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ARTIFICIAL INSEMINATION

ALAN F. GUTTMACHER*

ARTIFICIAL INSEMINATION may be defined as the introduction of the male semen into the vagina for the sake of procreation by any means other than through the act of copulation. In the human the semen employed in artificial insemination may be from the husband (A.I.H.) or from some other donor (A.I.D.); in medical terminology the former is referred to as homologous and the latter as heterologous insemination. The lay press refers to a child conceived by A.I.D. as a "test tube baby" for reasons unclear, since ordinarily no test tube is used in the equipment to perform artificial insemination.

Since medical history has little fascination for non-medical persons, I shall present the history of artificial insemination only briefly. According to legend the procedure was first used by fourteenth century Arabs in the breeding of horses. It is said that warring tribes stole into an enemy's camp and artificially inseminated the fine mares in heat by inserting into the vagina cotton that had been immersed in the seed of inferior stallions. Centuries later, Jacobi artificially fertilized the eggs of fish in 1700, and Abbe Lazarro Spallanzani, a bitch in 1785.¹

The early reported human cases were all husband inseminations, the first being performed in about 1790 by one of the most illustrious surgeons of all times, the great Englishman, John Hunter. The husband of his patient had hypospadias, a malformation of the penis causing the semen to be dribbled externally from the base and not intravaginally from the tip. In 1871, the famous Georgian born gynecologist, J. Marion Sims, reported fifty-five occasions in which he injected a husband's semen into the wife's uterus. The cases covered a span of years, many

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¹ Guttmacher, *The Role of Artificial Insemination in the Treatment of Sterility*, 15 OBSTET. GYNEC. SURVEY 767 (1960).

from England where he became an expatriate because of the Civil War. His first case probably dates from the middle of the last century since she was anesthetized with ether, and ether was not introduced until 1843. The patient suffered from such severe dyspareunia, painful intercourse, that vaginal entrance of any kind was only possible under anesthesia. The name "ethereal copulation" was given the procedure by some wag.²

The first donor insemination is said to have been done at the Jefferson Medical College in Philadelphia in 1884. Dr. William Pancoast, a surgeon, had as infertility patients a Philadelphia merchant and his wealthy Quaker wife ten years his junior. Investigation pinpointed the husband as the source of the sterility since his semen was bereft of spermatozoa. In the course of discussion of the case with medical students one suggested that a "hired man" be called in to solve the problem. As a substitute procedure, semen was collected from the best looking member of the group and while the wife was anesthetized with chloroform, the semen was injected into her uterus. Neither husband nor wife were told of the procedure. Pregnancy resulted in the birth of a son. Later, Dr. Pancoast reluctantly confessed to the husband and was much relieved by his enthusiastic reception of the news and his admonition that his wife never be told.³

A.I.D. was probably not again practiced until the second decade of the twentieth century when two American gynecologists, Cary and Dickinson, independently began to perform the procedure and publish their results.⁴ For reasons difficult to understand, donor insemination became broadly and quickly accepted as a rational method for curing sterility in certain barren marriages by many physicians in America and England, but has been much slower in gaining lay or public medical approval elsewhere. It was first reported performed in Japan in 1951 and is now extensively practiced there.⁵ It is impossible to determine how many babies are born annually in the United States as the result of donor insemination, but a fair estimate would fall between seven and ten thousand. When one recalls that American births total

² *Id.*

³ Gregoire & Mayer, *The Impregnators*, 16 FERTIL. STERIL. 130 (1965).

⁴ Cary, *Results of Artificial Insemination with an Extramarital Specimen*, 56 AMER. J. OF OBSTET. GYNEC. 727 (1948).

⁵ Iizuka, Swada, Nishina & Ohi, *The Physical and Mental Development of Children Born Following Artificial Insemination*, 13 INT. J. OF FERTIL. 24 (1968).

3,375,000 babies per year, it is obvious that the total number achieved through donor insemination is relatively insignificant.

In this article on artificial insemination, I will address myself to the related areas of animal husbandry, human insemination, the physician's role in the artificial impregnation process, the collection and technique of insemination, and the social, religious, and legal attitudes towards artificial insemination.

ARTIFICIAL INSEMINATION IN ANIMAL HUSBANDRY

Since 1907, the year that the Russian physiologist Iwanoff published his distinguished monograph on artificial insemination in several sub-primate mammals, insemination has played an increasingly important role in animal husbandry.⁶ In recent years almost every species of animal has been bred through artificial insemination. Semen collected from a male of excellent genoplasm can be partitioned or diluted and several females impregnated from a single service. In horses a condom-like sheath is inserted into the vagina of the mare to collect the stallion's ejaculate. The seminal vesicles and the ampullae of the bull can be emptied by rectal manipulation and sufficient semen recovered to divide into several samples which are put into capsules that dissolve on intra-vaginal insertion. In rams, semen can be obtained by placing one electrode in the rectum and the other on the skin overlying the fourth lumbar vertebra. A series of ten to twenty stimulations at thirty volts is then applied, the current being on five seconds and off five seconds. In dogs, semen is easily obtained by manual masturbation. The animal husbandry division of the United States Department of Agriculture is extensively involved in the research of animal breeding through artificial insemination.⁷ In 1960, two-thirds of the calves born in this country to dairy stock were sired artificially.

Artificial insemination has many advantages for the animal breeder: (1) It makes better use of young sires who are incapable of frequent services. (2) It increases the number of pregnancies that can be fathered by valuable, proved sires, since the semen can be diluted with a special buffered egg yolk-citrate solution, and ten cows, for example, can be serviced from a single semen specimen. Apparently to maintain

⁶ Iwanoff, *De la Fecondation Artificielle chez les Mammiferes*, 12 ARCH. SCI. BIOL. 377 (1907).

⁷ LAMBERT & MCKENZIE, ARTIFICIAL INSEMINATION IN LIVESTOCK BREEDING 567 (1952).

the price structure of the services of great stallions, horse breeders do not permit artificial insemination of racing mares. (3) It increases the percentage of conceptions in some horses by making possible insemination every other day during estrus and in cows which habitually ovulate too late in estrus to accept the bull. (4) It overcomes coital difficulties caused by differences in size or weight between a breeding pair. (5) It prevents the spread of venereal disease from an infected female to the unaffected male, such as dourine in horses and trichomonas in cattle. (6) It permits the crossing of different species when there is difficulty in obtaining normal matings.

INDICATIONS FOR HUMAN ARTIFICIAL INSEMINATION

The reasons for artificial insemination from the husband are twofold. A.I.H. is indicated when deposition of semen within the vagina by coitus is impossible. Difficulty in the wife may be anatomical or psychological. In the former instance intercourse may be impossible because of obesity, vaginal tumors, or partial vaginal obliteration through scarring. In the latter situation penetration by the penis is rendered impossible for psychological reasons, the woman closing the vaginal entrance by involuntary contractions of the strong muscles which rim the opening. Male conditions necessitating A.I.H. are: impotence, malformations of the penis, or a neurological lesion causing retrograde ejaculation, the semen collecting in the bladder rather than being expelled externally. A second indication for A.I.H. is infertility, either due to defective semen, including such abnormalities as poor motility of the sperm cells, paucity of their number or small volume of the ejaculate, or some pathological condition in the wife interfering with the upward passage of the spermatozoa such as a very small cervical opening or an abnormal position of the uterus.

Artificial insemination from the husband when coital insemination is impossible but when he has a normal fertile semen yields the same likelihood of impregnation as coitus would between the same two individuals. However, using the husband's semen for artificial insemination to correct some anti-fertility factor shows disappointing success, especially when the quality of the semen is at fault. Giving limping sperm cells a several inch boost on their upward trek rarely improves their chances for fatherhood.

There are two broad indications for substituting the semen of an

unrelated donor for that of the husband. The most common is conclusive evidence of the permanent sterility of the husband. Under such conditions, the couple have the choice of remaining childless, attempting to adopt a child, having the wife achieve pregnancy through extramarital coitus, or availing themselves of donor artificial insemination. The second indication for donor insemination, a relatively infrequent one, is eugenic. Occasionally the husband carries a genetic factor in his germ plasm which is catastrophic as far as the offspring of the marriage is concerned. The commonest situation is a homozygous Rh positive condition in the husband of a highly sensitized Rh negative wife who has born a succession of stillborn infants. Donor insemination from an Rh negative man solves the problem. Other less common situations are the elimination of a recessive character in a marriage which has resulted in certain types of abnormal offspring. I delivered two normal children for a women whose first child died of amaurotic idiocy (Tay-Sachs) by inseminating her with semen from a non-Jewish donor, since the abnormality is virtually totally confined to couples where both husband and wife are of Jewish ancestry. Then, too, a dominant cacogenic trait in the male line, like Huntington's chorea, may be avoided. Other examples calling for eugenic donor insemination could be listed.

THE PHYSICIAN'S RESPONSIBILITY

The physician who carries out donor inseminations assumes a great responsibility, for he alone can and must determine the eugenic fitness and the acceptability of the substitute biologic father in each case, as well as determining whether or not donor insemination is a wise mode of therapy for the couple involved.

Through years of experience with artificial donor insemination, I developed my own credo in regard to donor insemination which I published in 1943. The following is a modification of that credo:

Rule One: The donor must remain completely anonymous to the recipient and the husband, and the recipient and the husband must remain equally anonymous to the donor.

Rule Two: Before attempting artificial insemination, know the couple: their intellectual capacity and emotional stability, and if possible the likelihood of a permanent marriage. Only a small percentage of patients applying qualify for so radical a social procedure. When a doc-

tor consents to do an artificial insemination from an unrelated donor, it is really the couple's insignia of good character. Artificial insemination must always be completely individualized. It should never be an assembly line kind of medical treatment.

Rule Three: Never urge the procedure, if either husband or wife is lukewarm; drop it completely.

Rule Four: In view of recent statutes and the recent decision⁸ of the Supreme Court of California the husband and wife should sign a consent form before the physician carries out donor insemination. This is unnecessary if the husband is the semen donor.

Rule Five: Paternity should be accorded to the legal husband, not the donor, both on the hospital record and the birth certificate. If one does not do this, he largely abrogates the chief advantage of A.I.D. Only three people in the world, the doctor, the husband and the patient, should know that the child is not the child of the husband; if more than these three know it, A.I.D. would have scant advantage over adoption.

Rule Six: The physician should keep his fees low. Donor insemination must be kept out of the mercenary column, otherwise the procedure may well become a racket and a doctor find himself doing A.I.D. in situations which do not merit it. The doctor's main reward should be the knowledge that he has helped some worthy sterile couple achieve a greatly desired baby.

In selecting a donor, I make it a rule whenever possible to accept only medical students or young physicians as donors. I discuss the role of donor with them and go over the medical and eugenic family history to qualify or disqualify them. I also prefer married donors with children since it gives assurance of the man's fertility and the quality of progeny he is likely to beget.

It is self-evident that the donor must be free of venereal disease. The recipient's Rh and blood group is determined so that a donor will not be used who may possibly create isoimmunization, blood incompatibility between mother and infant. An Rh negative recipient should not have an Rh positive donor and a Group "O" recipient should not have an "A" or "B" donor when possible.

An attempt is made to match in a broad but inexact fashion the physical characteristics of the biologic and legal fathers. We approximate height, body build, complexion, color of eyes and hair. We do not attempt to duplicate blood groups or religious backgrounds.

⁸ People v. Sorensen, 437 P.2d 495, 66 Cal. Rptr. 7 (1968).

As early as 1947, New York imposed specific regulations regarding donor insemination.⁹ The statute governs rules for ascertaining the health of the donor, his freedom from venereal disease and bacillus abortus Bang infection, the necessity of Rh negative donors for negative recipients and the keeping of records of such inseminations for inspection by the health commissioner or his designate when requested.

Finally, the donor must possess a semen of high quality: a minimum sperm density of 100,000,000 per cc., 80 per cent motility, less than 20 per cent abnormal forms and a volume from 2.5 to 5.0 cc.

COLLECTION AND TECHNIQUE OF HUMAN ARTIFICIAL INSEMINATION

The semen donor is instructed to forego coitus for at least twenty-four hours before supplying a specimen for A.I. He is advised to wash his hands and penis with soap and water, and to secure the semen through masturbation and direct ejaculation into a clean, dry, wide-necked bottle or jar. The receptacle is stoppered, kept at room temperature, and delivered within one hour to a place appointed by the gynecologist. A donor is not used again for at least forty-eight hours.

It is possible to establish a semen bank like a blood bank because semen from man and other animals can be frozen and stored and when thawed still retain its fertilizing ability. In 1866, Montgessa observed the survival of human spermatozoa after exposure to a temperature of -15°C . The first successful human pregnancies using stored frozen semen were reported in 1953.¹⁰ Several more recent reports have appeared.¹¹ The social possibilities pursuant to this accomplishment are many. Among them is the possibility of a donor siring progeny long after his death, if his semen had been collected and frozen before his demise. And should an atomic holocaust seem imminent, it would be possible to deposit frozen semen deep in the earth to protect it from harmful radiation. Then a new generation could be created in which only half of the gametes, those of the female, will have been exposed to mutant producing radiation.

⁹ New York Sanitary Code § 112 (McKinney 1947).

¹⁰ Bunge and Sherman, *Fertilizing Capacity of Frozen Human Spermatozoa*, 172 NATURE 767 (1953).

¹¹ Behrman and Sawada, *Heterologous and Homologous Inseminations with Human Semen Frozen and Stored in a Liquid Nitrogen Refrigerator*, 17 FERTIL. STERIL. 457 (1966).

After collection, the semen specimen is allowed to liquefy at room temperature. It is then diluted with an equal volume of a protective fluid medium consisting of egg yolk, glycerol, glucose and sodium citrate in fixed amounts. An antibiotic is added. The material is stored in 1.2 cc. glass ampules and cooled over 45 minutes to -196°C and stored at the same temperature. Thawing is accomplished in 20 minutes by immersion of the ampule in a water bath at 37°C . Two of the 1.2 cc. ampules are used for a single insemination. Behrman and Sawada in their 1966 report conclude that, "the frequency of pregnancies which may be expected after inseminations with frozen semen from donors remains approximately two-thirds of that expected when fresh semen is utilized."¹² Fourteen of their 28 patients conceived with donor semen frozen and stored for periods up to 17 weeks.

The freezing technique has had interesting application to A.I.H. In most men, 75 per cent of the total spermatozoa in a specimen are ejaculated immediately in the first portion of the ejaculate. Therefore if a man with a poor sperm count masturbates and splits his ejaculate saving the first portion and discarding the remainder, he will obtain a small, relatively concentrated specimen. This is then frozen. Three or four of his frozen split ejaculates are thawed and pooled and used as a single specimen for A.I.H. Behrman and Sawada succeeded in producing pregnancy once in seven cases using the frozen split ejaculate technique. Amelar and Hotchkiss in 39 carefully chosen cases from 86 men of questionable fertility used single fresh split ejaculates for A.I.H. and obtained 22 pregnancies (56%).¹³

Each semen specimen for donor insemination is bought on a wholly impersonal basis like blood for transfusion. The fee charged varies from community to community, but it usually ranges from fifteen to twenty-five dollars per specimen.

Inseminations are relatively simple office procedures and contrary to yesteryear are never done under anesthesia. There are four methods: (1) intrauterine, (2) paracervical, (3) vaginal, and (4) the use of a cervical cup.

In most instances the semen is not deposited within the body of the uterus. In theory it is unphysiologic, since in normal coitus semen does not enter the uterine cavity, the sperm cells ordinarily swimming out of the seminal plasma into the cervical mucus. All who have had ex-

¹² *Id.* at 463.

¹³ Amelar and Hotchkiss, *The Split Ejaculate*, 16 FERTIL. STERIL. 46 (1965).

perience with intrauterine insemination have found that when the amount exceeds 0.1 cc. the patient develops violent uterine cramps as the uterus attempts to expel the irritating material.

The paracervical technique consists of aspirating at room temperature the total semen specimen from the collection container into a dry, sterile glass syringe to which a metal intravenous needle or cannula is attached. I use a metal cutdown intravenous cannula which has a rounded end. The patient is placed on her back with legs up and spread apart. A sterile, unlubricated speculum is inserted into the vagina and the cervix exposed. The mouth of the cannula is placed loosely within the mouth of the cervix without swabbing off any secretions and by intermittent pressure on the syringe plunger simulating the ejaculatory, expulsive mechanism of normal male orgasm, its contents spurted at the cervix in three or four thrusts. The speculum is then partially withdrawn and the blades collapsed. The patient lies flat on her back with legs together for twenty minutes. The speculum is then withdrawn and a small piece of cotton placed in the vaginal orifice to prevent the semen from soiling the underclothes. The patient is then advised to go about her daily activities. There is no evidence that coitus immediately before or after donor insemination improves or retards the likelihood for success.

In donor inseminations for male sterility some physicians add a few drops of a husband's infertile semen to the donor specimen before injecting it. They feel this offers some psychological advantage to the husband and wife by offering them the infinitesimal hope that it was the husband's occasional spermatozoon which accomplished the act of fertilization. These physicians also feel that adding the husband's semen might increase the legality of the procedure in case of court action. I am averse to such subterfuge. I feel that if a couple is not sufficiently mature to accept the realities of donor insemination, the procedure is unwise for them.

Intravaginal insemination is quite similar to paracervical. The cannula is inserted directly into the upper vagina without exposure of the cervix and the semen deposited in the region of the cervix.

The cervical cup technique consists of filling a thimble-like cup with the semen and fitting the semen-filled cup over the cervix like a thimble over a finger and allowing the cup to remain in position for 24 hours, after which it is removed.

Three of the methods: paracervical, vaginal, and the cervical cup yield similar results, though perhaps the paracervical is slightly superior to the other two.

The technique for timing inseminations to yield the highest success rate is not standardized. Several methods have been suggested: calculating the expected day of ovulation on the basis of menstrual intervals since ovulation usually occurs about fourteen days before a next menses; a daily temperature reading taken under similar conditions (called B.B.T., basal body temperature) taking into account the fact that the temperature may drop a few tenths of a degree Fahrenheit just before ovulation and always promptly rises a half-degree after it; a microscopic study of stained vaginal cells since the cellular pattern varies with changes in the ovary and determination of the amount of two hormones, estrogen and progesterone, in urine or blood.

I use the median length of the six last menstrual periods and subtract 14 from the number assuming that this will give the approximate day in the cycle that the next ovulation is likely to occur. Since I ordinarily use three inseminations 48 hours apart each treatment month, the first month I inseminate 72 and 24 hours before the assumed ovulation day and also 24 hours after. For example, if the patient has a 28 day menstrual interval, I use days 11, 13, and 15 and for patients with a 30 day cycle, days 13, 15 and 17. If pregnancy does not occur the first month, I subtract one day from my insemination schedule, and the third month, I add one day to the first month's dates.

Despite the fact that most clinicians do three inseminations per month, again there is no fixed policy, some using only one or two. However, the number of donor inseminations per month is correlated with the degree of success in causing conception. Potter in a careful analysis of the data from seven published series concludes that "the number of inseminations per menstrual cycle appears to be a more important factor than the site or method of semen deposit."¹⁴

The rate of success in 690 cases of donor insemination published by seven different clinicians varied from 55 per cent to 78 per cent, the average being 69 per cent.¹⁵ Many factors affect the chances for con-

¹⁴ Potter, *Artificial Insemination by Donors*, 9 FERTIL. STERIL. 37 (1958).

¹⁵ *Id.*

ception, the most obvious being the number of months or years the doctor and patient persevere. Then, too, the inborn fertility of humans varies as does the quality of donors and the technique employed. Of the 476 conceptions which occurred, from 31 per cent to 46 per cent took place immediately during the first month of donor therapy; the average likelihood of success during the first month for those who eventually became pregnant was 37 per cent. It has been a unanimous observation by authorities on donor insemination that three-quarters of the women who become pregnant through donor insemination achieve pregnancy during the first three months of therapy. In my own experience 80 per cent of my successful results occurred during the first two months of donor insemination and 90 per cent within the first four months.¹⁶

It has been the general impression that fetal results from donor inseminated pregnancies do not differ from pregnancies achieved through coitus. One encounters the usual complications of pregnancy and labor, but in neither increased nor decreased frequency.

There is an interesting recent Japanese study on the physical and mental development of children conceived through donor insemination using the semen of medical students. Keio University Medical School in Tokyo began doing donor inseminations at its Planned Parenthood consultation clinic in 1950.¹⁷ Since then "several hundred patients" have delivered A.I.D. pregnancies and many have returned for second and third babies. In conjunction with the Department of Psychology and Pediatrics forty of these children more than two and one-half years of age and fourteen less than two and one-half years old were studied psychologically and physically. The intelligence quotients of the forty older children ranged between 84 and 148 with a mean of 111.7. The higher than average I.Q. was thought due to the superior home environment of the children since a disproportionately large number were born into homes of "professional families." The physical development quotients of the fourteen below the age of two and one-half years was found to range between 100 and 110. None was malformed and none showed physical retardation. Frozen semen was used in the conception of nine of the fourteen younger children. The specimens had been frozen from one to 393 days.

¹⁶ Guttmacher, *Artificial Insemination Techniques*, TRANS. AMER. SOC. STUDY STERIL. 15 (1947).

¹⁷ *Supra* note 5.

ATTITUDES TOWARD DONOR INSEMINATION

MEDICAL

The only poll of medical opinion concerning the medical ethics of donor insemination was conducted by The American Society for the Study of Sterility, among its membership, in 1950.¹⁸ Eighty-nine clinician members were queried by questionnaire and seventy-one replied. The first question asked was, "Do you favor artificial insemination from a foreign donor—do you oppose it?" Of these seventy-one specialists in male or female sterility, fifty-two approved, twelve opposed, and seven made an equivocal response. Two of the twelve who condemned donor insemination based their disapproval on purely legal grounds, two solely on religious and four on combined legal and religious reasons, one on aesthetic repugnance and three did not state why they cast a negative vote.

It is to be noted that this 73 per cent unqualified approval was by specialists in the field of reproduction; it does not include the attitudes of the general practitioner or specialists in other fields. To my knowledge, no such study has been done.

PATIENT

As for the attitude of the general public, again no adequate statistics have been gathered. In 1957 Dr. Arthur Levisohn of Chicago polled a random sample of 200 women by questionnaire. Eighty-two replied, most of them married, living with their husbands and with children of their own. Seventy-two (88%) approved of the procedure, 53 (65%) preferred it to adoption and 48 (60%) stated they would resort to it if their husbands were sterile. It must be noted that 118 of 200 women did not reply to Dr. Levisohn's questionnaire, and one cannot know or assume that their opinions were similar.

In addition to opinion polls, an unbiased psychological study should be done on a meaningful sample of couples before and after successful donor insemination. But the difficulty inherent in the latter study is that the artificial insemination procedure is clothed in such unbroken anonymity in the United States that it would be virtually impossible to assemble a representative group of A.I.D. parents or children for any study.

¹⁸ Guttmacher, Haman & MacLeod, *The Use of Donors for Artificial Insemination*, 1 FERTIL. STERIL. 264 (1950).

Most clinicians who practice A.I.D. have the rewarding experience of couples returning for a second or third child. My maximum number is four children. The survey of the American Society for the Study of Sterility showed that 15 per cent of patients seeking donor insemination had previously conceived by means of it.

RELIGIOUS ATTITUDES

The spectrum of religious opinion regarding artificial insemination is broad; the point where the beam comes to rest depends upon the specific religion.

Catholic Attitude

Pope Leo XIII, in 1897, decreed the practice to be illicit.¹⁹ Pope Pius XII made three pronouncements about it, the first in 1949 when he spoke before the Fourth International Congress of Catholic Doctors. After referring to the responsibilities of parenthood, he stated: "But between the lawful husband and the child who is the fruit of an active element derived from a third party [even should the husband consent] there is no link of origin, no moral and juridical bond of conjugal procreation."²⁰ In 1951, addressing a gathering of Catholic midwives, he referred to his earlier pronouncement by saying, "We formally excluded artificial insemination from marriage." And then he more clearly included A.I.H. along with A.I.D. in his disapproval: "To reduce the cohabitation of married persons and the conjugal act to a mere organic function for the transmission of the germ of life would be to convert the domestic hearth, sanctuary of the family, into nothing more than a biological laboratory."²¹ Though his wording might possibly leave room for a fine distinction between censure and outright proscription, his statement in 1956 before the Second World Congress on Fertility and Sterility seems unequivocal: "Artificial insemination is not within the rights acquired by a couple by virtue of the marriage contract, nor is the right to its use derived from the right to offspring as a primary objective of matrimony."²²

¹⁹ Leo XIII, *H.O. Decree: Artificial Insemination Is Illicit*, 29 ACTA SANCTAE SEDIS 704 (March 26, 1897).

²⁰ Pius XII, *Address to Fourth Convention of Catholic Doctors in Rome*, 41 ACTA APOSTOLICAE SEDIS 557 (September, 1949).

²¹ Pius XII, *Address to Catholic Midwives*, 43 ACTA APOSTOLICAE SEDIS 835 (October, 1951).

²² Pius XII, *Address to Delegates to the Second World Congress on Fertility and*

The prevailing view among Catholic spokesmen is that Pius XII intended his prohibition of artificial insemination to be inclusive and absolute. However, some doubts about this have been expressed because of another statement he made in the same 1956 World Congress: "This does not mean that one must necessarily condemn the use of certain artificial means, with the view of either facilitating the conjugal act or attaining the objective of the normal act."²³ This would seem to offer some margin for approval of artificial insemination with the semen of the spouse. Pope John XXIII did not express himself publicly on this subject, nor has Pope Paul VI done so to date.

Protestant

Among Protestants in the United States, there are few denominational pronouncements about either form of artificial insemination. In England, a special commission of the Anglican Church appointed by the Archbishop of Canterbury issued an extensive report on the subject in 1948.²⁴ It summarized the arguments for and against both A.I.D. and A.I.H., concluding with a round denunciation of the former but not reaching any clear-cut conclusion about the latter. The Protestant Episcopal Church in the United States, however, as part of the International Anglican Communion, has made no official move to accept or reject the position of the Church of England. Perhaps the absence of a statement is tantamount to acceptance. In practice, no American Episcopal strictures are evident against either A.I.H. or A.I.D. The same non-committal position appears to be true of the Lutherans and other major Protestant bodies.

The only recent declaration of national magnitude by a United States Protestant body about artificial insemination is that of the United Presbyterian Church in its 1962 comprehensive report on "Responsible Marriage and Parenthood." Concerning A.I.H., the report states simply, "If both partners agree, this is an acceptable aid to responsible parenthood." As for A.I.D., the report first notes that the American Society for the Study of Sterility finds it "a completely ethical, moral, and desirable form of medical therapy." Then dealing with the ques-

Sterility: On Marriage, Parenthood, Artificial Insemination and Sterility Tests, 48 ACTA APOSTOLICAE SEDIS 467 (May, 1956).

²³ *Id.*

²⁴ THE COMMISSION APPOINTED BY HIS GRACE, THE BISHOP OF CANTERBURY, ARTIFICIAL INSEMINATION (1948).

tion of whether use of donor insemination is adulterous, the report continues: "To discover in A.I.D. an act of adultery—though there is no coitus—is certainly to give the word a meaning that it does not have in the New Testament." For Presbyterian couples contemplating the use of A.I.D., the report urges "the most serious and well-informed consideration" before reaching a decision. And it suggests, but does not require, the couple's consultation with their own minister.

Jewish

Among Jews, there is a broad spectrum of expressed beliefs, ranging from flat prohibition of A.I.D. by the ultra-Orthodox minority to approval by the liberal groups. Many Orthodox spokesmen agree that A.I.H. is permissible after ten years of a childless marriage, and after other means of having children—presumably, other forms of infertility treatment—have failed. The therapeutic necessity for A.I.H. in any case must be attested to by two physicians and approved by two rabbis.

The Orthodox view on A.I.D. strikes many laymen as paradoxical. Children born as a result of donor insemination are considered legitimate, but the practice itself is forbidden. The husband whose wife bears a donor-conceived child, with or without his permission, may sue for divorce. The wife is not considered to have sinned because where there is no guilty intent (adultery), there can be no sin.

Conservative Jewish opinion on either A.I.H. or A.I.D. appears to be inconclusively formulated thus affording considerable latitude for the exercise of personal moral judgment. In recent years, there have been several opinions favorable to both donor and husband insemination expressed by leading members of the Reform rabbinate.

A.I.D. AND THE LAW

Modern court history involving A.I.D. began with the case of *Orford v. Orford* in Canada in 1921.²⁵ The wife attempted through the court to obtain alimony from her divorced husband. His defense was that she had committed adultery. She admitted having a child of which her former husband had not been the biological father, but claimed that it was the result of donor insemination. The court denied her contention, showing its disbelief that the infant had been conceived artificially. The court then went on to comment by dicta that even if

²⁵ 58 Dom. Law Reports 251 (Ont. Sup. Ct. 1921).

A.I.D. had been employed, its use without the husband's consent would have constituted moral turpitude and adultery. In England, in 1924, the House of Lords ruled that the conception of a child by a man other than the husband constituted adultery and the resulting offspring was therefore illegitimate.²⁶

The first United States case involving A.I.D. was the case of *Strnad v. Strnad*.²⁷ The issue was whether the husband of a woman who bore an A.I.D. child with the husband's consent might legally visit the child after the couple had separated. The court granted a decree of separation to the wife but upheld the husband's rights of visitation. The trial judge ruled that the husband was "entitled to the same rights as those acquired by a foster parent who has formally adopted a child, if not the same rights to which a natural parent under the circumstances would be permitted."²⁸ The judge also stated that the child was legitimate, assuming A.I.D. had been performed with the husband's consent. This favorable climate toward the legality of A.I.D. was enhanced by the 1954 Illinois case of *Ohlson v. Ohlson*.²⁹ The couple had separated and Mrs. Ohlson challenged the right of her husband to visit their three year old son, born of donor sperm. Ohlson insisted he was the father but this was never legally determined. Nonetheless, the court upheld Ohlson's rights of visitation, ruling that "when a child is born within a marriage by whatever method, there is a legal presumption that both marriage partners are its parents."³⁰

That same year, the Illinois court, in the case of *Doornbus v. Doornbus*,³¹ in granting a divorce decree involving custody of an A.I.D. child and the visitation rights of the husband, declared that donor insemination "with or without the consent of the husband is contrary to public policy and good morals and constitutes adultery on the part of the mother."³² The resulting child, he ruled, is therefore illegitimate. Only A.I.H., he concluded, is moral and "does not present any difficulty from the legal point of view."³³

²⁶ *Russel v. Russel*, [1924] A.C. 687, at 148.

²⁷ *Strnad v. Strnad*, 78 N.Y.S.2d 390, 190 Misc. 786 (Sup. Ct. 1948).

²⁸ *Id.* at 391, 190 Misc. at 787.

²⁹ No. 54 S 13875 (Super. Ct., Cook County, Sept., 1954).

³⁰ *Id.*

³¹ No. 54 S 14981 (Super. Ct., Cook County, Nov., 1954), *appeal dismissed*, 12 Ill. App. 2d 473 (1956).

³² *Id.*

³³ *Id.*

Recent cases in New York highlight other legal pitfalls in the use of A.I.D., without offering any greater guide toward their future avoidance. The 1963 case of *Gursky v. Gursky*⁸⁴ involved an action for annulment and separation by the husband and a counterclaim for separation by the wife. The wife had borne a child conceived by A.I.D. with the husband's consent. The husband contended that he was not liable for the support of the child and alleged that there were no legal children from their marriage. The trial judge ruled that because the husband had consented to the insemination procedure, there arose "an implied contract to support the child," and so the husband must provide this support.⁸⁵ However, the judge ruled the child was illegitimate. In 1964, a similar case resulted in the same decision—the child was illegitimate but the husband liable for support.⁸⁶

All the above cited cases were decided in lower courts and in no instance was their decision either affirmed or reversed by a higher court. Thus, the case of *People v. Sorensen*⁸⁷ decided on appeal by the Supreme Court of California in 1967 assumes great legal significance.

The State of California brought criminal proceedings against Follmer Sorensen charging him with failure to support a child born to his wife and conceived by donor insemination to which he had given written consent. Four years after the child's birth, the Sorensens separated and later divorced, with Mrs. Sorensen retaining custody and agreeing to support the child. Mrs. Sorensen later became ill and applied to the state for support of the child. The District Attorney's Office demanded that Mr. Sorensen provide support for the child and when he refused brought legal action. A municipal court held him liable for support and the Appellate Court reversed.

The Supreme Court of California, upholding the trial court's ruling, held that "a reasonable man, who because of his inability to procreate, actively participates and consents to his wife's artificial insemination . . . knows that such behavior carries with it legal responsibilities of fatherhood."⁸⁸ In the course of its opinion the court further noted the absurdities in considering artificial insemination an adulterous act and supported the legitimate status of the child.

⁸⁴ 242 N.Y.S.2d 406, 39 Misc. 2d 1083 (Sup. Ct. 1963).

⁸⁵ *Id.* at 412, 39 Misc. 2d at 1088.

⁸⁶ *Anonymous v. Anonymous*, 246 N.Y.S.2d 835, 41 Misc. 2d 886 (Sup. Ct. 1964).

⁸⁷ 66 Cal. Rptr. 7, 437 P.2d 499 (1968).

⁸⁸ 66 Cal. Rptr. 7, 11, 437 P.2d 499, 503 (1968).

The legal uncertainties which surround and plague donor insemination could be eliminated by proper legislation in the fifty states, Puerto Rico, and the District of Columbia. Prior to 1964, six states had introduced bills concerning artificial insemination, but none were enacted into legislation. The favorable legislation sought to legalize the procedure and to legitimize the offspring, giving the child full inheritance status, whereas the unfavorable legislation sought to stigmatize donor insemination as unlawful and the child as illegitimate, and to subject the parties to the act to fine and imprisonment.

Finally, in 1964, Georgia became the first state to enact favorable legislation which legitimated A.I. children "if both husband and wife consent in writing to the use and administration of artificial insemination."³⁹ A similar statute was enacted by the Oklahoma legislature in 1967.⁴⁰

The social and legal problems stemming from donor (heterologous) insemination are very different from those involved in husband (homologous) insemination, although the medical technique employed in both is identical. Both religion and the law were slow to view donor insemination in its proper perspective. The law confused donor insemination with adultery and the infant born with a bastard. Actually, the technique was introduced to avoid and make unnecessary illicit relations to achieve pregnancy in the marriage of a fertile wife to a sterile husband. I am strongly of the opinion through medical experience with two hundred children conceived through donor insemination that it portends a magnificent solution for husband sterility, but applicants must be chosen carefully and the anonymous semen donor conscientiously selected by the physician. Donor insemination is not a form of medical therapy which qualifies for assembly line medical treatment. Each case must be individualized, properly evaluated, and handled with understanding. It has been a long and tortuous journey from the legends and practices of fourteenth century Arabs to the laws and techniques of heterologous insemination which came into existence during the twentieth century. On the way, one catches glimpses of the unfolding of man's mind and the emancipation of his spirit, and now through new and specific permissive statutes in Georgia and Oklahoma, as well as the decision of the California Supreme Court, the law has begun to catch up with social and medical progress in this area.

³⁹ GEORGIA CODE ANNOT. tit. 74, § 101.1 (1964).

⁴⁰ OKLAHOMA STAT. ANNOT. tit. 10, § 551 (1967).