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This paper looks at the Catholic justification of medical interventions in ectopic pregnancies. The paper first shows that the way how Double Effect Reasoning is often applied to ectopic pregnancies is not consistent with the way Aquinas introduces this mode of reasoning. The paper then shows certain problems in common defences of the use of salpingectomies. The paper then re-evaluates the medical interventions used in the management of ectopic pregnancies, with both a focus on the aim of the treatment and the timing of the treatment.

**Key words:** Aquinas, ectopic pregnancy, double effect, salpingectomy, self-defence

**Introduction**

An ectopic pregnancy (EP) occurs, ‘when a fertilised egg implants itself outside of the womb, usually in one of the fallopian tubes’ (FT).\[^{[1]}\] Between 1-2% of all pregnancies in the English speaking world are EPs.\[^{[1–4]}\] EPs pose a grave risk to the mother’s life and are almost always fatal to the developing embryo. So far the Catholic Church has not made any definitive pronouncement regarding EP treatments. Nevertheless, Double Effect Reasoning (DER) is often-invoked in both academic and popular writing to highlight the licitness of salpingectomies.\[^{[5–7]}\]

This article will first look at the way DER is usually formulated and how this contrasts with the Aquinas’ seminal self-defence case which is credited for introducing DER. It will then highlight some inconsistencies relating to the application of DER to EP treatments, as well as how to approach removing the embryo from a Thomistic perspective. Finally, the article will discuss the issue of timing the removal of the embryo, which is seldom discussed in the literature. This will lead to the conclusion of which treatments are licit under what circumstances.

**Aquinas and Double Effect Reasoning**

Aquinas is often credited for introducing DER in his *Summa Theologica* (STh II-II q. 64, a. 7), though there is a lot of debate whether what Aquinas proposed is equivalent to the present day shape of this reasoning: its roots can be found in the Old Testament and a long line of scholars after Aquinas contributed to its present day formulation.\[^{[8]}\] DER is a tool for evaluating the licitness of an action when one knows that it will have good and bad effects. DER is usually presented as consisting of four principles:\[^{[5]}\]

P1 The act itself cannot be intrinsically evil
P2 The good effect cannot be realised through the bad effect
P3 Only the good effect is willed
P4 There must be a proportionate reason for accepting the bad effect

This contrasts sharply with STh II-II q. 64, a. 7, where Aquinas answers the question of ‘Whether it is lawful to kill a man in self-defense?’\[^{[8]}\]

‘Now moral acts take their species according to what is intended, and not according to what is beside the intention, since this is accidental […] Accordingly the act of self-defense may have two effects, one is the saving of one’s life, the other is the slaying of the aggressor. Therefore this act, since one’s intention is to save one’s own life, is not unlawful, seeing that it is natural to everything to keep itself in “being,” as far as possible. And yet, though proceeding from a good intention, an act may be rendered unlawful, if it be out of proportion to the end. Wherefore if a man, in self-defense, uses more than necessary violence, it will be unlawful […] Nor is it necessary for salvation that a man omit the act of moderate self-defense in order to avoid killing the other man, since one is bound to take more care of one’s own life than of another’s. But […] it is not lawful for a man to intend killing a man in self-defense, except for such as have public authority […]’

Aquinas highlights intention (P3) and proportionate response to the situation (P4) as the key factors influencing the evaluation of this situation: one can intend to preserve one’s life from danger, and if the death of the one posing the risk to one’s life is a proportionate means to this preservation, then this death is an acceptable consequence. P1 and P2 are omitted – it is hard to imagine how in the case given by Aquinas the good effect of defending oneself could have been achieved not through the bad side-effect of killing, injuring or maiming the aggressor (unless escape was feasible). Of course, an embryo cannot be an aggressor. \[^{[10]}\] Cajetan, later on, explicitly discusses the use of DER in killing an innocent person.\[^{[9]}\] There was also discussion whether a foetus could be considered an aggressor, and whether a child could be killed if they were used as a human shield by an aggressor. \[^{[11]}\] Nevertheless, what is clear is that Aquinas’ reasoning for the justification of self-defence and current DER are
Inconsistencies in Application

When a salpingectomy is justified using DER, the format looks somewhat like this:

P1 Removing a FT is not intrinsically evil
P2 The good effect is mediated via the removal of the FT and not the death of the embryo
P3 Only the FT removal is willed
P4 The survival of the mother is a proportionate reason for accepting the death of the child

This description is often reinforced by an analogy with uterine cancer. In uterine cancer the uterus is removed, and removal of any foetus in the uterus is accidental. By analogy, it is claimed that in an EP the inflamed FT is removed and the removal of the embryo contained in the FT is accidental. It is often highlighted that by removing the FT one does not directly (physically) act on the embryo, and this is what separates salpingectomies from the use of methotrexate and salpingostomies (two other interventions for EP). Yet even the original proponent of this interpretation labelled it as a ‘fine distinction’. Indeed, there are several problems with this reasoning.

Firstly, the uterine cancer analogy is inappropriate because in that case it is the cancerous uterus that endangers the mother’s life, while the foetus has no role to play in the pathology. In an EP, it is the developing child that is (unintentionally) causing the damage to the surrounding tissue and it is only by removing her/him from the FT that the risk to the mother’s life can be removed (if the FT is damaged it might also need to be removed). Secondly, the description of these events concentrates too much on what is happening in the physical order, i.e. on what the surgeon’s instruments are acting: the child or the FT (see e.g. reference 6). Aquinas would most likely not care if one punched the attacker or pushed a boulder that would crush them, but what were the intentions behind these actions and whether they were proportional. Indeed, some authors have highlighted problems with such focus on the physical order (as opposed to the intentional order). If such a focus was correct one could claim that when giving methotrexate one is also not directly physically acting on the embryo, but on the other hand EP embryos located in parts other than the FT (e.g. in the abdomen) could not be removed unless a specific inflamed structure could be pinpointed that could constitute an envelope for the physically indirect removal of the embryo. As such, it is better not to talk about salpingectomies in terms of the removal of FT, but of the removal of the embryo, with the intention to preserve the mother’s life. Indeed, it is the proximate end of the removal of the embryo with the final aim to preserve the mother’s life, which distinguishes EP management from procured abortion, which has the child’s death as the final aim.

Removing the Embryo

Two medical interventions for managing EPs involve the removal of the embryo: salpingectomy (where the embryo is encapsulated in the FT when removed) and salpingostomy (where only the embryo is removed). Methotrexate, which use of is sometimes defended by Catholic theologians targets the trophoblastic tissue which is part of the placenta and is necessary for the embryo’s survival in the womb. Also, methotrexate is potentially mutagenic to the embryo, and as such attacks the embryo in a manner that is not necessary to achieve the safety of the mother (for a critique of this use of methotrexate and salpingostomy see reference 7). One could though raise the objections that whether one removes the embryo via surgery or uses methotrexate the consequences are the same – the death of the child.

Indeed, Jones notes that salpingectomy is likely to violate a 1902 pronouncement of the Holy See. This document declared it illicit to extract a premature foetus from the mother’s womb, for the mother’s and the foetus’ lives should be preserved as far as possible. Jones, nevertheless, notes that we should place more emphasis on recent Holy See documents, because they allow us to clearly understand the principles underlying the earlier pronouncements. Evangelium Vitae demonstrates that what is wrong in a procured abortion is the ‘deliberate and direct killing’ of the embryo, moreover the use of salpingectomies seems uncontroversial among theologians. It is firstly noteworthy, that even the 1902 pronouncement does not prohibit embryo removal in the first place. Secondly, methotrexate does not allow for respectful removal of the embryo; the child is chemically attacked and she/he might exit the womb at an unpredicted time.

With salpingectomies and salpingostomies the child can be removed in a respectful manner and given appropriate palliative care something that could be understood as appropriate care considering that she/he would otherwise die inside the mother’s womb, perhaps with the mother suffering a potentially fatal haemorrhage in the process. Removal of the embryo could be accompanied by her/his transfer to the uterus something that has been attempted, with some success, in the past. In the future transfer to an artificial womb could also become an option. Even therapeutically experimental transfers would, in most cases, not be riskier for the embryo than keeping her/him in the ectopic location and would be a licit way of fulfilling the call to act as good Samaritans to the smallest of children. Yet, before reaching any conclusion about the licitness of any of these interventions we still need to consider Aquinas’ consideration of the proportionality of the response.

When to Act

Considerations of when can an intervention be performed to resolve the EP are often neglected – when does it become reasonable to act because the risks are proportionate to accept the unintended death of the child? NICE outlines what treatment is appropriate under different circumstances and stages of the pregnancy, though the guidelines are concerned with the health of the mother and not ethical considerations of the child.
One the one hand in 40–70% EP cases the embryo dies spontaneously,[13] while on the other hand there were a couple of reported cases of extrauterine pregnancies (neither of which therefore were Fallopian Tube pregnancies) where the babies developed to the age of viability, were delivered surgically and the mothers survived the process.[14] As such, expectant management should be undertaken if there is no foreseeable danger to the mother's health in the near future. Pharmacological and other ways of symptomatic relief should be employed both to keep the mother as safe as possible and to try to advance the EP until the child reaches the stage of viability and can be surgically delivered. This is to some degree a heroic undertaking by the mother, but one that is somewhat characteristic of the parent-child relationship.[15] In many cases the child will die by herself/himself, and their remains can be retrieved, if necessary, by any respectful means.

If the EP progresses to the stage when clinical judgment indicates that it would not be safe for the mother to continue with the EP, e.g. due to a risk of a potentially life-threatening haemorrhage, then child can be removed, and at these later stages, due to the damage to the FT a salpingectomy would be the likely recommended treatment. This reasoning is consistent with the principles of medical triage: to judge when the chances of the baby’s survival are too low and the chances of the mother's death too high to continue focusing on the baby’s treatment. The removed child should be given any appropriate life support and/or palliative care – one can then be sure that one did everything possible for the child, and that the side effect of the child’s death was proportional to the risk of the mother's death.

Early intervention via, salpingectomy or salpingostomy, might become preferable if artificial womb technologies or procedures for ectopic embryo transplantation into the mother's uterus will develop, and if early intervention will facilitate the success of these procedures.

Summary
In the light of Aquinas’ teaching on self-defence in STh; II–II q. 64, a. 7 [12] the most important considerations are those of the final aim of the act, and of the proportionality of the response used. In the case of EP management this final aim is the preservation of the mother’s health, while in procured abortion it is the child’s death. The aims of the composite components of EP management are secondary to this final aim. A proportionate response to the threat presented by an EP is one that preserves the mother’s life, while giving the embryo the greatest chance of survival and treats her/him with respect. The child, who lacking intentions could not be an aggressor, should always be given appropriate life support and palliative care based on sound clinical judgment and respect for their dignity. Currently the strategy that fulfils these criteria the most is expectant management, most likely followed by a salpingectomy. With the advent of new technologies, salpingostomies might also become such a means. Methotrexate is conducive to a respectful treatment of the child, and in the presence of other options cannot be deemed a proportionate response.

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Conflict of Interest and Funding: None

Acknowledgments:
The author would want to thank Fr Robert Gay OP, Genevieve Cox, Benjamin Portelli, Fr Stuart P. Chalmers, Carol Buydos, Louise Hopgood, Nathan Gamble and past reviewers for any suggestions or comments on the various versions of this manuscript.

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