
Moral Issues in Bio-Technology

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The rapid advances in Bio-Technology during the past three decades have opened up new and complex methods of investigation and treatment in medicine that have outstripped their ethical consideration. This is especially seen in the field of human infertility, where the moral questions demand urgent and thoughtful answers.

Christian leaders may be called upon to counsel in these relatively new areas and need to be well briefed if their advice is to be wise and helpful. Until recently newly-married couples may have sought their pastor's advice over family planning and the ethics of abortion. Infertility, with the failure to produce children, however, can now produce more complex moral problems. It can indeed result in a deep feeling of failure and guilt and may even result in marriage breakdown.

The new methods involving biology and genetics can now offer new hope of success in a certain group of infertile couples and also in the early diagnosis of foetal abnormalities with the identification of the defective gene responsible.

In 1953, Watson and Crick discovered the intricate construction of the DNA life system in the cells of the body. Today some 50,000 genes present in each human cell have been identified. In veterinary surgery defective genes are being replaced by healthy ones by means of genetic engineering and already such replacements are being considered in man.

In 1978, Steptoe and Edwards were successful in fertilising the egg cells (ova) of a woman with the husband's semen in a dish containing a nutrient and implanting the early embryo into the woman's womb with the resulting birth of the first 'test-tube' baby. This method is better known as In Vitro Fertilisation (IVF).

In 1985, an embryo was successfully implanted after being frozen for several months in Australia.

Problems of the Infertile Marriage

Difficulty in conceiving affects one marriage in ten and until recently the cause was presumed to be mainly in the wife. It is now recognised that she may be responsible in 30% of cases, the husband in 30% of cases and some cause in both in another 30% of cases, with no cause being found in 10%. An initial visit to the family doctor will probably have led to a referral for a specialist opinion. A Christian couple may now be faced with the dilemma caused by their intense desire for a child and the moral issues posed by the procedures for further investigation. In a number of cases it may be possible to treat successfully by means of drugs or by some surgical procedure. Occlusion of the wife's fallopian tubes may be relieved by microsurgery. In these cases normal co-habitation can continue between husband and wife and there seems to be no ethical problem.

Problems arise from the view of Christian ethics when the husband is sterile or

subfertile and the suggestion is made for the wife to be inseminated with the semen of another man by means of Artificial Insemination (AID). However carefully and anonymously chosen the donor may be, this method clearly raises moral questions as normal intercourse between husband and wife is by-passed and the child subsequently delivered has no blood relationship with the adopting father.

Where surgery or drugs are not able to achieve success In Vitro Fertilisation may be suggested. This involves the obtaining of a number of ova from the wife's ovary by means of a small telescopic instrument which is passed, under anaesthesia, into the abdomen. The ova so obtained are increased above the normal number by the administration of a super-ovulatory drug. Four or five of these ova are chosen under a microscope and after insemination with the husband's semen are inserted into the wife's womb. It has been shown that when four or five of these early embryos, rather than a single one, are inserted, the success rate is three-fold.

This fact raises the ethical question regarding the subsequent disposal of the 'spare' embryos depending upon the value that is given to their status. Many research workers do not consider that they have the value of adult life and see a wonderful opportunity for research into the causes of foetal abnormalities in the hope that by genetic engineering such conditions can be relieved in the future. Various conditions such as Down's Syndrome, Spina Bifida, Huntington's Chorea, Cystic Fibrosis and Haemophilia are such and can clearly cause great distress. Such workers will also carry out research only up till fourteen days of development as this is the time when evidence of the primitive nervous system appears.

Pro-life supporters, however, look upon life as a gift from God and ascribe such sanctity to it that they cannot accept that it can be experimented upon or produced to be discarded as if it were just a collection of cells. They recognise this early embryo as being genetically human, containing characteristics of both the mother and father and being a form of life through which we have all passed in our development and whose very vulnerability requires our protection. They concur with the Minority Group on the Warnock Committee who dissented from research on the embryo on the grounds that:

the embryo has a special status because of its potential for development to a stage at which everyone would accord it the status of a human person. It is in our view wrong to create something with the potential for becoming a human person and then deliberately to destroy it.

Gamete Intra Fallopian Tube Transfer (GIFT) is a modification of IVF in which only one of the wife's ova is obtained, fertilised with the husband's semen and then transferred into her fallopian tube in the patent portion past the blockage and thus allowing the early embryo to pass naturally into her womb for implantation. This avoids the production and disposal of any 'spare' embryos although the success rate is not so high as in IVF where a number of embryos is used.

Whichever method is used to overcome the problem of infertility by embryo replacement it may not be successful and may lead to many months of frustration and stress. This aspect should always be explained before a couple embark upon what is both a complex as well as an artificial method to conceive.