



Commentary

A Costly Choice? In Vitro Fertilization and Those That Terminate: Working towards an Understanding in a Post-Roe America

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Abstract: Abortion continues to be a hotly debated topic in the United States, despite the majority of the populace endorsing it as a legal right. The June 2022 ruling from the Supreme Court turned the legal question about abortion back to the states, which will drastically reduce abortion services in the country and confine abortion access mainly to the coasts. The intersection between abortion and a pregnancy achieved using assisted reproductive technology is one that lacks understanding. While presumed to be rare, as data is not collected in the US about abortions, this intersection exists but is understudied. This paper illuminates the little that we know to date about this intersection as well as where our knowledge is profoundly lacking. Creating a better sense of understanding will enable clinics to counsel patients appropriately when the intersection arises.

Keywords: abortion; IVF; assisted reproductive technology; termination of pregnancy; selective reduction; in vitro fertilization



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Citation: Bindeman, J. A Costly Choice? In Vitro Fertilization and Those That Terminate: Working towards an Understanding in a Post-Roe America. *Women* **2022**, *2*, 176–179. <https://doi.org/10.3390/women2030018>

Academic Editors: Tomer Avidor-Reiss, Samantha Beth Schon, Angela K. Lawson and Deborah Ikhen-Abel

Received: 25 January 2022

Accepted: 18 July 2022

Published: 21 July 2022

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1. Introduction

In 2017 in the United States (the year of most recent records), 18% of pregnancies ended in elective abortions according to the Guttmacher Institute [1]. The Society for Assisted Reproductive Technology reported a total of 293,672 cycles for 2019 (according to preliminary data—data for 2017 was unable to be accessed) [2]. Initially, these two groupings seem to be unrelated, as how could a person who undergoes the time and expense of in vitro fertilization to achieve a pregnancy also be someone who might choose to abort? However, using the IVF process to attain a pregnancy, and electively ending the pregnancy is a coupling that occurs, and potentially more often than we know. This paper will explore the reasons that people might choose to terminate IVF pregnancies.

Examination of the area of termination of pregnancy within the realm of the literature available tends to be reduced to three discrete scenarios. The first potential circumstance involves a person becoming pregnant and having the pregnancy impact either the pregnant person's health or testing revealing the determination of a fetal anomaly. Anomalies can range from cosmetic to life limiting in terms of presentation, and not all discovered anomalies lead parents to choose to terminate, as some couples choose to continue the pregnancy. The relevant second scenario that exists (which tends to be more common within the world of assisted reproduction) is when a pregnancy consists of two or more fetuses. This group also contains two subgroups: one where twins or triplets (or more) are not desired in terms of the number of children to raise (called multifetal reduction), whereas the second subgroup pertains to those that discover something anomalous within one fetus that could potentially impact the entire pregnancy or impact the fetus affected, so a multiple pregnancy is selectively reduced [3]. The final scenario involves a person becoming pregnant and then not wanting to remain pregnant, without any medical reason or justification for that pregnant person or the developing fetus.

2. Discussion

The most known circumstance in which someone who has undergone IVF and then chooses to terminate the pregnancy would be because of a discovery of a fetal anomaly or

a medical necessity for the pregnant person in which remaining pregnant directly impacts their health. The availability of technology such as preimplantation genetic testing for aneuploidy (PGT-A) shows that when the technology is utilized, it provides a greater sense of certainty of the transfer of an aneuploid embryo, thus strengthening the possibility of a live birth [4]. Given that the additional price tag of PGT-A in the United States (even in states that mandate fertility coverage by insurance) may serve as a barrier to use of the technology, a transferred embryo might be determined only during the time of pregnancy to contain a chromosomal anomaly. Rates of miscarriage outside of assisted reproductive technology (ART) stand at about 20–50% of pregnancies [5], and it can be expected that without embryonic testing at the blastocyst phase, these rates would be true within IVF pregnancies [6]. For those pregnancies that do not end in spontaneous abortion (or miscarriage), the non-invasive prenatal test (NIPT) or the nuchal fold translucency (NT scan) might bring to light a pregnancy that has continued and also contains a chromosomal anomaly. Such testing is typically carried out at the end of the first trimester [7]. This provides one point in time when new information comes to a pregnant person post-ART. Depending on numerous factors (the diagnosis and prognosis, religious beliefs, and access to treatment), a person might choose to terminate for medical reasons.

Nuances in terminating a pregnancy for medical reasons due to the discovery of a fetal anomaly include several themes, explicated by Hodgson et al., such as: shock (even after preliminary results suggest an anomaly); difficulties in waiting for final results; previously held religious beliefs, and decision-making [8]. A meta-synthesis of qualitative literature focuses the decision-making points around three central themes: how special the pregnancy is to the parents; the hope that the pregnancy would end well despite the diagnosis; and considerations around the baby's suffering [9]. Such a diagnosis and decision-making process is often considered to be “emotionally traumatic and [a] challenging experience” [9]. These emotional experiences often mimic those during IVF [10] thus compounding what had already been an emotionally complex situation in obtaining the state of pregnancy. Discovering a fetal anomaly and terminating is met with the additional psychological burden of potential symptoms such as: guilt or humiliation, low self-esteem, anxiety, anger, second-guessing the decision, and the fear of judgement from others [11]. While some of the emotional aspects might overlap between termination of pregnancy for medical reasons and ART, terminations in these cases are not based upon emotional considerations solely, but the emotional impact based upon the data of an anomaly that a family has received. Additionally, there are the themes of mourning being a lifelong journey [12] for those that terminate for medical reasons as well as the continued sense of one's body being deficient, [12] a similar theme that is echoed during the assisted reproductive technology experience [13].

The second scenario in which people undergo IVF and subsequently choose to terminate that pregnancy entails the occurrence of a multiple pregnancy. In some ways, this category also parallels the category that has previously been discussed. In these instances of a multifetal pregnancy, it is quite possible that the entire pregnancy is not terminated, but only a part of it. In the case of a multifetal reduction, the developing fetuses are assumed to be normal. Such terminations can occur for a variety of reasons including (but not limited to): maternal health considerations, gestational impact on fetal health, and socio-economic considerations [14]. There are mixed assessments about the necessity to reduce twins to singletons vis a vis maternal health [15]. Luo et al. found an increase in the take-home baby rate after reducing [16]. The other half of the parallel with multiple gestations is selective reduction, which is more akin to terminating (part) of the pregnancy for medical reasons. A piece that is different from those terminating a singleton pregnancy for medical reasons is that with a selective reduction, parents feel both grief for the baby they lost while simultaneously feeling anticipation or excitement for the baby that is continuing [3].

Finally, the instances where an individual or couple pursues assisted reproductive technology to achieve a pregnancy and then chooses to abort that pregnancy is one that is incomprehensible to many people, including the clinics that worked to help achieve

pregnancy in the first place. There is scant research for this scenario as data is not mandated within the United States about abortion and potential reasons. Anecdotal reasons from online news sources include individuals changing their minds about parenting, their life situation changes (i.e., their marriage breaks up), or for extreme morning sickness [17]. According to the same article, this is a rarity seen by clinic directors.

In 1998, an opinion article was written by Leroy Edozien about the voluntary termination of pregnancy after IVF, as the mere idea of it, for the majority of people that struggle with an infertility diagnosis, is inconceivable [18]. The numbers cited in various countries at the time do not always distinguish why the IVF pregnancy was terminated: be it for fetal anomaly or other reasons. However, the French have an IVF registry where terminations are recorded as “therapeutic” (meaning for a fetal anomaly) or “voluntary” [19]. In a five-year period in France between 1986 and 1990, only five pregnancies (or 0.1%) were voluntarily terminated out of a total of 7024 clinical pregnancies [19]. The study concluded that understanding why people might voluntarily end an IVF pregnancy is an important factor so that appropriate counseling (either before or during the discernment process) can be offered [19].

Adjacent research looks at people who undergo IVF successfully and give birth, and then choose abortion in a spontaneously occurring pregnancy. In a study by Hemminki et al., it was determined that abortions that occurred did so within 48 months of a participant’s last IVF cycle, indicating that assisted reproductive cycles were not the ones being terminated [20]. This was research conducted in Finland, who, like France, maintains a register of those that choose abortion as well as those that undergo IVF.

Research is clear that IVF is a stressful endeavor for individuals and couples [21,22]. Up to 60% of women (both in the US and globally) will discontinue treatment prior to achieving pregnancy with the decision points cited as emotional factors [23]. This was the case with those that had insurance coverage for treatment as well as for those without, though people who had insurance coverage were more likely to come back to treatment [22]. Typically, pregnancy after IVF is experienced as a relief [21] compounding the sense of a lack of understanding for those that would voluntarily terminate.

3. Conclusions

It is clear from the dearth of research that much continues to be unknown about why people who undergo IVF to obtain pregnancy will subsequently terminate that pregnancy. In the United States, abortion rates are not kept as outcome measures for pregnancy given the highly conflictual nature of abortion [24] and so rates are based on estimates. Rates for IVF are self-reported by clinics and the data is collected by the Society for Assisted Reproductive Technology. While terminating after an IVF-specific pregnancy is anecdotally rare, there is not a true sense of how often it occurs and the considerations taken before reaching that decision. Further research is necessary to gain a greater understanding of why individuals might choose to terminate a pregnancy conceived using assisted reproductive technology. Additionally, this newfound understanding will assist clinic staff, OB-GYNs, and mental health professionals in being able to guide and participate in conversations where individuals are contemplating terminating an IVF-conceived pregnancy as well as any potential policies that might help both clinics and patients navigate this unique circumstance. With the ability to access abortion being left up to states, the element of gestational age becomes another component. Understanding the complexities involved will enable patients to make informed health decisions, particularly when there is an external pressure of time.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The author declares no conflict of interest.

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