The Moral Dilemma of Management Procedures for Ectopic Pregnancy

Assoc. Prof. of Sacred Theology & Pastoral Catechetics
St. Mary’s College of Ave Maria University

I. Introduction to Ectopic Pregnancy

Is the fertilized egg a mass of cells, merely the products of conception (POCs) and gestation, and a blob of tissue, or is it a human person? If it were the first, then there would be no moral implications to consider in managing ectopic pregnancy. But since it is indeed a fully human person, there are necessarily moral considerations in the situation of an ectopic pregnancy. These moral considerations thus become vitally important because, in the moral debate over management procedures for ectopic pregnancy currently ensuing especially among Catholic theologians and medical doctors, we are discerning the distinction between saving the life of the mother versus what is otherwise murder of the unborn child masked under the auspices of saving the mother’s fertility. By one medical doctor’s account, the debate currently ensuing between non-dissenting Catholic theologians and doctors concerning management of ectopic pregnancy is tantamount to the pre-*Humanae Vitae* contraception issue.¹

The purpose of this paper, then, is threefold: to provide a background on current management procedures for ectopic pregnancy, to present the moral foundations and the two sides of the current moral debate, and to make conclusions based on the moral aspects of managing ectopic pregnancy.

B. Definition

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During the process of conception, the fallopian tubes normally serve as transport passages for the egg (ovum) to meet the male sperm cell for fertilization. The fertilized egg then implants within the womb (uterus) to establish the developing embryo. The word “ectopic” means “out of place” (from the Greek - ek, “out of,” and topos, “place”). An ectopic pregnancy is a potentially life-threatening form of pregnancy in which implantation of the fertilized egg occurs outside the inner (endometrial) lining of the uterus. Often called a "tubal pregnancy," most ectopic pregnancies (about 97%; 1.5% are abdominal, 0.5% are ovarian and 0.03% are cervical) occur in the fallopian tubes. Since the fallopian tubes are not large enough to accommodate a growing embryo, the pregnancy cannot continue normally. The inner lining of the fallopian tubes are coated with small hair-like projections called cilia. These cilia transport the egg smoothly from the ovary through the fallopian tube and into the uterus. If these cilia are damaged by infection or scarring, or there is partial blockage of the fallopian tubes, ovum transport may become disrupted. The egg may settle in the fallopian tube without reaching the uterus, thus becoming an ectopic pregnancy. Sadly, at this time, even a viable ectopic fetus cannot be saved.

This paper will discuss the management procedures utilized today for ectopic pregnancy and the moral implications and dilemmas they present.

C. Risks Involved with the Condition of Ectopic Pregnancy

Ectopic pregnancy is a very serious condition. When the pregnancy grows in these abnormal areas, it can easily cause massive, internal bleeding, and even death for both mother and child. In some cases, the embryo grows until the fallopian tube is stretched so much that the tube ruptures (usually at 6-10 weeks of gestation). Rupture of the tube is a true medical emergency because of maternal hemorrhage (severe blood loss).

According to one source, there are varying health risks:

Some women spontaneously absorb their ectopic pregnancy with no apparent ill affects, and can be observed without treatment. The most feared complication of an ectopic pregnancy is internal bleeding, causing pelvic and abdominal pain, shock, and even death. Therefore, bleeding in an ectopic pregnancy may require immediate surgical attention. Bleeding results from the rupture of the fallopian tube, or from blood leaking from the end of the tube as the growing placenta erodes into the veins and arteries located inside the tubal wall. Blood coming from the tube can be very irritating to other tissues and organs in the pelvis and abdomen, and result in significant pain. The pelvic blood can lead to scar tissue formation and problems with becoming pregnant in the future. The scar tissue can also increase the risk of future ectopic pregnancies.²

² http://www.advancedfertility.com/ectopic.htm (5/15/02).
Another source gives more detail:

Any growing pregnancy requires a large nutrient source (blood supply) and develops many communications with the mother’s (pregnant woman's) vascular system (blood vessels). The uterus is uniquely designed to accommodate this development, so that when a pregnancy begins to grow in other surrounding structures the vascular communication may be inadequate.

Furthermore, as the pregnancy grows in size the uterus dramatically changes shape and size. Surrounding structures are usually not able to change as readily so they are often damaged or "ruptured" by a contained growing ectopic pregnancy. When the ectopic pregnancy outgrows the limits of the space enclosing it, there can be life threatening bleeding.4

**Types & Locations**

1. **In the fallopian tube**, also called a tubal pregnancy, whereby the embryo is located either in the
   a. Ampullary (mid) portion of the fallopian tube (80-90%),
   b. Isthmic (area closer to the uterus) portion of the fallopian tube (5-10%),
   c. Fimbrial (distal end away from the uterus) portion of the fallopian tube (about 5%),
   d. Cornual or interstitial (within the uterine muscle) portion of the fallopian tube and uterus (1-2%),

2. **Attached to the outer wall of the abdomen** (1-2%; may grow to term and morally should be permitted to advance so long as hemorrhaging is evaded,5 but has a 20-fold higher mortality rate than tubal ectopic),

3. **Attached to an ovary** (less than 1%; may grow to term, thus surgical intervention is not morally justified unless there exists imminent danger to the mother;6 partial resection or removal of the ovary is then advised), or

4. **In the cervix** (less than 1%; high risk of hemorrhage, thus packing of the cervix and total hysterectomy may be required;7 with high mortality rate).8

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6 Ibid.
According to one noted theologian, “The various accepted classifications of tubal pregnancy, determined by the part of the tube in which nidation occurs are of no particular importance in the moral consideration of tubal gestation”, which will be discussed later in this paper.

**Causes**

Most ectopic pregnancies occur because the fertilized egg cannot pass through the fallopian tube to the uterus. The egg is unable to pass through narrowed or blocked tubes. Any condition that may have damaged the fallopian tubes increases a woman’s risk for an ectopic pregnancy. There are several risk factors for ectopic pregnancy, which include the following:

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7 Ibid.
Pelvic inflammatory disease (PIDs) or a history of pelvic infections\textsuperscript{10} in 30-50\% of cases\textsuperscript{11}

\textsuperscript{10} “Infection in the pelvis is another leading cause of ectopic pregnancy. Sexually transmitted organisms, such as chlamydia or gonorrhea, usually cause pelvic infections. However, non-sexually transmitted bacteria can also cause pelvic infection and increase the risk of an ectopic pregnancy.”

“Rate of ectopic pregnancy in women with previous known PID is increased 6-10 times higher than in women with no previous history of PID. A published study of 745 women with one or more episodes of PID that attempted to conceive showed that 16% were infertile from tubal occlusion. Of those that conceived, 6.4% had ectopic pregnancies. Pelvic inflammatory disease is usually caused by invasion of either gonorrhea or chlamydia from the cervix up to the uterus and tubes. The infection in these tissues causes an intense inflammatory response. Bacteria, white blood cells and other fluids (pus) fill the tubes as the body combats the infection. Eventually, the body wins and the bacteria are controlled and destroyed. However, during the healing process the delicate inner lining of the tubes (tubal mucosa) is permanently scarred. The end of the tube by the ovaries may become partially or completely blocked, and scar tissue often forms on the outside of the tubes and ovaries. All of these factors can impact ovarian or tubal function and the chances for conception in the future. If pelvic inflammatory disease is treated very early and aggressively with IV antibiotics, the tubal damage might be minimized, and fertility maintained.” http://www.advancedfertility.com/ectopic.htm (5/15/02).

Pelvic inflammatory disease (PID) is the single greatest risk factor. PID is an infection of the female reproductive organs that can cause scarring of the organs. http://www.ectopicpregnancy.com/facts.htm (5/15/02).
- Previous tubal pregnancy (repeat rate is about 12-15%, 30% after the second)\(^{12}\)
- History of endometriosis
- Previous tubal surgery
- IVF\(^{13}\)

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\(^{12}\) “When an ectopic pregnancy in the fallopian tube is treated conservatively (by preserving the tube), there is a roughly 10 fold increase in ectopic pregnancy.” [http://www.drdalter.com/hyst_ecto/ecto1.html](http://www.drdalter.com/hyst_ecto/ecto1.html) (5/15/02).

\(^{13}\) “About 2-5% of clinical pregnancies are ectopic with IVF. The figure is higher for women with a history of previous ectopic pregnancy or tubal infertility.” With regard to heterotopic pregnancy (combined intra- and extra-uterine pregnancy), current rate is about 1/4000 pregnancies, but with IVF, rate is about 1/35-1/100 clinical pregnancies. [http://www.advancedfertility.com/ectopic.htm](http://www.advancedfertility.com/ectopic.htm) (5/15/02).
Failed or reversed tubal ligation

Multiple induced abortions

Pelvic adhesions (bands of scar tissue that constrict the tube, most often a result of pelvic surgery)

Use of medications to stimulate ovulation

Use of progestin (releases progesterone) contraceptives such as an intrauterine device (IUD)—primarily because of the risk of scarring

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14 “After non-laparoscopic tubal ligation about 12% of pregnancies are ectopic. After laparoscopic tubal coagulation about 51% of pregnancies are ectopic.”

15 Although rare, “approximately 50% of pregnancies in women using intrauterine devices (IUDs) will be located outside of the uterus.”
A fibroid tumor of the uterus
- Smoking (may damage the ampulla of the fallopian tube)\(^\text{16}\)
- Pelvic scar tissue (adhesions)
- Congenital defects in the structure of the tubes (e.g. exposure to diethylstilbestrol (DES) in utero)
- Hormonal imbalance (excessive levels of progesterone or estrogen may interfere with the contractions of the fallopian tube) from progesterone mini-pills and post-coital estrogens

In addition to these known risk factors, according to one source, “It is [also] important to note that women without any of these risk factors can still develop an ectopic pregnancy.”\(^\text{17}\)

\(^\text{16}\) “In a recent study, researchers in France concluded the risk of an ectopic pregnancy is two-thirds greater among women who smoke than among non-smokers. Among those women who smoke at least \(\frac{1}{2}\) pack of cigarettes a day, the risk is double.” William G. Birch, M.D., L.L.D. (hon). Pregnancy Book (Chicago: Budlong Press, 2000), 40.

E. Incidence

Ectopic pregnancy rates are rising. The rate of ectopic pregnancy rose from 4.5 to 16.8 per 1,000 pregnancies from 1970 to 1987. Approximately 100,000 ectopic pregnancies occur each year. “Even in the absence of known risk factors, ectopic pregnancy may occur as often as 1-2% of pregnancies. If there are multiple risk factors, the risk may be 25% of pregnancies,” according to one source. Before the 19th century, mortality from ectopic pregnancies exceeded 50%. But by the end of the 19th century, the mortality rate dropped to 5% because of surgical intervention. With current advances in early detection, the mortality rate has improved to less than 5 in 10,000. The survival rate from ectopic pregnancies is improving even though the incidence of ectopic pregnancies is also increasing. The major reason for a poor outcome is failure to seek early medical attention. About 40-50 women die each year from ectopic pregnancy in the U.S. Today, maternal death is rare (less than 1 in 2500 cases). However, ectopic pregnancy is still one of the number one causes of death for women in the first trimester of pregnancy.


24 http://f.about.com/z/js/spr01.htm (5/15/02).
**Symptoms**

Symptoms of an ectopic pregnancy can often be vague and occur under other conditions. Such symptoms include vaginal bleeding, abdominal or pelvic pain (usually stronger on one side), shoulder pain, weakness, or dizziness. Weakness, dizziness, and a sense of passing out upon standing can represent serious internal bleeding. However, some women have no symptoms (other than those of pregnancy), making the diagnosis difficult at times.

**Diagnosis**

Early diagnosis of an ectopic pregnancy is critically important in terms of outcome. When an ectopic pregnancy is detected early in development, especially prior to rupture or damage to surrounding tissue, morbidity rates decrease and treatment options are enhanced. There is currently no uniformly accepted diagnostic protocol for the determination of an ectopic pregnancy. Some of the procedures are as follows:

a. Interview and examination by the doctor or gynecologist. (Occasionally, the doctor may feel a tender mass during the pelvic examination.)

b. Blood hormone tests (beta HCG and progesterone)\(^{25}\)

c. Pelvic transcervical (vaginal) or abdominal ultrasound

d. Laparoscopy (a small, lighted camera inserted through small incisions below the navel and/or near the pubic bone) to help confirm the diagnosis.\(^{26}\)

These tests may take several days to complete, and the results may be inconclusive. The timing of performing these tests and interpretation of test results can be complicated, and should be directed by the obstetrician. When checking blood hormone levels, such as beta human chorionic gonadotropin (beta HCG) and progesterone, a series of blood samples are obtained. Beta HCG levels normally rise during pregnancy. An abnormal pattern in the rise of this hormone can be a clue to the presence of an ectopic pregnancy. In those with abnormal hormone patterns, an ultrasound can be performed. In patients with an ectopic pregnancy, an ultrasound can demonstrate the absence of pregnancy within the uterus, abdomen and pelvis, thereby revealing the site of the ectopic pregnancy. Usually a laparoscopy coincides immediately with surgery to remedy the problem due to the increased risk factors if delayed. In rare instances, even laparoscopy may not detect certain ectopic pregnancies because of their small size or unusual

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\(^{25}\) There is as of yet no ectopic pregnancy hormone that has been found which could make it possible to determine this condition conclusively through a hormone test, but research is active in this area. But, other hormone tests can be indicative. HCG, and in some cases progesterone, rise during pregnancy. These tests can suggest an abnormally growing intrauterine pregnancy or an ectopic pregnancy.

\(^{26}\) Occasionally, culdocentesis is done. In culdocentesis, a needle is inserted at the top of the vagina, between the uterus and the rectum, to check for blood. The presence of blood may indicate bleeding from a ruptured fallopian tube.
location.27 “Today, ectopic pregnancy is diagnosed and treatment is begun prior to tubal rupture in over 80 percent of affected women.”28

II. Moral Foundations for Discerning Management of Ectopic Pregnancy


According to St. Thomas Aquinas, the first precept of the moral law is that good is to be done and evil avoided. All human activity should harmonize with the good of the human race. The normative requirement of accomplishing harmony is that of loving God and neighbor, for which grace is necessary. The negative precepts of natural law as expressed in the Decalogue are universally valid and thus “oblige each and every individual, always and in every circumstance.” Human acts are moral acts because they determine the goodness or evil of the individual who performs them. Thus, we must consider the teleological character of our actions, that is the “deliberate ordering of human acts to God, the supreme good and ultimate end (telos) of man.” The moral assessment of man’s free acts ordered to God are determined by the threefold sources of morality, of 1) the intention (motive) of the acting subject, 2) the circumstances (and consequences), and 3) the (moral) object itself of his act. With this in mind, however, one must acknowledge the existence of moral absolutes, namely that “there are certain specific kinds of behavior that are always wrong to choose, because choosing them involves a disorder of the will, that is, a moral evil,” and thus good intentions and circumstances are not in themselves always sufficient. This is what St. Paul refers to in Romans when he says that it is never licit to do evil that good may come of it (3:8) because some actions are by their very object intrinsically evil. In determining actions in these situations, one will also remember that discerning and choosing truth is the condition for authentic freedom.

There are two principles that are commonly applied to ectopic pregnancy situations. The first is the principle of totality, which “holds that we may sacrifice even a basic bodily function or organ to preserve the whole of the bodily life provided there is no less invasive way of achieving this goal.” Thus, it might be morally permissible to remove the mother’s fallopian tube or a portion of it, which is causing harm to her life, to protect the totality of her bodily life. But in certain circumstances, it might be acceptable for an action to produce both a desired good effect and at the same time allow for certain evil consequences in what is called the principle of double effect. There is a vital difference between a directly willed effect and an indirectly willed effect. There are four conditions for considering the principle of double effect:

1. The moral object may not be evil in itself; the moral act must itself be good or morally indifferent.
2. The good and evil effect must proceed at least equally directly from the act (the immediate effect must not be solely evil and the good effect should not physically result from the evil effect).
3. The agent may not intend or approve the evil effect.
4. There must be a proportionate grave reason in order to allow the evil effect.

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31 VS 73.
33 CCC 1761.
While even God never intends that evil be He, nevertheless, permits evil at times but always for a greater good. In discerning a particular act, and having the “first goal of the intention” in mind, it must be remembered that the ends do not justify the means.\textsuperscript{36} Every act of means toward an end must itself be good or the whole act is evil.

Besides the necessity of natural law in considering the moral act, we should also consider that man is a spiritual being who is capable of receiving faith, and thus receives theological faith to live in obedience to the moral truths revealed by God. Of these truths of divine Revelation, the Fifth Commandment, you shall not kill, bears consideration here.

\textsuperscript{36} CCC 1753.
In regard to the sacredness and origin of human life, some in theology have tried to argue that the actual beginning of human life has not yet been medically determined, and one medical source directly states, “Medical science defines the beginning of pregnancy [not at the time of fertilization, but only after] the implantation of a fertilized egg in the lining of a woman’s uterus.” Basically, this medical source seems to claim that until the fertilized egg implants in the uterus, it is not considered the beginning of human life; and thus, if it never makes it to the uterus, as in the case of ectopics, then the claim is that conception did not take place. Whereas the Magisterium of the Catholic Church has concluded in truth, “from the time the ovum is fertilized, a life is begun which is neither that of the father nor the mother; it is rather the life of a human being with its own growth.”

The evil of direct or induced abortion, for whatever reason, is a moral absolute. “Procured abortion,” according to John Paul II in Evangelium Vitae (“The Gospel of Life”), “is the deliberate and direct killing, by whatever means it is carried out, of a human being in the initial phase of his or her existence, extending from conception to birth” and this “direct and voluntary killing of an innocent human being is always gravely immoral.” He goes on to say, “The killing of innocent human creatures (an ectopic), even if carried out to help others (e.g., the mother), constitutes an absolutely unacceptable act.” Dr. William May explains, “it is crucially important to recognize that a dying person (the unborn baby in the ectopic) is still a person, whose life is to be respected and treated as a person from the moment of conception; and therefore form that same moment his rights as a person must be recognized, among which in the first place is the inviolable right of every innocent human being to life.” Other statements from the Magisterium include: “From the moment of conception life must be guarded with the greatest care” (Vatican II, “The Church in the Modern World” 51); “Since it must be treated from conception as a person, the embryo must be defended in its integrity, cared for, and healed, as far as possible, like any other human being” (CCC 2274).

37 Bohr, 295-296.
38 http://ec.princeton.edu/questions/ecabt.html (5/30/02). The question to consider here is whether there may be a distinction between the moment of conception and the moment that the pregnancy officially begins, which is not until implantation in the uterus, according to this medical source. This seems to be a false distinction.
39 John Paul II, Encyclical Evangelium Vitae (“The Gospel of Life”), 60, citing “Declaration on Procured Abortion.” Other statements from the Magisterium include: “The human being is to be respected and treated as a person from the moment of conception; and therefore form that same moment his rights as a person must be recognized, among which in the first place is the inviolable right of every innocent human being to life.” (“Respect for Human Life” I, 1); “From the moment of conception life must be guarded with the greatest care” (Vatican II, “The Church in the Modern World” 51); “Since it must be treated from conception as a person, the embryo must be defended in its integrity, cared for, and healed, as far as possible, like any other human being” (CCC 2274).
respected and whose death, even if inevitable, is not to be hastened for the benefit of any
other person (the mother).” Therefore, any attempt to directly remove the living fetus,
even if it is deemed nonviable, as is eventually the case currently with tubal pregnancies,
has always been recognized by Catholic moral teaching as gravely immoral and
essentially similar to abortion.

The Catholic teaching from U.S. Bishops on this issue has been controversial. There
have been two statements made by the Bishops of the United States, the first of which
was issued in 1971, which states:

40 William May, Ph.D. “Methotrexate and Ectopic Pregnancy,” Ethics & Medics Vol. 23, no. 3
(March 1998), 1.
In extrauterine pregnancy the affected part of the mother (e.g., cervix, ovary, or fallopian tube) may be removed, even though fetal death is foreseen, provided that (a) the affected part is presumed already to be so damaged and dangerously affected as to warrant its removal, and that (b) the operation is not just a separation of the embryo or fetus from its site within the part (which would be a direct abortion from a uterine appendage) and that (c) the operation cannot be postponed without notably increasing the danger to the mother.  

About this statement, Dr. May concludes, “This directive clearly authorizes as morally licit the use of partial salpingectomy or total salpingectomy in order to safeguard the mother’s life when there is grave danger of hemorrhaging from the fallopian-tube pregnancy. But it also clearly excludes use of a salpingostomy. At the time this directive was written, the management of tubal pregnancies by methotrexate was not known.”

The more recent 1994 U.S. Bishops’ directive states more simply as follows: “In the case of extrauterine pregnancy, no intervention is morally licit which constitutes a direct abortion.” On the other hand, the document continues, “Operations, treatments and medications that have as their direct purpose the cure of a proportionately serious pathological condition of a pregnant woman (i.e., a salpingectomy) are permitted when they cannot be safely postponed until the unborn child is viable, even if they will result in the death of the unborn child” (47, italics added). In a section on emergency contraception, the new directive also states, “It is not permissible, however, to initiate or to recommend treatments that have as their purpose or direct effect the removal, destruction, or interference with the implantation of a fertilized ovum” (36). The current theological debate seems to have two points of argument: first, what can be inferred from newfound brevity in the 1994 U.S. Bishops’ directive versus the original 1971 directive; and second, what constitutes a direct abortion? These questions shall be pursued later in this paper.

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I. Current Procedures and Moral Considerations for Managing Ectopic Pregnancy

When the diagnosis of an ectopic pregnancy is made, treatment options need to be considered. In some situations, emergency surgery is required to control internal bleeding. If, however, the diagnosis is made early in the pregnancy and prior to tubal rupture, other management options are available. In recent years with the new ability to make an early diagnosis of ectopic pregnancy, there has been a shift from saving the life of the mother (with the high mortality rates now a consequence of the past) to saving the mother’s fertility. This new focus, while it demonstrates laudable concern for the mother and her fertility, also presents new moral considerations in regard to the ectopic baby. There are currently three primary types of treatment options for managing ectopic pregnancy: expectant management, surgery, and medication (chemical). Each will briefly be discussed now with their corresponding moral considerations.

A. Expectant Therapy – Observation

One medical option for ectopic pregnancy is expectant management. This is essentially based on observation and monitoring without active treatment, making no interventions in hopes that the problem will resolve naturally without causing harm to the mother. Estimates on the percentage of ectopic pregnancies that will resolve on their own vary widely from 25% to 60-65%. Understanding that the risk of expectant management is rupture of the ectopic pregnancy (in 1 out of 3 cases) during the observation period and possibly death, “expectant management of an ectopic pregnancy is generally discouraged,” according to one medical source.

“Expectant management of ectopic pregnancy may be appropriate in selected situations. The risk of rupture for an ampullary ectopic pregnancy is thought to be roughly 10% for circulating hCG concentrations less than 1000 mIU/mL. The risk of rupture for an isthmic ectopic pregnancy is thought to be about 10% for a circulating hCG concentration less than 100 mIU/mL (since the space in which isthmic pregnancies must grow is far smaller than for ampullary pregnancies). Therefore, consideration of expectant management for an ectopic pregnancy when hCG concentrations are low is possible… Criteria that are occasionally used in deciding on expectant management include

1. decreasing hCG titers on serial determinations
2. tubal location (rather than ovarian, abdominal, cervical)
3. no evidence of rupture or significant bleeding
4. ectopic mass with size less than 4 cm
5. highly motivated patient with strong desire to avoid both surgery and medical management.”

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46 Cavagnaro, 4.
Moral Considerations

Expectant therapy is sometimes a legitimate moral way of handling ectopic pregnancy. If it involves an ectopic in the abdomen or ovary not yet hemorrhaging, then expectant therapy is advised because the baby may grow to term. However, this management procedure may at other times be imprudent and irresponsible. In still many cases today, by the time ectopic pregnancy is diagnosed, the fallopian tube is already damaged and causing danger to the mother’s life. Such a decision to engage in expectant care would unnecessarily prolong and increase the risk of death to the mother. The fact that the Church clearly allows for salpingectomy (a morally good act) to resolve the problem also clearly calls for it in this situation to minimize what are otherwise further unnecessary risks to the life of the mother, especially since the unborn child is nonviable under current potential medical procedures available. As another point of consideration, albeit secondarily, the blood flowing into the fallopian tube caused by an untreated ectopic can lead to an increase of scar tissue formation and problems with becoming pregnant in the future.

Should the doctor however discover a tubal pregnancy that has advanced to a stage approaching viability, expectant therapy is a good consideration. Thomas O’Donnell, S.J., discussed the moral considerations as follows:

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48 May, Catholic Bioethics, 185.
it is obvious that the element of proportion in the principle of double effect has to be given very special consideration. In such a case special attention must be paid to the proportion between the risk of expectant treatment for the mother and the chances of soon delivering the viable fetus. Unless the danger to the mother notably outweighs the chance for fetal survival, expectant treatment would be the procedure of moral choice.\textsuperscript{50}

B. Chemical: Methotrexate (MTX)

\textsuperscript{50} O’Donnell, \textit{Medicine}, 177.
First used in the 1980s as a management procedure for ectopic pregnancy, Methotrexate, a mixture containing at least 85% of “4-amino-10-methylfolic acid,” is a folic acid antagonist (reversibly inhibiting dihydrofolate reductase which normally reduces folic acid to tetrahydrofolic acid), is usually administered in a single IM injection dose, and consequently interferes with DNA (deoxyribonucleic acid) synthesis and cell reproduction\textsuperscript{51} in the trophoblastic tissue (the outer layer of cells produced by the growing baby that connect it with its mother) of the developing fetus. Methotrexate inhibits rapidly growing cells such as a pregnancy or some cancer cells. “Ectopic pregnancy is not an approved FDA indication for methotrexate. FDA approved uses of methotrexate include cancer treatment (including trophoblast disease, breast cancers and leukemia), psoriasis, and rheumatoid arthritis.”\textsuperscript{52} Despite its lack of FDA approval, the use of methotrexate has been gaining popularity because of its high success rate (resolution in 70-95% of cases treated)\textsuperscript{53} and low amount of side effects.\textsuperscript{54} If an unruptured ectopic pregnancy (tubal, cervical, abdominal and cornual pregnancy) is discovered in early embryonic development (less than 2-4 cm and the HCG is less than 1000-10,000mIU/ml), methotrexate is currently an alternative medical procedure.

\begin{itemize}
\item \textsuperscript{51} \url{http://www.drdaiter.com/hyst_ecco/ecto1.html} (5/15/02).
\item \textsuperscript{52} Ibid.
\item \textsuperscript{53} \url{http://www.advancedfertility.com/ectopic.htm} (5/15/02).
\item \textsuperscript{54} \url{http://www.drdaiter.com/hyst_ecco/ecto1.html} (5/15/02).
\end{itemize}

“Side effects were seen in about 5% of women and typically included gastrointestinal upset (stomatitis [oral ulcers], gastritis, diarrhea, transient elevation in liver enzymes). Significant side effects involving bone marrow suppression, dermatitis and pleuritis have been very uncommon.”
In pregnancy, methotrexate destroys the placental (trophoblast) cells/tissue. “Methotrexate management results in destruction of the growing pregnancy but [its effects are] comparatively slow – often taking 4-6 weeks for complete resolution of the ectopic pregnancy.” Methotrexate management by this method will risk rupture of the ectopic over this relatively long course of management. Interesting to note, according to medical literature, found on the internet at abortionclinic.com, Methotrexate, together with misoprostol [a prostaglandin], is also commonly used today for medical abortions of healthy in utero babies. Working together, “methotrexate creates a folic acid deficiency that stops cell division, resulting in termination of the pregnancy. Misoprostol, the same prostaglandin that is used in conjunction with RU 486, causes expulsion of the embryo” by stimulating uterine contractions.

57 http://www.feminist.org/research/73_meth.htm (5/30/02). According to this web site of the Feminist Majority Foundation, “the Methotrexate procedure is the only medical abortion method that effectively terminates ectopic pregnancy” (bold added).
Moral Considerations

This medical procedure to have the mother ingest methotrexate to cause miscarriage, is similar to the use of a ‘morning-after-pill’ like RU-486 (Mifepristone), only at a later stage in fetal development.

Dr. John E. Foran, Coordinator of Internal Medicine Education at St. Joseph Hospital in Chicago, in a February 1999 article in The Linacre Quarterly, has determined that both salpingotomy and methotrexate “carry the direct effect of fetal termination,” though he acknowledges that there are also some “supportive theologians [who] justify these actions under a laudable intention to preserve both the health and fertility of the mother.”

Today, many Catholic moral theologians disagree on the moral implications of the use of methotrexate to manage ectopic pregnancy. Most recently, Peter Clark, S.J., Ph.D., in the February 2000 issue of The Linacre Quarterly, argues in favor of methotrexate by attempting to differentiate between the embryo and the placenta, or the cytotrophoblast and the trophoblast. He argues that methotrexate is destructive to the trophoblast by stopping future protein synthesis, and that it stops the pathological trophoblastic implanting process that is threatening the life of the mother, but that it did not attack the life of the embryo directly. Under the conditions for the principle of double effect, as a foreseen but non-directly intended effect, the cytotrophoblast dies, while the mother’s life is spared, according to his premise.

But as Dr. May points out, the trophoblastic tissue “is a vital organ [and ‘must be regarded as an integral part of the body of the unborn child’] upon which it is ‘inextricably dependent’” during gestation]... even though it is later discarded... methotrexate ‘manage(s)’ the tubal pregnancy by lethally invading the unborn child’s body and effecting” its death. The obstetric literature and its definition of the placenta seem to agree with Dr. May as well. According to one medical definition of the placenta, “The placenta is a complex tissue and should not be envisioned as simple permiable (sic) membrane.”

Early in gestation, the embryo is small and has correspondingly small requirements for nutrients and for waste disposal systems - it subsists by taking up endometrial secretions and dumping its metabolic wastes into

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58 Mifepristone blocks the action of progesterone, which is necessary to sustain a pregnancy. Without progesterone, the uterus will not sustain the embryo, and since it will not be able to implant, it is then dislodged through the cervix.
59 Foran, 21.
60 Albert Moraczewski, O.P., Kevin O’Rourke, O.P., Patrick Norris, O.P., and others share Clark’s view, while several eminent doctors, including Charles E. Cavagnaro III, M.D., Thomas W. Hilgers, John Bruchalski, and Bernard Nathanson, share May’s view. See May, Catholic Bioethics, 185, and footnote 80.
61 Clark, 12-13.
62 May, “Methotrexate.”
63 Cavagnaro, 5.
64 May, Catholic Bioethics, 184.
the lumen of the uterus. [But] this situation changes rapidly. As the embryo grows and develops a vascular system, it must establish a much more efficient means of obtaining nutrients and eliminating waste products, and does so by establishing an efficient interface between its vascular system and that of its mother. That interface is the placenta. In addition to its primary goal of facilitating transport of nutrients and waste products between mother and fetus, the placenta is also a major endocrine organ (synthesizing and producing hormones).  

66 http://arbl.cvmbs.colostate.edu/hbooks/pathphys/reprod/placenta/ (5/15/02).
The chorionic epithelial cells, which make up the trophoblast, are the outermost layer of the fetal membrane, or the fetal extraembryonic membrane, but, nevertheless, a vital part of the fetal membrane itself.\(^\text{67}\) during its metamorphosis. These are vital parts of the organism at this stage in development, inseparable to the organism itself, though later discarded; and when methotrexate destroys the vital organ of the trophoblastic tissue, it thus kills the embryo itself. Charles E. Cavagnaro III, M.D., in his article, “Treating Ectopic Pregnancy: A Moral Analysis,” in the November 1998 issue of *The NaProEthics Forum*, clarifies that under the principle of totality we are not free to sacrifice our vital organs\(^\text{68}\) needed to sustain life or those of the unborn baby for that matter. Dr. May makes a conclusion:

> Thus, the ‘therapeutic effect’ [of methotrexate] is achieved only by means of its lethal effect on the unborn child. Moreover, the ‘therapeutic effect’ does not benefit the unborn child but the mother, and does so only because its non-therapeutic effect destroys the trophoblast of the unborn child, thus causing its death.\(^\text{69}\)

While Peter Clark, S.J., Ph.D. agrees that salpingostomy is a direct abortion,\(^\text{70}\) key to his argument in favor of the use of methotrexate to alleviate a tubal pregnancy is the argument that the change from the 1971 U.S. Bishops directive to their 1994 directive implies a change in the implicit teaching of the U.S. Bishops that certain procedures do not conform to the moral law.\(^\text{71}\) I think this is an unsubstantiated argument. The clear point at hand is that the new directive, while it is more simply stated, neither directly negates nor contradicts the original directive. Perhaps, the simpler 1994 statement is purposefully meant to invite theologians and doctors to further investigate the truths of these issues of moral management procedures of ectopic pregnancy, and to present their arguments so as to assist the Church in making a more definitive statement regarding the moral implications of managing ectopics in the future. Thus, if this is the case, it’s working.

### C. Surgical Procedures

For those who choose or require intervention, the most common treatment is surgery. Surgery is the treatment of medical problems by mechanical means. This often involves performing operations whereby malfunctioning or abnormal parts are removed or repaired. This has traditionally required making large incisions to get to the part that

\(^{67}\) [http://arbl.cvmbs.colostate.edu/hbooks/pathphys/reprod/placenta/structure.html](http://arbl.cvmbs.colostate.edu/hbooks/pathphys/reprod/placenta/structure.html) (5/15/02).

\(^{68}\) Cavagnaro, 4.

\(^{69}\) May, “Methotrexate,” 2.


\(^{71}\) Ibid., 12.
needs the attention. The incision is the part of the operation that causes all the pain and really contributes nothing to the patient's recovery. In the case of ectopic pregnancy, surgery allows a rapid and usually definite resolution of the pregnancy. There is, however, a new method of surgery that avoids many of the shortfalls of traditional surgical methods. “Minimally invasive surgery is a new approach whereby the same operations are done using specialized instruments designed to fit into the body through several tiny punctures instead of one large incision. Instead of looking directly at the part of the body being treated, the physician monitors the procedure via a special video camera called a laparoscope inserted through one of the small punctures. By eliminating the large incision, much of the pain of recovery can also be eliminated.”

1. Two Surgical Methods

Surgical treatment options for removal of an ectopic pregnancy partially depend on the location of the ectopic pregnancy. There are primarily two surgical methods available – laparoscopy and laparotomy. If surgery is decided upon, then the decision must be made in terms of laparoscopy or laparotomy. This decision depends primarily on the surgeon's expertise with laparoscopy and the operating room's laparoscopic equipment, and not on moral criteria.

**Laparoscopy**
If ectopic pregnancy is treated surgically instead of medically, laparoscopy is the surgical procedure most often indicated today. Laparoscopy involves inserting viewing instruments (a laparoscope) into the pelvis through tiny incisions in the skin in or just below the navel. Using the laparoscope, the physician can remove or repair the fallopian tube and thus remedy the ectopic pregnancy. The advantage of laparoscopy is in terms of postoperative recovery for the woman having surgery. Generally, women prefer the shorter recovery period, reduction in postoperative pain, and smaller incisions in the abdomen associated with laparoscopy. If the tube has ruptured, the physician must perform an emergency laparoscopic procedure. He will then perform a laparotomy.

**Laparotomy**
Laparotomy is an open procedure whereby a transverse (bikini) incision is made across the lower abdomen (approximately 5 cm) and a salpingectomy is usually performed while a salpingostomy might be the option as well. It should be emphasized that either approach (laparoscopy or laparotomy) is medically and morally acceptable and capable of achieving the goals of decreasing morbidity and increasing future fertility.

The decision on whether a laparoscopy or laparotomy is to be performed depends on the specific clinical details, the couple’s desires, the surgeon’s laparoscopic expertise, and

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74 Certain conditions make laparoscopy less effective or unavailable as an alternative. These include massive pelvic scar tissue and excessive blood in the abdomen or pelvis. In some instances, the location or extent of damage may require removal of a portion of the fallopian tube, the entire tube, the ovary, and even the uterus.
the operating room's equipment. The same type of surgery would be done regardless of the size of the incisions made to perform the surgery. In cases where the ectopic pregnancy is already ruptured, surgery is the only option. If the woman has a ruptured ectopic pregnancy and she is hemodynamically unstable, then surgery is required and a laparotomy is performed with a salpingectomy regardless of whether significant damage to the tubal lumen is suspected. The removal of the damaged tube allows rapid control of bleeding and the best chance for continued hemostasis throughout the postoperative period. If the woman has a ruptured ectopic pregnancy and is hemodynamically stable, then surgery is required and laparoscopy is not absolutely contraindicated. But, if the surgeon identifies an ectopic by laparoscopy and is not comfortable performing the necessary surgery on the ectopic pregnancy site through the laparoscope, then the appropriate decision is to perform the surgery by laparotomy. The surgeon in this situation would hopefully have counseled the patient preoperatively that if necessary he would proceed to definitive management by laparotomy.

2. Three Types of Surgery

There are three types of surgery for managing ectopic pregnancy: a salpingectomy, a fimbrial expression procedure, or a salpingotomy.

Salpingectomy When a salpingectomy is performed, the fallopian tube is cut out. In management of ectopic pregnancies today, if future fertility is of no concern, the tube is ruptured, it has irreversible damage, there is overt hemorrhage, there is significant anatomic distortion, severe damage, or if a woman is medically unstable, a salpingectomy is usually performed. Besides simply removing the entire fallopian tube, another option might be a partial salpingectomy with a segmental resection whereby the surgeon only cuts out the affected portion of the tube. A partial salpingectomy may either be a tubocornual anastomosis (the portion of the tube containing the ectopic is removed, and the remaining portion is reattached to the uterus) or a tubotubal anastomosis (a section of the tube is removed and the two severed pieces are then stitched back together) and is usually recommended for an unruptured ectopic in the isthmic portion of the tube (since it causes scarring and subsequent narrowing of the small lumen). However, there is data suggesting that repaired tubes have a higher rate of recurrent ectopic pregnancy (in the same tube).\(^75\)

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indirect result of an attempt to save the life of the mother. Under what has become known as the “Bouscaren approach”, named for its proponent, T. Lincoln Bouscaren, S.J., who first applied the principle of double effect to ectopic pregnancy, and this proposal has become generally accepted by Catholic moral theologians.\(^76\) The threatening risk to the mother, which is usually the case by the time the ectopic is discovered. Second is the moral question of the tubal-saving procedure of anastomosis,\(^76\)


which medical findings conclude causes an increase in the risk of future ectopics.\textsuperscript{77} About this, Father O’Donnell, concluded, “the probability of such a risk must be weighed against the total removal of the tube, particularly if the patient has a remaining intact tube.”\textsuperscript{78} Considering that a child is a gift and not a right, it is important to note that if a mother has undergone a salpingectomy and the other tube is normal, there is still a good chance of conception taking place, although it may take a little longer.\textsuperscript{79}

\textsuperscript{77} http://www.advancedfertility.com/ectopic.htm (5/15/02).

Though “salpingostomy gives a higher delivery rate (76\% vs. 44\% in one study) and also a higher risk of recurrent ectopic than would salpingectomy”, partial salpingectomy increases the chances of future ectopics dramatically.\textsuperscript{78} O’Donnell, \textit{Medicine}, 179.

\textsuperscript{79} http://www.ectopicpregnancy.com/facts.htm (5/15/02).
**Fimbrial Expression**

One procedure for ectopic pregnancy is known as “milking” the pregnancy out the end of the tube. This procedure can damage the tubal lumen and cause unnecessary bleeding, and thus is medically discouraged.80

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One moral theologian, Jesuit Father Thomas J. O’Donnell, as follows: “In regard to ‘milking’ of the embryo out of the distal end of the tube… [the] question of fertility salvage and maternal risk is clearly moot. The direct removal of an embryo or fetus [as with salpingostomy] from its site of implantation (except under circumstances of its viability…) is clearly the direct infliction of a lethal blow which is, in turn, directly destructive of the fetal life.”81

**Salpingotomy (stomy)**

A salpingotomy is the surgical procedure whereby a small incision is made in the fallopian tube and the ectopic pregnancy is removed intact, or if needed, repaired. The surgeon then has two options in finishing the surgery. Salpingotomy occurs when the serosal defect in the fallopian tube is closed with fine, non-reactive, interrupted sutures. Salpingostomy takes place when the serosal defect in the fallopian tube is left open so that it can close by secondary intention – “on its own.” There is nonconclusive evidence that suturing the incision on the tube closed or leaving it open is better,82 but when the tissue is not sewn shut, the hope is that this allows the tissue to persist and resume growing. Persistent ectopic pregnancy: If the tube is saved at surgery, there is some risk that some of the pregnancy remains in the tube. This tissue can persist and resume growing. A mass can form with subsequent rupture and hemorrhage. Case reports of patients who developed symptoms after conservative surgery have generally been at least 10 days after


81 O’Donnell, Medicine, 179.

to close itself minimizing the risk of further scarring; i.e., to decrease the risk of future ectopic pregnancy due to scarring. Even after a surgery that removes the embryo, “persistent trophoblast (placental) tissue can [be left behind and] grow at the ectopic site and require further active management if the fallopian tube is saved. This occurs about 5-10% of the time,”83 in which case, methotrexate is often given to eliminate the remaining tissue.

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**surgery.** Incidence of persistent ectopic: After laparotomy: 3-5% of cases, after laparoscopy: 3-20% of cases (most reports at 5-10%). The best approach is to follow the woman with weekly HCG levels until negative. If a persistent ectopic is diagnosed, methotrexate therapy is usually the treatment of choice.

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(fallopian tube), has always been recognized in the teaching of the Church as a grave moral evil... [A]borting a fetus from a fallopian tube is no different than aborting it from the uterus itself.\textsuperscript{84} He further argued that justifying any surgical procedure to solve the problem of an ectopic pregnancy “must be based on the presumption that the tube itself is so pathologically affected here and now that surgical intervention on the tube itself is indicated.”\textsuperscript{85} Yet, some Catholic theologians today are trying to legitimize linear salpingotomy based on their attempts to apply the principle of double effect. Jean de Blois, C.S.J., et al, feel that in regard to both salpingotomy and methotrexate, “[a]lthough the action that corrects the pathology, whether surgical or medical, is the same action that brings about the death of the embryo, that death is not the direct effect that is intended.”\textsuperscript{86} Another proponent of this perspective is Albert Moraczewski, O.P., who argues that the doctor’s intent in performing a salpingostomy is “to preserve the health and life of the mother,”\textsuperscript{87} and thus the main distinction between salpingectomy and salpingostomy is really in saving of the fertility of the mother.

At issue here is that, in practice, the evil effect of directly removing or killing of the embryo is the direct means to the good effect of saving the mother of double effect. According to Moraczewski’s perspective, “the specific objective and good of that act is the removal of the damaged tissue and the stopping of the enzymatic activity of the trophoblast [whereby]... The embryo, of course, is necessarily also removed in the process.”\textsuperscript{88} But others argue that salpingostomy is indeed a direct and lethal attack on the body of the unborn child. “The direct act of removing the conceptus from the fallopian tube, be it by suction, forceps, or toxin, is the cause of the well intended health of the mother... Therefore, since the immediate effect of methotrexate and salpingotomy (ostomy) is the death of the fetus, the principle of double effect is not applicable

\textsuperscript{84} O’Donnell, \textit{Medicine}, 177-178.
\textsuperscript{85} Ibid., 179.
\textsuperscript{88} Ibid.
because the act is evil,” according to Dr. Foran.\textsuperscript{89} Dr. Hilgers, M.D., adds that he sees “no difference between… a salpingostomy and [a] D&C entering through the cervix to remove the embryo and placental tissue,”\textsuperscript{90} in a normal pregnancy. “removal” of the fetus whereby in the latter of which they claim the death of the embryo is not intended.\textsuperscript{91} Dr. May critiques their position as “euphemistic,” pointing out the clear distinction between an act of medical intervention that is performed on the mother to save her life (salpingectomy) versus an act of abortion under the auspices of a “removal” that is performed on the child to kill it (salpingostomy), explaining:

\textsuperscript{89} Foran, 26.
\textsuperscript{90} Quoted by May, “Methotrexate,” 2.
I similarly hold that managing ectopic pregnancies by the use of salpingostomy and methotrexate constitutes direct abortion, i.e., abortion as killing, inasmuch as these procedures are lethal and are performed on the body person of the unborn child; they are performed on it, not for its good, but for the good of the mother; moreover, they are not necessary to save her life if this is jeopardized by the tubal pregnancy inasmuch as her life can be preserved by a salpingectomy.92

Thus, it is rightly argued that methotrexate, and salpingostomy like it, is a direct abortion and an immoral act.

92 May, Catholic Bioethics, 184.
Conclusion

After examining all the arguments in the moral debates on management procedures for ectopic pregnancies, evidence that the ectopic is not yet causing imminent harm to the life of the mother or when it appears the baby may even come to term. In regard to the tubal-saving procedure of anastomosis in that of a partial salpingectomy, which medical findings conclude causes an increase in the risk of future ectopics, there is great concern as to whether it is worthwhile to save the tube, especially if there is another good tube, in hopes of saving that tube’s fertility potential, all the while, knowing that such a procedure causes the risk of future ectopics. Procedure of performing a salpingectomy to remedy the condition. All points considered, and although not yet definitively declared to be so by the Catholic Church’s teaching authority, salpingostomy, fimbrial expression, and methotrexate, by legitimate accounts and sound principles, are directly abortive procedures and thus deemed immoral. Until the Magisterium makes a definitive statement on this issue, some theologians are all too quick in applying the principle of probabilism, simply because there exists two sides to this moral argument. On the contrary, according to the former executive director of the U.S. Bishops’ Doctrine and Pastoral Practices office, J. A. DiNoia, O.P., while “Conscientious of the moral issues involved (in tubal pregnancy), the (Catholic) Church judiciously deliberates on these issues before promulgating a definitive statement,” and therefore, in the meantime, he agreed, “the Church’s wellspring of moral teachings can act as a guide in such matters;” and for many theologians and doctors, the wellspring of existing Church teaching is clear enough.

In reality, the arguments with unambiguous teaching from the Magisterium,” suggests Dr. Foran, a sentiment shared unanimously by theologians on both sides of the debate. think it is unequivocally better in the meantime to favor the definitive Church-approved procedure of salpingectomy, which is clearly not an evil act, over any other surgical or medical procedure so dramatically debated today even among sound Catholic theologians, and of which could at anytime be definitively declared immoral by the Church, as some expect.

salpingotomy (especially if the method used is a laparoscopy) is the choice of management, Dr. Foran asks, “Does Mother Church wish the conceptus baptized before or after its [so-called] ‘gentle removal’?” On the other hand, in the case of a salpingectomy, baptism is possible and can easily be the priority,


Though “salpingostomy gives a higher delivery rate (76% vs. 44% in one study) and also a higher risk of recurrent ectopic than would salpingectomy”, partial salpingectomy increases the chances of future ectopics dramatically.

93 Foran mentions this problem and argues against it (p. 27), while Clark actually tries to apply the argument (p. 18). The principle of probabilism has been defined by concluding that “if the lawlessness of an action is doubtful one may follow a solidly probable opinion which favors liberty of action, even if the opposite is more probable.” Thomas O’Donnell, S.J. Morals in Medicine (Westminster, MD: The Newman Press, 1960), 25.


96 For details, see Bowring, 9.

97 Foran, 27.
as was indicated by Dr. Cavagnaro, and as it was when my wife and I had our ectopic pregnancy (we had the nurse who assisted the doctor baptize our baby) at the time of my wife’s salpingectomy. possibility of saving both the life of the mother and the life of the baby when he says, “it is morally imperative today to make every effort possible to discover and transplant into the uterus those unborn babies who have, unfortunately, implanted in the fallopian tube or other ectopic site.” But perhaps, as is the case with embryonic stem cell research, the focus is on the cutting edge of science, divorced from its moral implications, and thus while surgical and medical advances move forward to save not only the mother but her fertility, the possibility of actually saving the life of the child in the precarious position of an ectopic pregnancy is hardly given a chance for consideration in modern medical research. What is remarkable is that medical records report two successful transplantations of an ectopic into the mother’s uterus, by Dr. C. J. Wallace, and even more remarkably, these took place in 1915 and 1917! Unfortunately, according to May, this procedure was not attempted successfully again until 1980, and is rarely even considered today. He concludes by saying that, “[s]ince it is possible to save their lives in this way and at the same time care for their mothers, surely there is an obligation to attempt their transplantation from

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98 Cavagnaro, 4.
99 Bowring, 9. As this article discusses in more detail, while seeking medical assistance at a Catholic hospital, salpingostomy was the only surgical procedure offered to us; and I had to insist that the doctors instead perform a salpingectomy, which in the end they referred to as archaic and unnecessarily harsh to the mother’s future fertility, but hesitantly in the end agreed to perform.
fallopian tube to womb."\textsuperscript{103} This needs to be reconsidered and pursued, especially with the certainty that it is not just plausible, but possible. Convincing the medical field to focus on re-implantation is the true moral imperative in the issue of managing ectopic pregnancy today.

\textsuperscript{103} Ibid.