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The Pill: Abortifacient or Contraceptive?

A Literature Review

by

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1. The Problem

There has been a gradual but major change in oral contraception. The drive to reduce metabolic assault and unwanted side-effects has resulted in a trend toward formulations which are less contraceptive and more likely to be abortifacient. This has a broad range of moral consequences.

There is not one formulation of the contraceptive-abortion pill but many varieties. In general, there are three actions involved: the effect on the cervix, on ovulation and on the lining of the uterus.

The estrogen content is significant in suppressing ovulation. The lower the estrogen dose, the greater the likelihood that ovulation will not be suppressed. In the latter case the cervical and endometrial factors are more significant. In the various formulations it is not known how often that both ovulation is not suppressed and the cervical factor fails to block the passage of sperm and so allows fertilization followed by an endometrial effect causing loss of the zygote. However it is likely that that is sometimes the result of taking oral contraception and it is more likely in the circumstances of the newer formulations with their much lower estrogen content and reduced effect on ovulation. The likely induced loss rate of zygotes, though low, is of serious moral significance because it is human life that is at risk.

The progesterone-only formulations are more likely to have this unfortunate abortifacient result than the combined estrogen-progestogen formulations.

The "contraceptive pill" (meaning either the combined estrogen and progestogen preparations or the progestogen only preparations) ought not be regarded as contraceptive only. There is a significant chance of abortifacient effect which increases as the estrogen content diminishes. The increased likelihood of the various formulations being abortifacient changes the moral

evaluation of material cooperation by health professionals in regard to contraception. The grave matter of justice and respect for nascent human life arises.

There is a need for clear teaching on contraceptive-abortifacients and the deceit involved, not only in order to address the matter of respect for human life but also the matter of the rights of women to know what they are doing to their own bodies and to the lives for whom their bodies are rendered hostile. Such a statement might also address the moral conclusions that flow from that information in regard to the practice of contraception and abortifacience and the issue of cooperation.

Also to be considered are new birth control developments other than the estrogen-progestogen pill. The new preparations are nearly all primarily abortifacient although they are usually trialled, approved and/or marketed misleadingly as "contraceptive".

2. The Distinction Between Contraception and Abortifacience

For the purposes of this analysis which is concerned ultimately with some moral questions, the terms "abortifacient" and "contraceptive" are defined in the following way:

A *contraceptive effect* occurs when the natural process of human generation originating in the marital act is prevented, by some form of deliberate intervention in the human body or in the act itself, from resulting in fertilization of an ovum by a sperm.

An *abortifacient effect* occurs when intervention takes place of a kind which would be likely, if fertilization were to have occurred, to destroy the human zygote, embryo or fetus, to prevent its implantation, or to cause an implanted embryo or fetus to miscarry. The human zygote is the cell formed by the fusion of the two gametes (*"Zygotum est cellula orta a fusione duorum gametum"*¹).

There is a distinct difference between the moral significance of a contraceptive effect and of an abortifacient effect. The fruit of human generation, from the first moment of its existence, that is to say from the moment the zygote is formed, demands the unconditional respect that is morally due to the human being in his bodily and spiritual totality. (*"Quare fructus generationis humanae, inde a primo temporis momento quo exsistere incipit, hoc est a momento quo formatio zygoti inchoatur, absolutam illam exigit observantiam, quae ex lege morali homini debetur quoad totam suam rationem corporalem atque spiritualem"*²)

There are at least twenty-four different formulations of the estrogen-progestogen oral contraceptive in approved use in Australia³. They do not all have the same pharmacological action. It is not merely a question of being stronger or weaker doses of the same hormones, but different preparations with different effects.

To clarify the matter, this section differentiates between each of the types of the pill in approved use in Australia and gives an account of the effects of each type in regard to the mechanism by which they prevent the development of pregnancy, so far as the specific pharmacological actions are known. In addition, some details of

new formulations which are currently being experimentally tried in Australia, but are not yet approved for general use, are also included. Finally, an opinion is offered in regard to moral issues arising from the blurring of the distinction between contraception and abortion that has occurred through the gradual development of contraceptives toward being more abortifacient than contraceptive.

3. Combined Pills

These are pills which have a combination of both estrogen and progestogen⁴. The estrogen in all the approved formulations available in Australia is ethinylestradiol with the daily dosage varying between 30 - 50 mcg⁵. The progestogen content however comes in several formulations: Levonorgestrel (150-250 mcg), Norethisterone (500-1000mcg) Ethynodiol diacetate (500-1000mcg) and Desogestrel (150mcg)⁶. The formulation and the dosage are both significant in relation to the action of the pills in regard to which of the three actions — the suppression of ovulation, the disruption of cervical mucus, or changes to the endometrium (causing loss of the zygote) — are likely to be factors preventing fertilization and/or the development of a pregnancy.⁷ Further, the response to these agents varies from woman to woman and between cycles. As the woman's own hormonal levels fluctuate from cycle to cycle and different women have different hormonal levels, the action of these agents on the ovaries, cervix and endometrium varies.⁸

The effect of the formulations is on the hypothalamus and/or the pituitary gland in the brain which produce the hormones which affect the reproductive cycle⁹. Some of the formulations work to suppress Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH), some suppress only FSH production, and some simply disturb the FSH and LH cycle so that instead of the LH surge happening following a period of sustained FSH, there may be several LH pulses which do not coincide with follicle maturation. Some suppress only LH. Some formulations may simply disrupt the coincidence of the receptiveness of the endometrium to implantation, cervical mucus sperm penetrability and ovulation so that while these events occur they do not happen with a timing that allows both fertilization and implantation to occur.¹⁰

Generally, if the formulation being used has a high estrogen content, then the likelihood is that ovulation will be suppressed and the matter of an abortifacient effect on the endometrium would not arise.¹¹ In the formulations with a low estrogen content, ovulation would be less likely to be suppressed and the actions of the progestogen on the cervix and the endometrium become more significant¹². Generally, the higher and the more prolonged the dose of progestogen, the greater the disruption to the cervical mucus and the lower the chance of fertilization occurring and hence the lower the chance of an abortifacient effect¹³.

The type of progestogen formulation being used is also relevant. Some have a slower more sustained absorption than others. Some are rapidly absorbed. Some have a shorter half-life than others. These differences are significant. A sustained level of progestogen throughout the day is probably necessary to maintain disruption of the cervical mucus, thus maintaining a contraceptive effect. Whether it is necessary

for it to be sustained to maintain the effect on the endometrium or whether the endometrium would be sufficiently disrupted by daily peaks of progesterone is not clear. Peaks and troughs in the progesterone levels may cause the breakthrough bleeding seen in some women using the low dose oral contraceptive pill, indicating that the endometrium is disturbed¹⁴. In that case the abortifacient effect on the endometrium, rather than the contraceptive effect achieved in the cervix, is more likely in formulations that do not provide a sustained level of the hormones throughout the day. An additional factor is that it appears that the ratio of Estradiol to Progesterone is significant in relation to the effect on the endometrium¹⁵.

In the event of low estrogen levels, ovulation occurring and unsustained progesterone levels, it is not clear from the literature which is the more likely to function adequately, the cervical mucus or the endometrium. Hence it is not possible to say definitely that there are circumstances with the combined pills in which the sperm penetrates the ovum and fertilization occurs, but the zygote is lost because of the damage to the endometrium. It may be the case that the disruption to cervical function is always relatively greater than the damage to the endometrium. However, it should be assumed that any damage to the endometrium is likely to increase the risk of zygote loss. The combined pill certainly causes atrophic changes to the endometrium which then becomes an unreceptive environment to the zygote. Second, there is a pregnancy rate in the actual clinical use of the combined pill indicating that the cervical effect is not always sufficient. For those reasons the possibility that the combined pill in some circumstances allows fertilization to occur while increasing the likelihood of implantation failure cannot be considered as improbable. That probability increases in the combined pills using lower estrogen doses.

So far this discussion has presumed strict compliance in users in both taking the pill each day and taking it at the same time of day. Of course this often does not happen. Most of the pregnancies associated with pill usage are attributed to user error rather than method error. It can only be a matter of speculation as to which of the organs is the first to function when a pill is missed or delayed, the ovaries, the cervix or the endometrium. Hence it is not known how many missed pills actually result in fertilization and subsequent failure to implant. At a guess it does seem probable that the endometrium may be slower to return to function than the cervix and hence the abortifacient effect may be more likely.¹⁶

Similarly, many drug interactions which reduce the efficacy of oral contraceptives resulting in pregnancy are known¹⁷. It is not known how often drug interaction would be sufficient to allow ovulation and sperm penetration, but would not be sufficient to prevent damage to the endometrium and hence an abortifacient effect¹⁸.

There is some indication that there may be a prolonged effect of the oral contraceptives on both the endometrium and the cervix after a woman has ceased taking the pill. There may well be a greater likelihood of miscarriage in that period also as a result of some chromosomal abnormalities.¹⁹ Professor Jerome Lejeune drew attention to the greater incidence of chromosomal abnormalities resulting in miscarriage, and thought that there was a greater incidence of Trisomy 21 (Down Syndrome) after the use of hormonal contraception.²⁰ It is worth noting that the

consumer advice from the manufacturers cautions that pregnancy should be avoided in the first three months after ceasing the combined oral contraceptive.

4. Progestogen-Only Pills (the mini-pill)

The progestogen-only pill is recommended for women who experience side effects with the combined pills and for women who are lactating in whom the estrogen component of the combined pills would interfere with lactation²¹.

The formulations used in the progestogen-only pill (mini-pill) in Australia are Levonorgestrel (30mcg) and Norethisterone (350mcg)²². The mini-pill not only does not include estrogen, it also has a significantly lower progestogen dose than the combined pill. For that reason it has far fewer side effects but a higher pregnancy rate (3 per hundred women years²³). In particular, the more dramatic pharmacological effects and probable harmful side effects associated with estrogen do not occur²⁴. The scientific data suggests that the progestogen-only pill does not prevent ovulation in more than half of the women who use it. The range would seem to vary between 67% and 81% of cases in which ovulation failed to be suppressed when the progesterone-only pill was used in women who had been normally ovulating²⁵.

The progestogen-only pill therefore depends largely on the other two factors: the disruption of the cervical mucus function²⁶ and the changes to the lining of the uterus²⁷. It is not known precisely which is more likely.

Significantly, the effect on the endometrium differs between the different progestogen preparations²⁸. What significance this has for the sustained effect of the formulations and whether the endometrial factor is likely to be more or less significant than the cervical factor has not been established²⁹.

It should be borne in mind that our interest in which factor is significant is not reflected in the published research priorities. A computer search of the literature yielded no recent study that aimed to find out whether the progestogen-only pill was abortifacient or contraceptive. The priorities in the literature are efficacy in terms of preventing the development of pregnancy and on the side-effects for women. The concentration at the moment is on pill usage in relation to cancer, cardio-vascular disease, drug interaction, metabolic disorders and some other diseases. Some progestogen-only formulations may be administered as an intra-nasal spray rather than as a pill. The pharmacological effects would be much the same.³⁰

5. Triphasic and Biphasic Pills

These are combined estrogen and progesterone formulations, but with the dosages of each varying through the month. Their purpose is to mimic more closely the normal cycle. With the ordinary combined pills, the same combined dosage is taken for 21 days of the cycle with inert tablets being taken for the rest (approx 7 days)³¹. A menstrual bleed occurs, but because the endometrial development has been so altered it is often a much lighter, less significant bleed³². The triphasic pills generally have a consistent level of estrogen at a relatively low dose, but they vary in the amount of progestogen. Some (such as Triphasil, Triquilar, Trifeme and Logynon ED) use Levonorgestrel with 50mcg in the first

six days, 75 mcg in the next five days and 125 mcg in the next 10 days. Thus the progestogen level gradually increases. Others (such as Synphasic) use Norethisterone with 500mcg for the first seven days, 1000mcg for the next nine days and 500 mcg for the next five days³³.

With the lower dose of estrogen, it is more likely that ovulation is not always suppressed or disrupted and the cervical and endometrial factors become significant. A recent review of seven of the low dose combined pills showed that on ultrasound examination and serum hormone estimations ovarian suppression occurred in only 50% of cycles.³⁴ The efficacy in terms of preventing pregnancy remained high with tablet related pregnancy, as distinct from patient error pregnancy, remaining at less than one per hundred women years.³⁵ In those circumstances the endometrial and cervical factors are essential for the prevention of the development of pregnancy.

The different levels of progestogen used at the different stages of the cycle are also significant in regard to which effect is more dominant, the contraceptive effect on the cervix or the abortifacient effect on the endometrium.³⁶ A constant level of progestogen would be needed to maintain the cervical factor. In the formulations in which the level of progestogen wanes significantly during the day, it would be much more likely that the endometrial (abortifacient) factor would be preventing pregnancy.

The biphasic pills (such as biphasil and sequilar ED) use a constant 50mcg of ethinyloestradiol but vary the levonorgestrel from 50mcg in the first eleven days and 125mcg in the next ten days³⁷. Hence, the estrogen level is high and most likely prevents ovulation. The cervical mucus and endometrial effects of the progestogen, although a back-up in case ovulation suppression fails, are thus probably not so significant in those formulations.

6. Tricyclic Pills

Athletes competing at sporting events, women marrying and wanting the wedding night free of menstruation, women undergoing academic examination and women simply not wanting the inconvenience of monthly cycles may choose to extend the twenty-one days of pill taking. Tricyclic pills extend the menstrual cycle to three months.

The combined pill mainly suppresses ovulation and also has the back-up effects on the endometrium and the cervix. The woman experiences something like menstruation only after she stops taking the pill. The choice to use a standard twenty-one days of pill-taking followed by seven days of an inert pill establishes a regular twenty-eight day cycle. The manufacturers choose to do it that way, mimicking the normal menstrual cycle. However, shorter or longer periods may be chosen by varying the period that the combined pill is taken.³⁸ Presumably the three actions of the combined pill remain the same in these long cycles but whether the actions on each of the target organs are more or less severe is seemingly not known.

7. Post-Coital Oral Contraceptive Use

In Australia, the practice of using combined the estrogen-progestogen pill in

high dosage as a morning-after pill is becoming more common. One of the high dose pills is used. Two pills are taken immediately and two more are taken twelve hours later. The result is a very high estrogen and progestogen peak followed soon after by a heavy bleed. The probable mechanism is abortifacient. It is possible that ovulation is suppressed depending on when the medication is taken in the cycle. The stage of the cycle and the time between intercourse and taking the pills would obviously be crucial in determining whether it is the contraceptive effect that works prior to the abortifacient effect and hence prevents fertilization³⁹.

General practitioners report that the demand for the morning-after pill has increased markedly in the last few years, probably as a result of condom promotion in relation to sexually transmissible diseases. It is common for teenagers to ask for the morning-after pill. It appears that, in the knowledge that the morning-after pill will resolve the problem, they may not take other precautions. Often they are accompanied to the doctor by their mothers! More women seemed to be depending on condoms in conjunction with the morning-after pill in the event of condom breakage or leakage. In actual human use, as distinct from laboratory testing, breakage rates in condoms that meet WHO laboratory test standards are between 7-13%⁴⁰. Hence the demand for so-called "post-coital contraception", that is, abortifacients, is significant.

8. Formulations Other than Estrogen-Progestogen Pills

The major trend in fertility control seems to be toward the development of abortifacients. The new methods are sought as replacements for the intra-uterine device and the contraceptive pill. Intra-uterine devices are out of favour because of their reputed association with pelvic inflammatory disease. The contraceptive pill is contra-indicated now for women who smoke and there are reservations about its use in women over thirty-five. In addition, the tedium of a daily dose and disquiet about its side-effects have led to the search for alternatives to the contraceptive pill.

Some attempts have been made to improve barrier methods but the major candidates for the future of medical control of fertility seem to be the anti-progesterones, anti-estrogens, vaccines, inhibin, synthetic GnRH (Gonadotrophin Releasing Hormones), and monthly injections or implants.

9. Antiprogestones

The so-called "abortion pill"⁴¹ RU486 (mifepristone) has been the centre of some controversy. Apart from the fact that RU486 causes abortions, pro-lifers have been concerned that the pill could be used on a regular basis; that it would be self-administered and would thus allow abortions to be achieved easily in the privacy and secrecy of the woman's home; and that the language used to describe it hides the fact that it is abortifacient. The new word "contragestive" is frequently used⁴².

RU486 is being heavily promoted by the population control and pro-abortion lobbies and it is likely to gain widespread acceptance for use after pregnancy has been confirmed, as an alternative to surgical abortion, and possibly earlier as an immediate post-coital treatment. RU486 is now being trialled in Australia both in low dose as an immediate post-coital treatment, and later when the pregnancy is

known to have been established⁴³. The trial in Australia is a part of a WHO international multi-centre trial.

Some pro-abortionists have supported the agent as a much easier way of procuring an abortion than the surgical procedures involving curettage or vacuum aspiration.⁴⁴ Some have claimed that it could be used without a pregnancy test when pregnancy is a possibility and menses are delayed. It has been argued that this would avoid the problems of guilt, and other psychological sequelae in relation to abortion: the woman would not know whether she had been pregnant.

RU486 is a progesterone antagonist. It acts to inhibit the function of progesterone at the receptor level in the endometrium and other organs that respond to progesterone. In plain language that means that RU486 makes progesterone ineffective. Progesterone is essential for maintaining the lining of the uterus during pregnancy. Within a few days of administering RU486 after pregnancy has been established, the lining of the uterus sheds, taking with it the embryo or fetus if the woman is pregnant⁴⁵.

Administered immediately after coitus before pregnancy can be confirmed it would also seem to prevent nidation but the mechanism is uncertain. In the latter case, according to the *plain language statements*⁴⁶ of the Australian trials, menstruation is usually delayed⁴⁷. If administered very early after pregnancy has been established, the woman would experience an early abortion as a very heavy period⁴⁸.

RU486, used on its own, after pregnancy has been established, procures an early abortion in approximately 85% of cases⁴⁹. However if used in conjunction with other agents the success rate may be as high as 95-100%⁵⁰. RU486 can also be used effectively in the second⁵¹ and third trimesters⁵². If the current trial using RU486 immediately after coitus is successful, then is likely to be used frequently as a back-up following barrier method failure⁵³. At first it was claimed that RU486 might be used to regularize cycles and prevent pregnancy⁵⁴, but uncertainty about the prolonged effects and dosages needed have led to the conclusion that this would not be appropriate⁵⁵. In addition the menses which follow the taking of RU486 are heavy and prolonged⁵⁶. The agent is thus not likely to be particularly appealing as a once-a-month "contraceptive".

One of the problems inhibiting the use of RU486 as a "menstrual regulator" is that its effect is to block the function of progesterone. The rise in progesterone, on which so much depends, does not occur until the latter part of the cycle. This meant that, at first, it was held that if used too early in the cycle, the effectiveness of RU486 would be reduced. It was thought not to be effective in the absence of luteal phase levels of progesterone⁵⁷. The current WHO trial which Australia is participating in will prove or disprove that hypothesis. If the WHO trial is successful, RU486 might even gain approval as a self-administered home abortion pill. However the research and the manufacturers currently hold that it should only be used under close medical supervision⁵⁸. The major reason for this is that there is usually heavy, prolonged bleeding which may endanger the woman's health⁵⁹. Follow-up treatments such as blood transfusion and curettage may be indicated in a small percentage of cases⁶⁰.

The action of RU486 in inhibiting the effect of progesterone on the lining of the uterus is not the only direct effect. Some studies have shown that RU486 directly inhibits placental hormone secretion, having a direct effect on the embryo⁶¹. Thus

RU486 not only brings about an abortion by affecting the lining of the uterus, it may also directly damage the embryo. The latter would be particularly relevant in the event that a woman chose not to have curettage after RU486 failed to procure an abortion. A complex range of legal and ethical issues would arise in that event. If a woman had been ambivalent in the first instance, one could well imagine her deciding not to go further in the event of RU486 failure. Her rights and the medical and pharmaceutical liabilities would provoke conflict in such circumstances. The damage done to the embryo, and subsequently the child born at a later stage, would be an issue which the courts and the community would have to heed.

The medical literature also contains the information that while the hormonal functions of the woman return to normal after RU486 has been used, there may be lasting effects on the tissues of the uterus and cervix. One study shows that cell dynamics which depend on a continuity of progesterone will be irreversibly disrupted⁶². The long term effects and the potential for serious adverse reactions are not yet known. The literature claims that it is safe, but only time will tell. The effects of hormonal treatments of this kind can be insidious and may only appear much later as was the case with the early high dose contraceptive pill, with some fertility drugs, and with some morning sickness therapies.

RU486 can readily cross the blood-follicle barrier of human pre-ovulatory follicles. RU486 and its metabolites have been found in the egg-follicles in the ovaries of women undergoing sterilization to whom RU486 had been administered thirty-four hours earlier⁶³. A question must therefore arise about the potential for damage to the ovaries and the egg follicles and the risk to any children subsequently conceived by a woman who has undergone RU486 therapy.

RU486 does have some uses other than inducing abortion. Research has been done on it as a therapy following fetal death. Research has also been done on RU486 as an aid to ripening the cervix thus facilitating surgical abortion⁶⁴. The agent may also be of therapeutic value in the treatment of breast cancer⁶⁵.

There is a very real danger that RU486 might be approved for prescription in Australia. Probably the conditions for its approved use would require that it be administered under close medical supervision. However, medical practitioners who are passionately in favour of private abortions might well interpret "close medical supervision" liberally and, at risk to their patients, prescribe RU486 in such a way as to allow it to be used as a home abortion pill. Once in the hands of unqualified personnel RU486 might then be adapted for regular use after menses delay in spite of that use being contra-indicated.

10. Anti-estrogens

A new development not yet reported to have been applied to humans is the development of *anti-estrogens*. A substance currently called *CDRI-85/287* has been developed which interacts with the estrogen receptors thus blocking estrogen function in the same way that RU486 blocks progesterone function⁶⁶. Estrogen is thought to have an essential role to play in the healthy functions of the cervix, the cervical mucus and sperm transport, in maintaining the corpus luteum, in ovum transport, and in the functions of the endometrium⁶⁷. An anti-estrogen thus would be likely to disrupt healthy reproductive function. *CDRI-85/287* has been shown

to affect implantation by causing changes to the rat uterus⁶⁸. There are other similar developments such as the anti-estrogens *ICI-182780* and *nylestriol* which have also been shown to inhibit implantation⁶⁹.

11. Contraceptive and Abortifacient Vaccines

The immune system may be utilized in a number of ways in order to render a couple infertile. In layperson's terms, the immune system works by identifying a foreign body, then attacking it. Immunity develops normally by exposure to foreign bodies and the immune system learning to recognize them. Thus, for instance, a virus may infect a person, the immune system eventually recognizes it, targets it and then destroys it. In that process the immune system will have recorded the event and from then on retains the means of rapidly recognizing the virus. Future exposure to the virus results in an immediate attack response thus preventing the development of infection and illness.

Two ways in which the contraceptive vaccines are likely to function are by producing a foreign body recognition of a man's sperm by his own immune system, or by producing a foreign body recognition of a man's sperm by his wife's immune system. The fertilizing capacity of the sperm is affected by the immune system and the system's response to the sperm may occur at many sites.⁷⁰ For instance the anti-bodies may affect the sperm in the cervical mucus or at the site of sperm being absorbed in the ovum's zona pellucida.⁷¹ A further contraceptive possibility arises in relation to producing an immune response to ova⁷².

The *new* ethical issues which arise in relation to the developments of contraceptive vaccines are to do with the risks for harm. The men and women who are subject to the experiments run the risk of developing an auto-immune disease. That is to say, the antibodies created may not be specific enough in targeting sperm or ova, and other tissues may be attacked. However, if animal studies show that these risks are minimal then the question of risk taking is only a matter of gaining informed consent to experiments. A much more complex issue would arise in relation to the risk of conception occurring and a child developing who had been damaged by experiments with vaccines against the sperm or ova from which he or she was conceived.

A further use of the immune system, and a much more likely use, is the development of antibodies which inactivate key reproductive hormones necessary for the maintenance of a pregnancy. Anti-bodies to human chorionic gonadotrophin have been developed⁷³. The latter has already been achieved in primates and is now being tried in women⁷⁴. Such vaccines are abortifacient in that they act against the placenta and hence destroy the pregnancy.

A major problem in relation to the abortifacient vaccine is that it is often described as contraceptive when there is little doubt that it is abortifacient. The effect is on the hormone produced by the chorion and the chorion does not exist prior to the formation of an embryo. The chorionic cells are not established until implantation is under way⁷⁵.

12. Inhibin

Inhibin is a naturally-occurring hormone identified by a Melbourne group of

scientists. It is thought to have a function as a messenger informing the hypothalamus in the brain about the status of development of ova or sperm. It may have a use in suppressing LH and FSH production thus potentially preventing ovulation.⁷⁶

13. Implants and Monthly Contraceptives

Contraceptives that are injectable once a month and contraceptive implants have been developed.

Norplant is a subdermal slow release levonorgestrel implant which acts as a long term progestogen "contraceptive". A major function it has is to alter the endometrium thus preventing implantation⁷⁷, but it also alters the cervical mucus and sometimes prevents ovulation⁷⁸.

Cyclofem and *Mesigyna* (containing medroxyprogesterone acetate) are once-a-month injectable "contraceptives" releasing both estrogen and progestogen⁷⁹. From the literature it is not clear what levels of the two hormones are maintained throughout the month, and that makes it difficult to assess what is the predominant action: suppression of ovulation, changes to the cervical mucus or endometrial changes. Moral assessment might assume a similar action as that of the combined pill — probable suppression of ovulation and cervical mucus changes inhibiting fertilization, with the endometrial changes providing abortifacient back-up. However, the monthly injection is likely to provide a diminishing level of the hormones as the month progresses. It is probable that it depends more on being abortifacient than the daily oral contraceptives.

It is thought that formulations containing medroxyprogesterone acetate may cause very severe lasting damage to the endometrium, even a condition called Asherman's syndrome when the woman may ovulate without menstruation. Asherman's syndrome can also occur after a radical destruction of the endometrium in the performance of a surgical abortion, and it can also occur as a congenital under-development of the uterus.⁸⁰

14. GnRH

Gonadotrophin releasing hormone (GnRH) has an effect on the pituitary gland, the ovary and the testis. In men it inhibits the formation of sperm. GnRH is normally produced by the hypothalamus and works on the pituitary gland to trigger the production of FSH and LH. The synthetic variety is more potent⁸¹. One established effect of using a synthetic GnRH is in fact to block the action of estradiol⁸². The latter may have some use in altering cervical mucus function, suppressing ovulation and changing the endometrium.

15. Hormone Releasing IUDs

A further development is that of intra-uterine contraceptive devices (IUDs) which release progesterone. The effect would probably be to enhance the effect of the IUD on the lining of the uterus causing changes that prevent implantation.⁸³

16. Some Moral Consequences of the Trend Toward Abortifacients

16.1 The Objective Problem

The development of the moral tradition in regard to contraception has

presumed that contraception was, in fact, contraception. It now appears that many if not all of the pharmacological contraceptives are at least in part abortifacient, and the newer preparations under development tend to be entirely abortifacient, notwithstanding that they are promoted as contraceptives.

This raises serious questions not only for the moral tradition but also for Church discipline. The Code of Canon law holds that a person who actually procures an abortion incurs a *latae sententiae* excommunication (Canon 1398) and abortion is defined by the Pontifical Commission for the Authentic Interpretation of Canon Law as any method used to terminate a human life from the moment of conception until birth.

Objectively, and assuming that one should always favor human life, the abortifacient component of oral contraceptives should result in them being regarded as abortifacient and assessed that way. That is, assessed as involving not only the wrong of contraception but the even more serious wrong of procuring an abortion. In the higher-dose combined pills that risk is relatively small but not assuredly so small that it is morally insignificant. Further it is a matter of risking human life which makes even a relatively small risk a serious matter.

The moral assessment of the use of oral contraceptives for other medical purposes such as the management of hormonal imbalance, dysmenorrhoea and acne, must also change now that it is clear that the formulations are at least in part abortifacient. It is a question both of justice and proportionality. Significantly risking the life of a new human being is a disproportionate consequence of such treatments in a woman who is sexually active. The use of the estrogen-progesterone contraceptive formulations for non-contraceptive purposes should be restricted to women who are not sexually active or are known to be otherwise incapable of conceiving. This would not, of course, preclude the use of hormone supplements for the purposes of treating infertility where the aim is to restore reproductive health so as to achieve pregnancy, provided that they were not used in doses that diminished the chances of a zygote implanting.

Pastorally there are several matters to address in response to the information that oral contraceptives are at least partly abortifacient. The problem is experienced differently by:

- * women and their partners using contraceptive-abortion formulations,
- * the doctors who prescribe the formulations,
- * the pharmacists filling prescriptions,
- * the manufacturers and researchers, and
- * the legislators and public policy-makers.
- * the Church

16.2 Women Taking "Contraceptives"

A major factor in the moral question in regard to women using pharmaceutical contraceptives is whether the abortifacient effect can be considered to be intended by them. Advice about the effects of oral contraceptives are provided to women

with packets of the pill. The high dose combined pills which are most likely to suppress ovulation and are thus least likely to have an abortifacient effect because fertilization would not usually occur, still carry a message to users, such as the following:

The hormonal components [. . . the preparation is named . . .] inhibit ovulation by suppressing gonadotrophin release. Secondary mechanisms which may contribute to the effectiveness of [. . . the preparation . . .] as a contraceptive include changes in the cervical mucus (which increase the difficulty of sperm penetration) and changes in the endometrium (which reduce the likelihood of implantation).

Users are therefore informed of the anti-implantation effect but they may not understand that that is, in reality, an abortifacient effect. This does have a bearing on whether the pill is taken in good faith (in respect to taking an abortifacient) as a contraceptive and not as an abortifacient.

Often, anti-implantation effects would seem not to be regarded as morally the same as abortion. The Congregation for the Doctrine of the Faith's teaching in 1987⁸⁴ that the zygote (the cell formed by the fusion of the gametes) is to be given the respect due to the human person is not universally held even amongst theologians and that dissension, uncertainty or ignorance affects laypeople.

Given that there is loss or possible loss of life involved in taking the oral contraceptive, women should be warned that that is the case and the moral conclusions drawn as a matter of pastoral guidance.

Further, this may be treated as a matter of proportionality in that the intention of an informed woman (that is, one who knows of the possibility of an abortifacient effect) in taking an oral contraceptive may be to take a contraceptive and the abortifacient effect may simply be thought of as an unfortunate side effect. However, it is a question of loss of life and the proportionality conditions of the doctrine of double effect would have a bearing on the moral assessment even though the intention may be judged to be good in respect of not directly choosing abortion (but not, of course, in regard to contraception). There is a grave danger that the induced loss of early human life is being treated with indifference. In fact it is a matter of the utmost gravity.

It has been argued by the Bishops of England and Wales that such a risk could be legitimately taken in the circumstances of rape⁸⁵. That is to say, the Bishops accepted that contraception might be attempted after rape, and in an otherwise detailed treatment of the issue, left unanswered the question of the moral acceptability of the fact, acknowledged by them, that such contraceptive attempts might also be abortifacient in the circumstances of blind administration in which it was not known whether ovulation and possible fertilization had occurred.

This matter needs clarification. What is appropriate management in the circumstances of rape? Is the self-defence argument in favor of attempting post-coital contraception acceptable in the extreme case of rape when there are good grounds for believing that ovulation has not yet occurred? If so, is it permissible to attempt contraception in circumstances in which fertilization may not be prevented or may have already occurred and an abortifacient effect may be the result?

A certain amount of risk-taking is obviously permissible in life. Every time we

travel by automobile we risk human lives. The question is one of the level of risk. If those risks were increased, at some point they would become unconscionable. That is to say they become disproportionate. The same must be said of the risk of a contraceptive-abortionifacient in the circumstances of rape. At some point the risk of losing a life rather than preventing the generation of a life becomes disproportionate.

It is important to stress that this question only arises in the circumstances of rape. One could not consider such a justification in the ordinary circumstances of freely chosen acts, first because of the wrong of contraception, and second because contraception is not necessary for family planning. The ovulation awareness methods provide a viable and satisfactory (not to mention healthier and morally acceptable) alternative.

The significance of this discussion however is that the increasing likelihood of the contraceptive formulations being in fact abortifacient further vitiates such acts, adding an even more serious dimension — significant risk to human life.

16.3 Prescribers

Although women using the contraceptive-abortionifacient formulations may be ignorant of the abortifacient risks, the same should not be the case for prescribers. Women using contraceptives might simply trust the advice given that what has been prescribed is in fact a contraceptive. But a medical practitioner should know more about the preparations.

It is sometimes argued that the role of a medical practitioner in prescribing contraceptives is merely material co-operation and that the decision to contraceive is that of the patient rather than the practitioner. To the contrary, the reality is that the medical practitioner is a party not merely materially to the evil, but to the decision itself. It is the practitioner who puts the options to the woman. It is the practitioner who writes the prescription instructing the pharmacist. It is therefore a matter of conscience for the practitioner in regard to the wrong of contraception. Now that it is clear that the contraceptive formulations carry a significant risk of loss of life, the matter of prescribing them assumes an even more serious dimension for the prescribers. They not only participate formally in contraception, they also share direct responsibility for risking human life.

There is a climate of wreckless indifference in regard to human life, particularly nascent human life, which medical practitioners should seek to resist and to challenge,

16.4 Hospitals

Much of what is said about prescribers also applies to hospitals. It really depends on the nature of the hospital's co-operation, the legal authority it has over prescribers within the hospital, and the extent to which such matters can be made the subject of formal policy and decisions by the hospital.

It is worth noting that in 1971 the United States Catholic Conference drew a distinction in this respect, reportedly based on advice from the Congregation for the Doctrine of the Faith, between abortion and sterilization. The USCC held that it was sometimes permissible

for hospitals to remotely materially (but not formally) cooperate in sterilization but never in abortion.⁸⁶

The difference of course is that abortion involves matters of justice in regard to the unborn child. The same matters now are involved in the trend toward abortifacients in the pharmacological methods of birth control.

Catholic hospitals exist to give practical healing witness to the teachings of Christ and of His Church. They, more than any other institutions, must have hospital policies and staff development policies which are in accord with an ethos of respect for human life and dignity. This matter of the developments in regard to contraceptive-abortifacients provides a serious cultural challenge to the reason for the existence of Catholic health care institutions, particularly those providing services in obstetrics and gynecology.

16.5 Pharmacists

The situation of pharmacists has always been a complex one. They are professionally trained and registered and expected to give advice about their preparations. However, in Australia they cannot generate or modify prescriptions without medical authorization. Contraceptive formulations are only available by medical prescription. It is an offence to sell or supply a prescription medication without a doctor's prescription. Pharmacists may, of course, be self-employed or be employed by hospitals or companies and that does affect the degree of freedom to refuse to fill a doctor's prescription on conscientious grounds.

Generally it has been accepted, as a matter of theological opinion, that pharmacists materially, but not formally, co-operate when supplying contraceptives on a doctor's prescription. They are not a formal part of the evil and the oral contraceptives sometimes have medical uses other than contraception. However the principles of co-operation do require that the co-operation not be an injustice. The fact that the contraceptive formulations are significantly abortifacient changes the moral assessment. There is a grave matter of injustice to the human being, at the zygote stage of his or her development, in supplying formulations which put the life at risk.

For that reason, this review of the medical literature and the conclusion reached that oral contraceptives at least risk being abortifacient has led me to change the view I previously held in regard to advising pharmacists. I am now inclined to the view that pharmacists should not fill prescriptions for oral contraceptive-abortifacients to customers who may be sexually active.

16.6 Manufacturers and Researchers

The trend toward developing so-called "contraceptive" formulations that tend to be entirely or in part abortifacient is most unfortunate.

Those who conscientiously are engaged in the pharmaceutical industry, in marketing, research, development or production, have moral obligations to ensure that their product is a good product. That is, that it is unlikely to cause harm and is good for human persons. Manufacturers cannot be held to be morally responsible for all the ways in which a product may be applied. But they are responsible for identifying its recommended applications and warning about potential harm or misuse.

That a pharmaceutical may cause loss of a human life at any stage of development ought not be hidden behind euphemism or misleading terms. Such medications should contain clear warning to that effect. The worst part of the current dilemma is the fact that abortifacients have been accepted readily because they have been marketed as contraceptives only, something other than what they are.

Researchers also co-operate in the development of such products and they owe a duty of care to the community in regard to the contribution their efforts make to the society. The contemporary concentration in contraceptive research on developing abortifacients and the failure to distinguish between contraceptive and abortifacient effects is a serious wrong.

16.7 Public Policy

The safety of human life is an essential concern of the State in its role as protector of the common good. The development, production, marketing, supply, prescription and use of abortifacients is a matter which public authorities have an obligation to seek to control.

It is part of the duty of the public authority to ensure that the civil law is regulated according to the fundamental norms of the moral law in matters concerning human rights, human life and the institution of the family. Politicians must commit themselves, through their interventions upon public opinion, to securing in society the widest possible consensus on such essential points and to consolidating this consensus wherever it risks being weakened or is in danger of collapse.⁸⁷

16.8 The Church

A major problem in regard to the development of contraceptives toward being abortifacient is the manner in which abortifacients have come to be accepted as contraceptives. The source of the problem is medical indifference to the destruction of nascent human life. From that indifference flows a failure to communicate to women the real nature of the treatments and hence an ignorance on the part of both women and the general community.

As a defender of human life and human dignity it is of grave importance that once having recognized that source of the problem, the teaching resources of the Church be employed to address the deficiency. More than anything this is a matter of insisting that women are given full information about the effects of the contraceptives.

The Church is often accused of being *embryo-centric* to the exclusion of the rights of women and their free choice. Here, however, it is those who would threaten the lives of the innocent who are denying free choice to women by denying them relevant information needed to make decisions about family planning. This is not only injustice to the child in the womb, but an injustice to women.

There is a need for clear teaching on abortifacients and the deceit involved, not only as a matter of respect for human life but also as a matter of the rights of women to know what they are doing to their own bodies and to the lives for whom their bodies are rendered hostile without the women's knowledge.

17. Contraceptive Failure

Contraceptive failure with the oral contraceptives occurs both as a result of method failure and as a result of user error and interaction with other medications. From a pro-life perspective, the nature of the support and advice given to women in such instances is of great importance. This is particularly so when the use of a reasonably reliable method of contraception fails and the woman has no prior expectation of pregnancy.

The method-related failures of oral contraceptives are given thus:

The pregnancy rates in women using conventional combination oral contraceptives (containing 35 micrograms or more of ethinylloestradiol or 50 micrograms or more mestranol) is generally reported as less than 1 pregnancy per 100 woman-years of use. Slightly higher rates (somewhat more than 1 pregnancy per 100 woman-years of use) are reported for some combination products containing 35 micrograms or less of ethinylloestradiol, and rates of the order of 3 pregnancies per 100 woman years are reported for the progestogen-only oral contraceptives.⁸⁸

If you take into account that many woman become sexually active in their teens, their actual childbearing period is to be limited to two or three live births, and their naturally fertile life will extend over thirty years, then most women will wish to avoid pregnancy for twenty to twenty-five years. The chance of having an unexpected pregnancy at some time during their fertile years if they depend on the pill during the times that they do not want to be pregnant is thus 20-25% with the conventional preparations, more than 20-25% with the low dose combined pill and 60-75% with the progestogen-only pill, and that is without allowing for user failure such as missing pills, taking them at a different time of day, taking them with agents which have a known drug interaction with oral contraceptives, or having a stomach upset.

The failure rate thus accounts for a significant proportion of unplanned pregnancies. Such pregnancies come as a complete surprise, particularly if they are entirely method-related. Many women think that the pill makes them immune to pregnancy, hence when it occurs in a woman taking the pill, it can be devastating.

From a realistic pro-life perspective, permanent sterilization apart, willingness to engage in sexual intercourse should be premised upon a willingness to accept the possibility of pregnancy and the birth of a child. A pro-life view should thus link sexual intercourse with a willingness to form a family. That view is not shared by the Family Planning Associations.

The chances of a pregnancy can be greatly reduced by oral contraceptives. The chances can also be limited to an equivalent extent by the timing of sexual intercourse so that it does not coincide with the fertile stage of the cycle. Possible fertile times can be identified readily by the presence of cervical mucus observed at the vulva on that day or the preceding three days. The World Health Organization figures⁸⁹ indicate that the Billings Ovulation Method of observing mucus changes is more reliable than the mini-pill and about as reliable as the combined pills. The observation of the temperature rise that follows ovulation is also an indication of the fertile period having passed. Those natural methods can also be assisted, for women who find observation of the signs of fertility difficult, by the use of

hormonal testing which is now available in a Do-It-Yourself Kit.

The disadvantage of the abstinence methods is that they do involve days of abstinence. The major advantages are that they do not involve the health risks and unpleasant side-effects of the oral contraceptives, do not carry the abortifacient risks of the oral contraceptives, foster a co-operative relationship between spouses in which responsibility for controlling fertility is shared, increase awareness of the changes in the woman's body, provide early warning of a variety of medical conditions, and provide information which assists couples who have difficulty conceiving.

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later at syngamy when the two pro-nuclei from the sperm and ovum fuse to form one nucleus and the chromosomes line up on the mitotic spindle for the first time, immediately prior to the first cell division. The difference is about sixteen hours. The medical literature tends to take the later stage as the formation of the zygote. This is not a major issue in this discussion as the anti-implantation effects we are concerned about take place much later than this.]

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