Against Salpingostomy as a Treatment for Ectopic Pregnancy

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Abstract. Ectopic pregnancy, when not resolved naturally, can be fatal to the mother if left untreated. A number of medical solutions exist, though none that save the life of the embryo. This article assesses the ethical value of one of these solutions, the salpingostomy, by examining the moral object of the salpingostomy and whether the procedure constitutes a direct abortion. The author responds with William E. May and Maria DeGoede to salpingostomy proponents Albert Moraczewski, Christopher Kaczor, John Tuohey, and others. Because of the lack of moral certitude that the trophoblast is neither a vital organ of the fetus nor a member of the fetus's body, the author concludes that the salpingostomy may not be considered a licit procedure in the treatment of ectopic pregnancy, and challenges readers to admit that medical science lacks a direct, active solution to ectopic pregnancy. *National Catholic Bioethics Quarterly* 16.1 (Spring 2016): 39–48.

Ectopic pregnancy is an emotionally devastating occurrence for expectant parents: the embryo will almost always perish, and possibly the mother as well. Physicians currently possess three ways to actively manage ectopic pregnancy, two surgical and one pharmaceutical. I demonstrate below that one of these treatments, the salpingostomy, cannot be considered morally licit by analyzing arguments made in its favor, namely those by Albert Moraczewski, Christopher Kaczor and Janet Smith, and John Tuohey, as well as those made against it, namely those by William E. May, Maria DeGoede, and Brian Scarnecchia.

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Ectopic Pregnancy

Ectopic pregnancies, which account for 1 to 2 percent of pregnancies, occur when the recently fertilized embryo implants in somewhere other than the main cavity of the uterus, such as the fallopian tube, ovary, cervix, or abdominal cavity.[1] In rare abdominal implantation cases, the fetus may grow to viability and be delivered; however, 95 percent of ectopic pregnancies are located in one of the fallopian tubes, which never results in fetal viability.[2] A tubal pregnancy poses a serious threat to both the mother and child because it "results in a pathological condition in the fallopian tube, an abnormal infiltration of the fallopian tube by the placental villus of the conceptus, which could lead to death or a serious morbidity for the woman if the fallopian tube should rupture."[3] Thus, management of the ectopic pregnancy is critically important.

Treatments

A method often used for ectopic pregnancies, when discovered early, is expectant management, in which observation alone is employed without medical intervention. Ultrasound imaging and blood human chorionic gonadotropin (hCG) levels are used to monitor the pregnancy. Pregnant women employing this therapy will usually observe a natural resolution.[4] An ectopic pregnancy that does not resolve on its own will require medical intervention. In this case, three treatment options exist: salpingectomy, methotrexate, and salpingostomy. A partial or total salpingectomy is the removal of either the pathological portion of the fallopian tube or the entire tube itself, which also contains the embryo. Methotrexate is a drug that is thought to inhibit the rapidly growing cells of the trophoblast (which will become the placenta), resulting in detachment of the embryo from the maternal tissue.

Salpingostomy involves an incision along the fallopian tube and the removal of the embryo, including as much of the trophoblast tissue that can be removed without damaging the tube. Following a saline wash, the tube may or may not be sutured.[5] Barring any rupturing of the fallopian tube, this procedure is typically done

1. American Society for Reproductive Medicine, *Ectopic Pregnancy: A Guide for Patients*, rev. ed. (Birmingham, AL: ASRM, 2014), 3.

2. Ibid. Considering that a great majority of ectopic pregnancies are tubal, most ethicists refer to tubal pregnancies when they discuss ectopic pregnancy management.

3. Benedict M. Ashley, Jean deBlois, and Kevin D. O'Rourke, *Health Care Ethics: A Catholic Theological Analysis*, 5th ed. (Washington, DC: Georgetown University Press, 2006), 82.

4. ASRM, *Ectopic Pregnancy: A Guide*, 7.

5. D. Brian Scarnecchia, *Bioethics, Law, and Human Life Issues: A Catholic Perspective on Marriage, Family, Contraception, Abortion, Reproduction, and Death and Dying* (Toronto: Scarecrow Press, 2010), 294. Scarnecchia notes a technical difference: A salping*ost*omy requires the physician to suture the fallopian tube after the embryo is removed, whereas a salping*ot*omy lets the tube heal naturally. The moral arguments made in this paper do not depend on this distinction, so for ease of communication, "salpingostomy" will be used, whether the procedure involves suturing or not.

via laparoscopy.[6] Follow-up includes monitoring for continued trophoblast growth, which may be subdued with methotrexate.

Ethics

While some argue that the three above-mentioned medical treatments are morally equivalent because they achieve the same end, Catholic ethicists have made careful distinctions separating one from the other. In the first case, Catholic ethicists generally agree that a salpingectomy is permissible under the application of the principle of double effect.[7] First, the procedure itself operates on the pathological fallopian tube, not on the body of the embryo. Second, the intention of the doctor is to cure the pathology, not to abort the pregnancy. Third, the death of the embryo does not cause the cure of the pathology; rather, the cure of the pathology causes the death of the embryo. Finally, the loss of the embryo's life is proportional to the preservation of the mother's life, which is sure to be lost if no intervention is taken. Thus, most Catholic ethicists who operate under the principle of double effect understand a salpingectomy as morally permissible under these conditions.

Methotrexate, on the other hand, offers a more complicated ethical problem. Methotrexate, which inhibits DNA synthesis in rapidly growing cells, targets the trophoblast when used as an ectopic pregnancy treatment. In a successful application of methotrexate, the trophoblast is prevented from growing and further penetrating the mother's tissue, and the embryo disengages from the maternal tissue and dies.[8] Catholic ethicists are divided about the moral liceity of this treatment. Some argue that the trophoblast is a vital organ of the embryo; since methotrexate carries out a direct attack or mutilation on the trophoblast, it constitutes an illicit means of resolving the ectopic pregnancy.[9] Some say, on the contrary, that the trophoblast is not an organ of the embryo alone but also of the mother, and as such can licitly be targeted by methotrexate. Still others argue that the trophoblast, by implanting in the wrong location, is itself pathological, so methotrexate does not carry out a mutilation but prevents harmful activity by the embryo.[10] The arguments for and against methotrexate treatment are quite similar to those concerning salpingostomy.

Most Catholic ethicists do not favor salpingostomy as a licit treatment for ectopic pregnancy. However, the perceived benefits of salpingostomy over salpingectomy—primarily, that a salpingostomy preserves the mother's fertility better

6. ASRM, *Ectopic Pregnancy*, 8–9.

7. Scarnecchia, *Bioethics, Law, and Human Life Issues*, 293.

8. Maria T. DeGoede, "An Argument against the Use of Methotrexate in Ectopic Pregnancies," *National Catholic Bioethics Quarterly* 14.4 (Winter 2014): 627–628.

9. William E. May, *Catholic Bioethics and the Gift of Human Life* (Huntington, IN: Our Sunday Visitor, 2000), 184–186. All subsequent citations are to this first edition.

10. DeGoede, "Argument against Methotrexate," 630–632. DeGoede analyzes these arguments made by Kaczor and Moraczewski, respectively. She also discusses salpingostomy, since the arguments surrounding that procedure are similar to those concerning methotrexate. I believe this is a valid comparison.

than a salpingectomy and tubal reconnection—make the salpingostomy a desirable medical option, and therefore a prime subject for ethical consideration.[11]

The Key Question

The *Ethical and Religious Directives for Catholic Health Care Services* provides a guiding principle regarding ectopic pregnancies: "In case of extrauterine pregnancy, no intervention is morally licit which constitutes a direct abortion."[12] According to the same document, abortion is "the directly intended termination of pregnancy before viability or the directly intended destruction of a viable fetus. … Every procedure whose sole immediate effect is the termination of pregnancy before viability is an abortion."[13] The lines are drawn clearly for Catholic ethicists and physicians faithful to the magisterium: a direct abortion is not permitted in the treatment of an ectopic pregnancy. The question under consideration, then, is whether a salpingostomy is a direct abortion when used to treat an ectopic pregnancy.

What Is the Moral Object?

To discuss the ethical value of the salpingostomy, one must first understand the moral object at stake. Rev. Albert Moraczewski, OP, argues that the "specific objective and good" of a salpingostomy "is the removal of the damaged tissue and the stopping of the enzymatic activity of the trophoblast."[14] This is based on his notion of a salpingostomy, in which the surgeon "slits the tube carefully and with a pair of forceps he removes the damaged portion of the tube."[15]

William E. May calls his understanding of the salpingostomy into question, arguing that the action of a salpingostomy is not the removal of the damaged tubal tissue, but the removal of the ectopic pregnancy.[16] This more accurate description could still be accomplished in a clean method similar to Moraczewski's description: the tube is opened, and the ectopic pregnancy is removed whole and neat, scooped or pulled out, leaving the tube intact. Still, most importantly, May corrects Moraczewski by noting that the implantation site on the tube is not removed, but remains while the trophoblast is severed.

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11. Femke Mol et al., "Salpingotomy versus Salpingectomy in Women with Tubal Pregnancy (ESEP Study): An Open-Label, Multicentre, Randomised Controlled Trial," *Lancet* 383.9927 (April 26, 2014): 148–489, doi:10.1016/s0140-6736(14)60123-9. The interpretation of this study's findings calls into question the perceived benefits of the salpingostomy: "In women with a tubal pregnancy and a healthy contralateral tube, salpingotomy does not significantly improve fertility prospects compared with salpingectomy."

12. US Conference of Catholic Bishops, *Ethical and Religious Directives for Catholic Health Care Services*, 5th ed. (Washington, DC: USCCB, 2009), n. 48.

13. Ibid., n. 45.

14. Albert S. Moraczewski, "Arguments in Favor of Salpingostomy and Methotrexate," in *Catholic Health Care Ethics: A Manual for Practitioners*, 2nd ed., ed. Edward J. Furton et al. (Philadelphia: National Catholic Bioethics Center, 2009), 122.

15. Ibid.

16. William E. May, "Arguments against Salpingostomy and Methotrexate," in Furton et al., *Catholic Health Care Ethics*, 120.

Yet both of these understandings are generous depictions of a more grim reality. Invasive medical procedures are moving away from the traditional laparotomy (incision to open the abdominal cavity for the surgeon's hands and tools) and toward laparoscopy, in which small incisions are made in the abdomen, through which a camera and remotely operated tools are inserted. Video-recorded examples of salpingostomies performed laparoscopically often do not proceed with a neat slit in the tube and precise severing of the trophoblast, an ideal some may imagine is the reality.[17] Rather, the laparoscopic tools cut open the tube and then remove the pregnancy either by teasing it out, plucking it, or cutting it. The embryo is then suctioned or pulled out through the laparoscopic incisions, a process which may require cutting the embryo into smaller pieces.

Thus, when ethicists cite cutting the trophoblast as the central characteristic of a salpingostomy, one must be mindful that a simple cut and scoop is an ideal depiction of a procedure performed by doctors who are either not concerned about preserving or not able to preserve the bodily integrity of the embryo with laparoscopic tools. However, for the sake of giving the salpingostomy the best argument, I will assume the ideal: the surgeon operates via laparotomy, slits open the tube, and removes the embryo whole by cutting the trophoblast. The moral object at hand, therefore, is the cutting of the trophoblast, the defining characteristic of a salpingostomy.

Removal or Termination?

Is cutting the trophoblast morally good, morally neutral, or morally wrong? To analyze this action alone is a difficult task, since it is difficult to separate the object from circumstances and intentions. Consider the analogy of a kidney donation: If one were to ask whether it is licit to cut out someone's kidney, the question of intention would immediately arise. Why or for what purpose is the kidney being removed? If the organ is diseased, all would agree that this is a licit action. Likewise, if the trophoblast is cut so that the mother may live, one could draw the conclusion that severing the trophoblast is not in itself evil, but dependent on intention and circumstances. Yet is this not the "directly intended termination of pregnancy before viability"? Does it not constitute a direct abortion and is therefore forbidden?[18] By cutting the trophoblast, the doctor is indeed ending the pregnancy. Given current technology, transplantation into the uterus is a rare success and artificial wombs are merely theoretical.

Still, some argue that the severing of the trophoblast and the removal of the embryo constitute a case of abortion as removal (indirect abortion, harming the embryo in an indirect but unavoidable way), and not abortion as killing (direct abortion, harming the embryo directly in the moral object). In the former case, the embryo is removed because of some other circumstance (e.g., cancerous uterus) and later dies, a foreseen but not intended consequence; the latter deals death to the embryo directly.

17. See, for example, the collection, "Ectopic Pregnancy," *MEDtube.net*, accessed June 30, 2015, https://medtube.net/.

18. USCCB, *Ethical and Religious Directives*, n. 45.

But May makes an important distinction:

> There is a problem with the term "removal." If the unborn child can be "removed" by a means that does not kill the child in the process of its removal, then the distinction is valid. But if the means used to "remove" the unborn child are in truth death-dealing or fatal attacks on his or her body person … then it is misleading to speak of his or her "removal." This is a euphemism to disguise the truth that the unborn child is being killed by the means chosen to remove it and *not* merely as a consequence, not intended, of its removal.[19]

While May argues that the very act of a salpingostomy is death-dealing,[20] others respond that the salpingostomy is not intentionally death-dealing, but only leads to death as a side effect or undesired consequence.

Janet Smith and Christopher Kaczor present such an argument:

> [A minority of faithful theologians] maintain that the [salpingostomy] is properly described as an act directed to saving the mother's life by performing a "rescue mission" for the embryo. Since theoretically the embryo might live, the act is not directed at killing the embryonic human being. … Presently we cannot complete the "rescue mission," but some think we should do the portion of it that we can. In doing so we remove the embryo from a place where he or she cannot live anyway and thereby save the life of the mother.[21]

A number of problems arise in this argument. First of all, the salpingostomy is deemed a rescue mission for the embryo, although it is "directed to saving the mother's life":[22] Who is really being rescued in this procedure? Certainly not the embryo, since we admittedly "cannot complete the 'rescue mission.'"[23]

Not only do I think the idea of a failed embryo rescue mission a deluding euphemism, but I would argue that there is no mission at all. There can be no mission to rescue an embryo when we have no way to improve the chances of survival. Indeed, a salpingostomy will "remove the embryo from a place where he or she cannot live anyway,"[24] but the new location is not an improvement: in fact, removal brings about the embryo's death more quickly.

Maria DeGoede makes a noteworthy critique of Kaczor's understanding: "Kaczor limits the object in the direct removal of an embryo to the location from which the embryo is taken and relegates the location into which the embryo is put to

19. May, *Catholic Bioethics*, 182, original emphasis.

20. Ibid., 184–186.

21. Janet E. Smith and Christopher Kaczor, *Life Issues, Medical Choices: Questions and Answers for Catholics* (Cincinnati, OH: St. Anthony Messenger Press, 2007), 55. See also Ashley et al., *Health Care Ethics*, 82. The authors seem to make a similar argument implicitly: "While it would be wrong to detach a fertilized ovum from its normal site of implantation, to detach it from an abnormal site that constitutes a serious pathological condition in the woman's body would seem to be licit."

22. Ibid.

23. Smith and Kaczor, *Life Issues*, 55.

24. Ibid.

mere circumstances. … I argue that the single action of the extraction of an embryo involves both a movement *from* a given location *to* another location."[25] She continues by noting that the location to which the embryo is moved is not (given current medical technology) able to support the embryo's life. She therefore concludes that "the object of the act—the removal itself—is by nature a lethal action performed directly on the person killed. Death is not simply a side effect but a direct effect of the act of removal."[26] For DeGoede, this definition makes the salpingostomy (and, by relation, methotrexate treatment) a direct abortion.

Until there exists (concretely, not theoretically) a way either to preserve an embryo outside the womb or to transplant the embryo into the uterus, we must admit that a salpingostomy is done for the mother's sake, not to theoretically save the embryo. For May, who benefits and who suffers matters, and he argues that a salpingostomy constitutes a direct abortion, since it is "lethal and [is] performed on the body person of the unborn child … not for its good, but for the good of the mother."[27] For May, using lethal force *on the embryo for the sake of the mother* is unethical, and falls under the category of direct abortion. The lethal force May describes is not the same as an action that indirectly causes death as a side effect. Rather, May sees that the salpingostomy "is performed on the *child's body person*, securing its death in the very act of removing it."[28] By dealing death in the process of removal, the salpingostomy fails May's standards for an indirect abortion, and ought to be considered intentional killing. One may argue that the widely approved salpingectomy also results in fetal death and ought to be considered in the same light. However, the action in a salpingectomy is performed on the fallopian tube, not the body of the embryo; consequently, the death of the embryo is indirect.

Status of the Trophoblast

If the trophoblast is pathological, partly or fully an organ provided by the mother, not a vital organ of the embryo, or not a member of the body person of the embryo, then some feel the act of removal directed toward the trophoblast is more easily justified.[29] David Kelly et al. note that in 1995, John Tuohey argued that

25. DeGoede, "Argument against Methotrexate," 634, original emphasis.

26. Ibid.

27. May, *Catholic Bioethics*, 184.

28. Ibid., original emphasis.

29. See DeGoede, "Argument against Methotrexate," 630–635. DeGoede presents the arguments of Kaczor, who suggests that the trophoblast is not an organ of the embryo, even though it contains embryonic DNA and is essential for the embryo's life. DeGoede counters that these criteria affirm that the trophoblast certainly does not belong to the mother, since it contains no maternal DNA and is not essential for her life at all. Her conclusion that the trophoblast is in fact an organ of the embryo is backed by Jay J. Bringman and Robert B. Shabanowitz, "The Placenta as an Organ of the Fetus: A Response to the Consensus Statement on Maternal–Fetal Conflict," *National Catholic Bioethics Quarterly* 15.1 (Spring 2015): 35: "The placenta is an essential 'organ' of the fetus; if removed, the fetus will perish as if you removed the fetal heart or any other integral organ necessary for life." Still, some argue

salpingostomies are morally right.[30] Tuohey's argument was based on a distinction between the trophoblast tissue and the cytoblast tissue, since the former, the outer layer, will develop into the placenta while the latter, the inner layer, will develop into the embryo and fetus itself. This distinction, Tuohey argued, allows one to make a direct attack on the trophoblast in a morally licit way. Kelly et al. point out that, "just as [T. Lincoln] Bouscaren argued that it is always wrong to remove the embryo from the tube but right to remove the tube with the embryo inside, Tuohey argues that though it is wrong to remove the cytoblast directly, it is right to remove the trophoblast with the cytoblast inside."[31]

This argument stands on some questionable assumptions, first of all the comparison of the removal of the fetal trophoblast in a salpingostomy to the removal of the mother's fallopian tube in a salpingectomy. The fallopian tube is part of the mother's body, derived from her cells, whereas the trophoblast, while it may not remain with the body person of the fetus after birth, nevertheless is derived from fetal cells. In a salpingostomy, the physician is acting on something that either *is* the fetus or (closer to Tuohey's thought) *belongs* to the fetus in order to preserve the health of the mother. This is far different from the salpingectomy that Bouscaren discussed, which acts on the mother, for the mother's sake.

Additionally, in an ethically permissible salpingectomy, the fallopian tube is removed not because it contains the problem pregnancy, but because the *tube itself* has become pathological and is *presently threatening* the mother's life.[32] In comparing Tuohey's salpingostomy scenario with the classic salpingectomy case, one may reasonably conclude that he assumes the trophoblast is itself pathological, since it is considered equal in value to the usual target for surgery, the fallopian tube. DeGoede seems to see the same in Moraczewski, the "tacit conclusion that the trophoblastic tissue is pathological in ectopic pregnancy because it is destructive to the maternal tissues."[33] However, both DeGoede and Scarnecchia find this premise questionable.[34]

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that the placenta (and by relation, the trophoblast) does not belong to either the mother or the embryo. Becket Gremmels et al. posit that the placenta is "a quasi-substance that exists in symbiosis with mother and child." See Gremmels et al., "The Metaphysical Status of the Placenta," *National Catholic Bioethics Quarterly* 14.2 (Summer 2014): 295–333.

30. David F. Kelly, Gerard Magill, and Henk ten Have, *Contemporary Catholic Health Care Ethics*, 2nd ed. (Washington, DC: Georgetown University Press, 2013), 111, citing John F. Tuohey, "The Implications of the *Ethical and Religious Directives for Catholic Health Care Services* on the Clinical Practice of Resolving Ectopic Pregnancies," *Louvain Studies* 20.1 (Spring 1995): 41–57.

31. Ibid., citing T. Lincoln Bouscaren, *Ethics of Ectopic Operations* (Chicago: Loyola University Press, 1933).

32. Scarnecchia, *Bioethics, Law, and Human Life Issues*, 293.

33. DeGoede, "Argument against Methotrexate," 630.

34. See Scarnecchia, *Bioethics, Law, and Human Life Issues*, 297; and DeGoede, "Argument against Methotrexate," 630–632.

The connection between embryo and mother involves two sets of tissues: the trophoblast belonging to the embryo, and the receiving tissue belonging to the mother. When an embryo attaches ectopically, whose tissue is at fault? DeGoede makes a strong argument that the pathology lies with the maternal tissue. First, since some deformation of or damage to the maternal tissue (including prior ectopic pregnancies) is often identified as the cause of the ectopic pregnancy, one can conclude that there exists a "maternal predisposition" to developing an ectopic pregnancy.[35] Second, DeGoede argues that the embryo is merely acting according to its nature by implanting in maternal tissue, but the maternal tissue is acting contrary to its nature by accepting the embryo in the wrong place and not moving it along the fallopian tube to the uterus.

Thus, the trophoblast is not pathological but normal, functioning as it ought. If the pathology is found within the maternal tissue, then treatment should be directed towards the maternal tissue. Therefore, "stopping [the trophoblast's] growth and action would not be a good action since it would be aimed against healthy tissue acting according to its nature."[36] In this light, the salpingostomy is unethical.

Whether the trophoblast belongs to the embryo, constitutes a vital organ, or is a part of the body person of the embryo is open for debate among philosophers and biologists. Still, the argument that begins by denying any of these above three propositions begins on weak grounds. We lack the certitude needed to deny these propositions without doubt, and so we lack the certainty that during a salpingostomy the surgeon is *not* operating on a healthy and vital organ or the body of the embryo. We do not have certainty that the salpingostomy is not an attack on the embryo for the sake of the mother, that is, a direct abortion. Without the certainty that the moral object is not evil, arguments that deny the above propositions are themselves weak and uncertain.

No Easy Answers

An ectopic pregnancy is indeed a serious problem, as it can lead to tubal rupture, severe hemorrhaging, and even death for the mother. Though we place great confidence in the state of medical technology and knowledge, we must admit that we do not have an ethical solution or treatment for ectopic pregnancy that would save both mother and child. Watching for a natural resolution while standing on guard against any severe increase in the tubal pathology is the most we can do. Some see the salpingectomy as an ethical solution to the ectopic pregnancy, but it is only such in an indirect way, since the salpingectomy (when performed ethically) should not be aimed toward solving the crisis, inasmuch as this involves termination of the pregnancy. Rather, the salpingectomy is performed to alleviate the life-threatening pathologies in the fallopian tube, which have been caused by the ectopic pregnancy (by no fault of the innocent embryo).

35. DeGoede, "Argument against Methotrexate," 630.
36. Ibid.

The other so-called solutions to the ectopic pregnancy, methotrexate and salpingostomy, fail ethically because they merely terminate the pregnancy by detaching the trophoblast. This is an action directed toward the trophoblast, which we cannot be certain is *not* part of the fetus and a healthy, vital organ. When ending the pregnancy in this manner is the solution to the crisis, it is safe to call the solution a direct termination, or a direct abortion.

Human beings are not masters of reproduction and fertility, and as such we lack an answer to the ectopic pregnancy. It is a mystery to us and must remain that way until we find an ethical way to directly manage it. To wait patiently and watch carefully with God, the source of all life and conqueror of death, is for many people bad medicine. For Catholics, it is the only ethical way to handle a difficult beginning-of-life issue.