This is the second article in a three-part series dealing with ethics and use of pregnancy prophylaxis in the treatment of rape survivors. Part I (Prescriptions to Prevent Fertilization) treated the morality and medical value of older methods which attack the rapist’s sperm (e.g., spermicidal douches and curettage). Part III will treat morally licit possibilities for delaying ovulation (anovulants). This article is concerned with methods that clearly interfere with implantation (and are therefore illicit) or possibly delay ovulation (and therefore may be licit).

Confusion about legal liability for not using interceptive (abortifacient) methods may have discouraged Catholic hospitals from treating rape victims. There is confusion, also, about the effects of the more commonly prescribed pregnancy prophylaxis for rape victims, e.g., can there be anovulant effects at mid-cycle? Clarification of some of these matters may help Catholic hospitals feel more open to treating rape victims. To review a basic conclusion of the first article, it is well to recall that methods can be morally justified in the treatment of rape survivors as long as 1) the effect is to prevent fertilization, and 2) the prevention of implantation is not the result of the method itself or the way it is used.

Importance to Moralists of a Prescription Method of Action

Methods that “prevent pregnancy” by causing the sloughing off of the endometrial lining of the uterus are called interceptive. Because they induce menstruation, thus disrupting implantation and intercepting the embryo’s normal implantation, they are abortifacient. The questions of preventing fertilization on the one hand versus disrupting or intercepting implantation on the other is crucial when addressing the morality of any pregnancy-preventing procedure. Clearly, any medication whose primary effect is to prevent implantation aborts any newly conceived life. Therefore, the use of such a drug is not permitted by Catholic moral teaching, such as is reflected in The Ethical and Religious Directives for Catholic Health Facilities.

Complex medical and moral questions arise, however, when a medication may be both anovulant (suppresses ovulation) and abortifacient. For it is possible for one compound to have both effects (though clearly not in the same individual, in the same cycle), depending on the dosage and the timing. Thus, relatively low doses of natural or synthetic estrogens prevent fertilization (by inhibiting ovulation) when they are started early in the menstrual cycle (day 2 to day 10), while after day 10 doses 25 times higher prevent pregnancy post-coitally (within 72 hours of intercourse) by interfering with implantation.

In the recent past the drug with these anovulant and/or interceptive effects most commonly prescribed in the treatment of rape victims has been diethylstilbestrol (DES). It is also referred to simply as stilbestrol. Some Catholic theologians have used the Principle of Double Effect to justify the prescribing of high doses of DES (25mg, two times a day for five days) for an anovulant purpose when only a very slight possibility of preventing implantation exists. In these cases the intent was to prevent fertilization, even though the slight possibility of preventing implantation was accepted regretfully. This possibility was reduced as much as possible by limiting such prescriptions to those times of the ovulatory cycle when prevention of implantation.

(continued on page 2)
fertilization rather than prevention of implantation would be the expected effect.

Thus DES was used, at least for a while, in some Catholic hospitals in this very restrictive way. The 1978 issue of *Health Care Ethics*, authored by Father Benedict Ashley, O.P., and Father Kevin O'Rourke, O.P., was open to the use of DES in this very selective way in the treatment of rape victims. In the 1982 edition, however, these authors reversed themselves because they had become convinced that there was no clear scientific evidence that DES was anovulant, while the evidence for its contraceptive effects seemed overwhelming. One study, for example, indicated that, while 25-50 mg. of DES once a day for 5 days was insufficient to prevent a pregnancy (E.S.E. Hafez, *Human Reproduction*, Harper and Row, 2nd edition, 1980, p. 752), a daily 50 mg. dose for 5 days resulted in no reported pregnancies. Hence, 30 mg. a day would seem an upper limit to be allowed in late mid-cycle. Others have suggested, however, 25-50 mg. of DES a day may hasten ovulation rather than inhibit it. There does not seem to be any consistent medical evidence that would morally justify the use of DES in rape treatment to prevent pregnancy.

Legal Liability? Use Rather Than Omission of DES has Been the Problem

The possibility of legal liability for non-use has been raised on numerous occasions by proponents of DES use in the treatment of rape victims. For example, in a 1977 article entitled “Why a Catholic Hospital Provides Rape Relief” under the subtopic “Pregnancy Prevention”, the author makes the following statement:

Medically, provision for pregnancy control is considered a part of the standard care of rape victims as developed and expected in the United States. To ignore it is to be deficient regarding that standard, and that may bring a charge of negligence and legal liability for the physician and the hospital (Charlotte Van Dyke, December 1977, *Hospital Progress*, page 66, emphasis added).

More recently the possibility of legal liability was raised in a letter to the editor of the *New England Journal of Medicine* by a California physician. He was objecting to the lack of a “pregnancy prophylaxis”, (that is, of the type to prevent implantation) for one of his patients when she was taken to a Catholic hospital for treatment after rape.

But, in fact, liability suits for DES prescriptions have involved its use rather than its non-use. These liability-for-use cases are numerous and include thrombosis and female infants developing cancer (sometimes 30 years after they were exposed in utero).

Catholic hospitals have never had to pay liability for not using DES because there are state and federal conscience clauses against such legal liability for refusing abortifacient procedures. The legal department of the Catholic Health Association has analyzed the legal protections for Catholic policies against sterilization and abortion in a publication titled *In Defense of Values*. After reviewing the various constitutional provisions dealing with what was designated “belief-action dichotomy,” the article states:

Applying these principles to ethical standards of Catholic physicians in Catholic health care facilities, it seems rather clear that a decision, based on religious principles, to refrain from performing abortions and sterilizations falls on the “belief” side of the dichotomy. It would contravene the separation of Church and State for government to require Catholic health care institutions to violate its principles in favor of a physician or patient who believes otherwise (*In Defense of Values*, the Catholic Health Association, 1984, page 15, emphasis added).

Additional Moral Concerns: Informed Consent, Carcinogenic And Teratogenic Effects

A review of the articles dealing with DES over the last three years reveals that in 1982 twenty percent of the articles had to do with its adverse or toxic effects. By 1983 this figure rose to thirty-one percent, while in one month alone in 1984 eighty percent of the articles dealing with DES had to do with such deleterious effects. The existence of such negative effects does not mean that in a given case such effects will actually show up. But the increased number of articles on the topic does indicate a growing awareness of carcinogenic and/or teratogenic effects of DES. While most of these deleterious effects resulted from long-term use (such as for the prevention of miscarriages), short-term use has resulted in negative effects on embryo in utero being reported. In the 1984 edition of the *Physicians' Desk Reference* (PDR) [Medical Economics Company, 1984, p. 1126] for example, exposures involving only a few days of treatment were cited. One controlled study estimated a 4.7-fold increased risk of limb reduction defects for infants exposed in utero to sex hormones for only a few days.

The PDR warns in bold print, “Diethylstilbestrol should not be used for any purpose during pregnancy. Its use may cause severe harm to the fetus.” Since currently used pregnancy tests are generally not effective until ten days after conception, a rape survivor in this stage of pregnancy could be unaware of her pregnancy. By taking DES she could unwittingly subject the embryo in her uterus to this potential deforming effect. Informed consent to the potential risks thus becomes an additional moral concern in the prescribing of DES.

Recent Developments

More recently DES has been replaced as a prescription for rape victims in some health care facilities by a birth control pill, Ovral. Two tablets are taken orally within 72 hours of the rape, and two additional tablets twelve hours later. The studies indicate that it “prevents pregnancy” by preventing implantation. For this reason, the Principle of Double Effect cannot be used to justify prescribing it as a part of rape treatment in a Catholic health facility.

Conclusion

This article has dealt exclusively with the use of DES (and Ovral) in the treatment of rape victims because there has been so much confusion about the use of such pregnancy prophylaxis. Pressure has been emerging to force Catholic facilities to use
these treatments. DES is teratogenic and, along with Ovral, abortifacient by its effect of preventing implantation of the newly conceived individual. State and federal conscience clauses protect Catholic health facilities from legal liability for not cooperating in the procuring of an abortion. Clearly there is much Catholic health facilities can and should do for the survivors of rape, but this does not include terminating any human life that may be the result of rape by preventing its implantation in the uterus or directly cooperating in such abortions through referral.

The statistically slight probability of pregnancies resulting from rape, the presently available alternative prescriptions to prevent ovulation, and the future directions for research in this area will be discussed in the concluding part of this series.

Lloyd W. Hess, Ph.D.

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**Genetic Engineering to the Rescue . . . Synthetic Growth Hormone**

When in doubt call the culprit a virus. More diseases and disorders plague the human race than there are distinct names for them. Even less clear are the sources and causes of many diseases. In centuries past, blame was often placed at the devil's door. Today we are more likely to attribute an unknown disease to a virus. Among these poorly understood disorders are Crohn's disease (a chronic, inflammatory intestinal malady), Guillain-Barré syndrome (a neurological condition which results in an often totally or partially reversible paralysis, but fatal if not reversible) and Creutzfeld-Jakob disease (a rare brain condition for which at present there is no known cure).

**Virus Contaminated Growth Hormone**

The trigger for setting off a medical alarm was the death of three individuals who had been treated as children or adolescents for dwarfism with human growth hormone. The growth hormone had been extracted from the pituitary glands of human cadavers. Apparently, some of these tissues had been infected with the virus which causes the fatal brain condition, Creutzfeld-Jakob disease. The National Institutes of Health (NIH) annually processes about 50,000 human pituitaries. The growth hormone extracted from these glands is used to treat at no cost to the patient about 2,300 persons. An additional 1,200 affected individuals are being treated with commercially produced human growth hormone which costs about $5,000.00 to $10,000.00 per person for a year's treatment. The federal program is being stopped and the two companies commercially producing the human growth hormone are being urged to cease distributing the substance (See, *Science*, 7 June 1985, Colin Norman, "Virus Scare Halts Hormone Research" p. 1176-7).

Not only are those patients who are being treated with growth hormone being deprived of that necessary substance, but also researchers. In particular the termination of a reliable supply of these glands affects those researchers who were depending on these sources for other pituitary hormones such as prolactin (stimulates the production of milk in lactating women), and the sex hormones (such as luteinizing hormone [LH] and follicle stimulating hormone [FSH]) among several others. Without an adequate supply of these hormones, elucidation of their chemical structure, physiological function or clinical utility is severely compromised.

**Growth Hormone by Recombinant DNA Techniques**

There is a possible solution to the growth hormone problem: the production of synthetic growth hormone by the technique of genetic engineering (specifically, recombinant DNA techniques). These procedures use bacteria genetically modified by the engineered insertion of the human gene which in the human body governs the synthesis of human growth hormone. This synthetic growth hormone presumably will be identical with that which had been extracted from human pituitary glands except that it would not be contaminated by the virus responsible for Creutzfeld-Jakob disease. One of the U.S. firms who has synthesized the hormone and tested it clinically, is expecting soon to receive permission from the Food and Drug Administration (FDA) to market its synthetic growth hormone in the U.S.A.

**Recombinant DNA and Ethics**

If recombinant DNA techniques provide a solution for a true human need, this fact is another argument in favor of promoting the development of genetic engineering. Indeed, we may even have an obligation to promote the field of genetic engineering (See, *Genetic Medicine and Engineering*, Moraczewski, editor, St. Louis, The Pope John Center, 1983, pp. 101-120). Certainly, Pope John Paul II a few years ago had already encouraged the developing of genetic medicine and engineering.

It is also to be hoped, with reference to your activities, that the new techniques of modification of the genetic code, in particular cases of genetic or chromosomal diseases, will be a motive of hope for the great number of people affected by those maladies.

It can also be thought that, through the transfer of genes, certain specific diseases can be cured, such as sickle-cell