fusion of gametes within the female) also could be used for such transfer to assist those females who cannot conceive.

✓ Transfer of an ovum collected from a donor into the fallopian tube (GIFT gamete intra fallopian transfer) of another female who cannot produce one, but can provide suitable environment for fertilisation and further development is another method attempted. ✓ Intra cytoplasmic sperm injection (ICSI) is another specialised procedure to form an embryo in the laboratory in which a sperm is directly injected into the ovum. Infertility cases either due to inability of the male partner to inseminate the female or due to very low sperm counts in the ejaculates, could be corrected by artificial insemination (AI) technique. In this technique, the semen collected either from the husband or a healthy donor is artificially introduced either into the vagina or into the uterus (IUI intra-uterine insemination) of the female.

Though options are many, all these techniques require extremely high precision handling by specialised professionals and expensive instrumentation. Therefore, these facilities are presently available only in very few centres in the country. Obviously their benefits is affordable to only a limited number of people. Emotional, religious and social factors are also deterrents in the adoption of these methods. Since the ultimate aim of all these procedures is to have children, in India we have so many orphaned and destitute children, who would probably not survive till maturity, unless taken care of. Our laws permit legal adoption and it is as yet, one of the best methods for couples looking for parenthood.