The Ovulation or Pregnancy Approach in Cases of Rape?

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In the September–October issue of *Hospital Progress*, the lead article is titled "Emergency Contraception and Sexual Assault."[1] Since the principle author is the senior director of ethics for the Catholic Health Association and since *Hospital Progress* is the official journal of the Catholic Health Association, this statement can be construed as an official change in policy for CHA. Since the CHA is probably the principal source of consultation for administrators within the association, the change from an "ovulation approach" to a "pregnancy approach" will no doubt be conveyed to many hospital boards and emergency room personnel. Presumably also there is an implied invitation to comments and responses. Since both authors are Ph.D.'s and not M.D.'s, some nuances of physician impact may have been overlooked. This is an attempt to respond from a physician-ethicist perspective.

In comparing the pregnancy approach to the aftercare of rape victims with the ovulation approach, the authors are actually creating a false dichotomy. The real issue is whether or not potentially abortifacient medications should or should not be given to every woman who presents herself to an emergency room with a history of

[1]Ronald P. Hamel, Ph.D., and Michael R. Panicola, Ph.D., "Emergency Contraception and Sexual Assault," *Health Progress* 83.5 (September–October 2002): 12.

sexual assault. There has never been an issue regarding the obvious need for pregnancy testing in such cases. If a woman has been raped while pregnant, the need for postrape hormone therapy is moot, because super fecundation is impossible and the teratogenic effects of the administration of oral contraceptives during pregnancy are well established and included as a specific warning on the package insert of such pills.[2]

The pregnancy approach is really a euphemism for a policy of providing the Yuzpe regime[3] to every nonpregnant woman who has been raped regardless of the timing of the assault with reference to her menstrual cycle. The most obvious salutary effect of such a policy is to put an *end* to decades of agonizing confrontations and conflicts in public relations and in state legislative committees and law enforcement bodies. These have been accepted in the past as part of the cost of doing business as a pro-life Catholic hospital whose religious principles separate it from secular institutions that have no moral objection to any abortion, early or late.

There are no new scientific discoveries or endocrinological technologies that justify the abandonment of Catholic hospitals' previous positions dating back to the controversies surrounding the use of diethylstilbestrol after rape.[4] In fact the commercialization of "morning after" pills and our improved understanding of abortifacient "contraception" actually provide increased scientific underpinning for the witness given by Catholic hospitals in refusing to provide abortifacient in these poignant situations. Directive 36 of the *Ethical and Religious Directives for Catholic Health Care Services* reads as follows:

A female who has been raped should be able to defend herself against a potential conception from the sexual assault. If, after appropriate testing, there is no evidence that conception has occurred already, she may be treated with medications that would prevent ovulation, sperm capacitation, or fertilization.[5]

If an ovum and a capacitated sperm unite, fertilization occurs. There is no direct technology to prevent their uniting, and therefore, the available ways to "prevent" fertilization are to suppress ovulation, to prevent sperm capacitation, or to prevent sperm migration. Since capacitated sperm reach the oviduct within fifteen minutes after intercourse, the logistics of the rape situation would dictate that the only way to prevent fertilization is to prevent ovulation. If the sperm has penetrated the ovum, the Yuzpe regime will not "prevent fertilization" in the sense that it would interfere with the formation of the zygote. Obviously it can and does prevent im-

[2]*Thomson Physicians' Desk Reference* (Montvale, NJ: International Thomson Publishing 2003), 3537.

[3]J. Trussel, G. Rodríquez, and C. Ellertson, "Updated Estimates on the Effectiveness of the Yuzpe Regime of Emergency Contraception," *Contraception* 59.3 (March 1999): 147–151.

[4]Eugene Diamond, M.D., "Estrogen Treatment for Victims of Rape," *New England Journal of Medicine* 312.15 (April 11, 1985): 988.

[5]United States Conference of Catholic Bishops, *Ethical and Religious Directives for Catholic Health Care Services*, 4th ed. (Washington, D.C.: United States Conference of Catholic Bishops, 2001).

plantation through its effect on the receptivity of the endometrium to the nesting of the blastocyst.[6] In a practical scientific sense, therefore, directive 36 only allows "medications" which prevent ovulation, since medications that prevent implantation are abortifacients.

The process of fertilization involves several steps: 1) the sperm head gets to the surface of the ovum and emits an enzyme that opens a path for the genetic material of the sperm (pronucleus) to enter the ovum; 2) the spermatic pronucleus migrates to the ovum's pronucleus (twelve hours); 3) pronuclei unit unite to form a zygote in the process of syngamy (two hours); and 4) the nucleus reproduces itself and divides into two daughter cells (eighteen hours). Ronald Hamel and Michael Panicola suggest that there is no conceptus until this process is complete. The process *begins* however with the entry of the sperm into the ovum. It is arbitrary to suggest that life is not present until the "process" is complete. Life begins with the joining of the ovum and the sperm, and the subsequent stages in the formation and division of the zygote add nothing to the original content. They are no more significant than subsequent embryological stages leading to formation of the blastula or the blastocyst.

The American College of Obstetrics and Gynecology defines "life" as beginning with the implantation of the blastocyst. This is their strategy for justifying abortifacient contraception. The use of the *completion* of the process of fertilization as the beginning of life is no less arbitrary. Whether the "process" is completed or not is really irrelevant, however, since the Yuzpe regime does not act by interrupting this process. The process goes forward, and the Ovral acts later by interference with the implantation of the blastocyst. It is misleading to identify the "window of opportunity" to administer emergency contraception to include the twenty-four-to-thirty-two hours required for the formation of the conceptus since the abortifacient action will take place *later* at the time of implantation and since the giving of Ovral before the completion of the process of fertilization will not prevent the formation of the blastocyst. To declare a twenty-four-hour "free fire zone" for the administration of emergency contraception to any rape victim is inconsistent with an understanding of the beginning of a life and the biological action of the drugs.

The authors' statement that any victim arriving within twenty-four hours of the rape would somehow be immune from the abortifacient action of Ovral in preventing the implantation of the blastocyst is presumptuous and biologically uninformed.[7]

The authors also state that the ovulation approach gives too much weight to ovulation in setting the moral limits of treatment. Putting aside that no pregnancy has ever occurred without ovulation, the authors state that ovulation only provides evi-

[6]J. Wilks, "The Science of the Pill," *Lay Witness* 3 (January–February 2001): 35.

[7]Ibid.; J. Morris and G. Van Vagenen, "Interception: The Use of Postovulatory Estrogen to Prevent Implantation," *Journal of Obstetrics and Gynecology* 115 (1973): 101; W.Y. Ling et al., "Mode of Action of DL-Norgestrol and Ethinyl Estradiol Combination in Postcortal Contraception," *Fertility and Sterility*, 32.3 (1979): 297–302.

dence that conception "may occur." The corollary of this statement is that absence of ovulation means that conception "will not occur." It is disingenuous to trivialize ovulation as being a necessary precursor to pregnancy. It is certainly to be conceded that pregnancy following a single act of forcible rape is uncommon if not rare.[8] This would seem to be a better argument for not giving Ovral than for giving it. In fact in a study done prospectively on rape victims, there were no pregnancies among rape victims given emergency contraception and no pregnancies among one hundred women not given emergency contraception.[9]

The description of the state of the art regarding the action of emergency contraception is much too dismissive of the data that have been accumulating in peer-reviewed journals regarding the postfertilization effects of oral contraceptives. Their own bibliography cites the work, for example, of Walter Larimore and Joseph Stanford, who reviewed thirty-five years of publications on the subject.[10] Postfertilization effects supported by voluminous evidence include: 1) thinning of the endometrium to a thickness incapable of supporting a pregnancy; these data are supported by extensive evidence from in vitro fertilization; 2) depletion of integrins (which are cellular adhesive molecules supporting implantation) to a level incapable of supporting the invasion and adhesion of the blastocyst; and 3) a change in the ratio between intrauterine and extrauterine pregnancy rates indicating that uterine pregnancies are being lost. Without overstating the case, the evidence for the postfertilization effects are so formidable that the question is no longer if but rather *how often* they operate. Confirmation will await prospective studies that will be very difficult to carry out in vivo without violating ethical standards.

Protestant groups including the Physicians' Resource Council of Focus on the Family (an Evangelical organization) and the Christian Medical Society have issued policy statements acknowledging the impressiveness of the postfertilization effect evidence.[11] Nevertheless Hamel and Panicola dismiss the evidence as "not having surfaced" and quote only one source that states incredibly "no scientific evidence supports an abortifacient effect."[12] Such a categorical opinion obviously lacks objectivity. Whatever bias enters into the weighing of the evidence, there is at least serious doubt as to whether emergency contraception can be given with impunity and without regard for abortifacience. If, as the authors state, the moral object can be judged in light of the circumstance that emergency contraception "may or can"

[8]S. Makhorn, *Pregnancy and Sexual Assault* (Washington D.C.: University Publications, 1979).

[9]R.B. Everett and R.F. Jimerson, "The Rape Victim: A Review of 117 Consecutive Cases," *Obstetrics and Gynecology* 50.1 (July 1977): 88–90.

[10]Walter L. Larimore, M.D., and Joseph B. Stanford, M.D., "Post-Fertilization Effects of Oral Contraceptives and their Relationship to Informed Consent," *Archives of Family Medicine* 9.2 (February 2000): 126–133.

[11]Focus on the Family (in conjunction with its Physician Resource Council), "Position Statement: Birth Control Pills and Other Hormonal Contraception," April 8, 1999; Christian Medical & Dental Associations, *Today's Christian Doctor* (Spring 1999).

[12]Hamel and Panicola, "Emergency Contraception."

have an abortifacient effect, then the action of those who administer the drugs must be judged accordingly.

My Carmelite high school religion teachers laid down a principle (later reiterated by even my Jesuit medical-school ethics professors) that one acts only on a certain conscience and never on a doubtful conscience.

The authors' case for the moral justification of the pregnancy approach is as follows:

1) Prior pregnancy is ruled out. (This is standard procedure even in Planned Parenthood Clinics.) A disclaimer that the teratogenic effects on the developing embryo or fetus have "never been proven convincingly" qualifies even this requirement.

2) The risk of pregnancy is small.

3) Emergency contraception does not have postfertilization effects (not even the manufacturer claims this).

4) The intent is to prevent conception and not to prevent implantation (untenable if number 3 above is false).

This case in its totality, in my opinion, is flimsy and unconvincing. It amounts to saying that the hunter may fire at the bush, if he is pretty sure that there is nothing behind the bush.

Writing in support of the pregnancy approach one commentator states, "we clinicians need to do the right thing and that is to follow the Centers for Disease Control and Prevention and the American College of Obstetrics and Gynecology guidelines."[13] One can get into some very serious moral trouble by following the standards of either one of those organizations. In fact virtually every professional organization (American Medical Association, American College of Physicians, American Academy of Pediatrics, etc.) supports abortion on demand as does practically every state and federal public health agency.

Another commentator appeals to a "real world" ethic and points out that despite the fact that automobiles kill people and cause pollution, "we still drive."[14] It is also true that we spend billions of dollars on traffic signals, billions of dollars on traffic law enforcement, and billions of dollars on special safety equipment such as airbags, antilock brakes, catalytic converters, padded interiors, safety glass, restraints, collapsible steering columns, etc., etc. We really do not just "drive anyway," we spend hundreds of billions of dollars to protect that 0.0025 percent of our population who will die in an auto accident each year. Compared to this, the "expense" of the ovulation method consists in hiring staff for the emergency room (who are required by law to be there anyway), doing a simple urine dipstick test not requiring extensive

[13]Margaret Barron, M.D., "A Physician's Point of View," *Health Progress* 83.5 (September–October 2002): 14.

[14]Daniel P. Sulmasy, O.F.M., M.D., Ph.D., "A Reasonable, Realistic, and Ethical Protocol," *Health Progress* 83.5 (September–October 2002): 15.

training for interpretation (about five dollars) and sending out a progesterone test to be done by a reference laboratory on an emergency basis.

Ovulation method approaches such as the Peoria Protocol (see appendix below) are real world ethical methodologies. They are good faith attempts to protect human life and to give Catholic witness to our commitment to the sanctity of even microscopic human life. They do not insist on moral certitude since there is recent evidence to show that there are uncertainties in the perfection of the method in protecting against every possible early pregnancy.[15]

As the father of the CEO of an eight-hundred-bed Catholic hospital, I am well aware of the tremendous pressures being applied to the preservation of Catholic sponsorship of health care. There is a well-orchestrated and well-financed form of warfare being waged in the courts, the legislative bodies, and the professional establishment to undermine the system, particularly in the area of "reproductive rights." Mergers and acquisitions only exacerbate the opportunities for conflict. I am far more impressed by the courage and devotion of hospital administrations that defend Christ's truths on a daily basis than I am by the compromise and cave-in of most of my fellow medical practitioners.

A grand strategy that will sustain itself through economic stresses would be difficult to devise. Nevertheless I am convinced that the opponents of Catholic health care are encouraged, not appeased, by any suggestion of compromise of principle.

[15]Chris Kahlenborn, Joseph B. Stanford, and Walter L. Larimore, "Postfertilization Effects of Hormonal Emergency Contraception," *Annals of Pharmacotherapy* 36.3 (March 2002): 465.

Appendix: Rape Protocol

Sexual Assault: Contraceptive Treatment Component

This protocol supplements the existing general protocol for treatment of victims of sexual assault. As additional clinical data is developed, this protocol will be reviewed.

Part II: Clinical Application

I. If a woman is determined to be in the Preovulatory phase of her cycle, then Ovral will be immediately available for the most effective contraceptive intervention in the dosage of two pills at the present time, and two in twelve hours.

1) History: Compatible with Preovulatory phase

2) Physical Examination: Compatible with Preovulatory phase

3) LH Urine: Negative

Progesterone Level: Less than 1.5 ng/mL

II. If a woman is determined to be in (1) her Midcycle LH Surge phase or (2) Early Postovulatory phase, Ovral is not to be given by the Emergency Medicine Department Physician:

1) LH Urine: Positive

Progesterone Level: Unnecessary to perform

2) LH Urine: Negative

Progesterone Level: Greater than or equal to 1.5 or less than or equal to 59 ng./mL

Menstrual History: Compatible with midcycle and early postovulatory phase (menses expected in greater than seven days)

III. If the woman is determined to be past the Early Postovulatory phase (LH urine: negative; progesterone: greater than or equal to 6 ng/mL), because the timing of the sexual assault could not have coincided with the presence of an ovum, it is not unethical to prescribe Ovral.

IV. If the woman is determined to be in the Late Postovulatory phase, because the timing of the sexual assault could not have coincided with the presence of an ovum; it is not unethical to prescribe Ovral for the woman who requests it:

1) Progesterone Level: Less than 6 ng/mL

2) LH Urine: Negative

3) Menstrual History: Anticipation of menses in less than seven days (usually 3–5 days)