4.3.5 Ethical Considerations for the Reduction of Multifetal Pregnancies

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Educational Objectives:

1. To increase awareness of the ethical issues associated with multifetal pregnancy reduction;
2. To highlight the potential ethical distinctions between singleton abortion and multifetal pregnancy reduction;
3. To explore whether different types of fetal reduction procedures present distinct ethical issues that require unique ethical justification, drawing attention to the utility of ethical analysis of this issue in practice;
4. To probe health care practitioners about the ethical responsibilities emerging from current assisted reproductive technologies and practices.

Case

Ms. Matthews is a 34-year-old elementary school teacher. She has been married for six years and has had no children. Ms. Matthews and her husband have been attempting to become pregnant for the past two years and, after no success, decide to visit a fertility specialist. Following an infertility work-up on both Ms. Matthews and her husband, no definitive cause for the couple’s infertility is found. The fertility specialist recommends in vitro fertilization (IVF) as an alternative means of conception.

Ms. Matthews expresses a desire to transfer multiple embryos during IVF, citing her advancing reproductive age and her preference of minimizing the number of IVF cycles. After being counselled by her fertility specialist about the potential risks associated with the transfer of multiple embryos, including multifetal pregnancy and its sequelae, Ms. Matthews persists in her desire to ‘maximize the chances of a successful pregnancy,’ stressing that she 'doesn't want to go through all this trouble just to put one or two embryos in.' Ms. Matthews, in consultation with her reproductive health team, decides to transfer three embryos during IVF. The procedure is successful and Ms. Matthews becomes pregnant with triplets.

In the tenth week of her pregnancy, Ms. Matthews visits a special pregnancy department within a large teaching hospital. She is informed that being pregnant with triplets carries particular risks, and that, generally speaking, the higher number of gestated fetuses in a pregnancy increases the risk to the pregnancy, the gestated fetuses, and resultant offspring. The patient, while thrilled to have conceived triplets given her reproductive history, is concerned about the fate of her pregnancy and feels she should do anything and everything to ensure a healthy pregnancy and birth. After researching multifetal pregnancy outcomes on the Internet, the patient becomes aware of the possibility of reducing the
number of fetuses in her pregnancy as a means to improve outcomes. She meets with you and requests a reduction of the number of fetuses in her pregnancy.

**Questions**

1. What medical, ethical, or other considerations exist when determining whether the patient’s pregnancy should be reduced?
2. If you agree to provide a pregnancy reduction for the patient, you could reduce the pregnancy to twins or a singleton. What factors do you think ought to be considered when determining which route to take?
3. Do you think the reduction of the number of fetuses in a multifetal pregnancy is ethically distinct from terminating a singleton pregnancy? If so, in what ways? If not, why not?
4. Do you think it would be more or less ethically justified to reduce the patient’s pregnancy had she been pregnant with a higher number of fetuses (e.g., quintuplets)? Why or why not? What about if she had been pregnant with twins?
5. What role does evidence suggesting that multifetal pregnancies carry risks of harm to the pregnancy, fetus(es), and resultant offspring play in your consideration of whether or not to perform a reduction? Is there such a thing as an ‘elective’ reduction that is done for primarily non-medical reasons? If so, would such a procedure be ethically permissible?

**Discussion**

The proportion of multifetal pregnancies has increased in the past few decades, a trend most attributable to the increased use of assisted reproductive technologies (ARTs).1 For instance, the incidence rate of twin pregnancies has increased by 50%-60% since the mid-1970’s, with the rates of high order multifetal pregnancies (triplets or more) increasing by 300%-700%.2-3 While multifetal pregnancies can occur for various reasons, it is estimated that 30% to 50% of twin pregnancies and at least 75% of triplet pregnancies occur as a result of ARTs.2-3 In Canada, the rate of multifetal pregnancies resulting from IVF alone is approximately 30%.4

Multifetal pregnancies are of significant concern because adverse obstetric, perinatal, and neonatal outcomes increase with the number of fetuses in a pregnancy.5-6 For instance, pregnancy loss before viability is estimated to account for 10% of twin pregnancies, 18% of triplet pregnancies, 25% for quadruplet pregnancies, and 50% for quintuplet pregnancies.7 When compared to singleton pregnancies, multifetal pregnancies carry increased risks of newborn prematurity, preeclampsia, isolated hypertension, and low birth weight.7-9 Moreover, when compared with women carrying singleton pregnancies, women carrying multifetal pregnancies are at increased risk for hypertensive disorders, Caesarean section, postpartum hemorrhage, cardiovascular morbidity, prolonged hospital stay, the need for hysterectomies and blood transfusions, stroke, and death.10

In order to mitigate the risks associated with existing multifetal pregnancies, some physicians and patients opt to reduce the number of gestated fetuses through multifetal pregnancy reduction (MFPR).7 While the benefits of multifetal pregnancy reduction depend in part on the method, operator, and data set that are evaluated, there is increasing
evidence demonstrating that fetal reduction improves obstetric, perinatal, and neonatal outcomes. However, while fetal reductions have emerged as a ‘solution’ to the sequelae of assisted reproductive technologies, many have recognized that the solution itself is morally contentious. While much scholarship has been dedicated to reproductive ethics (and, most notably, the ethics of singleton abortion), there is a relative dearth of awareness or discussion of the ethical issues and challenges that health care practitioners in Canada face with respect to the creation and subsequent reduction of multifetal pregnancies. As the utilization of ARTs increases, there is an ethical impetus to increase awareness of the ethical issues and considerations associated with fetal reduction.

**Fetal reduction and singleton abortion**

It is not surprising that many of the arguments that have emerged in the abortion debate are similarly deployed in favour of, or in opposition to, fetal reductions (e.g., traditional 'pro-choice' and 'pro-life' arguments). However, there is at least some reason to believe that distinct ethical features or justifications may exist between fetal reduction and singleton abortion. For instance, in a 2007 Committee Opinion, the American College of Obstetricians and Gynecologists’ Committee on Ethics suggested that the ethical issues involved in fetal reductions may be distinct from those involved in abortion as the intent is different: "A woman has an elective abortion because, for many complex and varied reasons, she does not wish or feels unable to have a child. In contrast, an infertility patient who has a multifetal pregnancy undergoes fetal reduction precisely because she does wish to bear a child" (p 1514). Similarly, a 2007 Washington Post article focusing on fetal reductions reported that Greenbaum, a sonographer working in a clinic that provides reductions, felt that in contrast to clinics providing abortions, "[h]ere it is completely different. You are helping people have healthy babies." Nonetheless, several commentators have argued that fetal reduction procedures, no matter the type, require no additional ethical justification in a society where abortion is available on demand. Indeed, some argue that the traditional legal arguments justifying abortion—appeals to women’s privacy, well-being, and the legal determination that a fetus does not have any rights—similarly apply in cases of fetal reduction. Conversely, others have claimed that a woman’s determination of whether or not she is pregnant does not necessarily extend to the determination of how many fetuses she is pregnant with. Thus, an important consideration in this debate concerns whether the arguments invoked in the context of abortion can be similarly applied with respect to the ethics of fetal reduction. What is pertinent, then, is to clarify the morally relevant similarities and differences that might exist between singleton abortion and fetal reductions. There is no doubt, however, that a similarity between singleton abortion and fetal reduction—namely, the fact that both procedures involve the termination of a fetus—may be the cause of similar ethical controversy.

**Pregnancy size**

A survey conducted in 1991 asked health care professionals, clergy, and ethicists about their attitudes toward fetal reduction procedures. The survey found that attitudes toward reduction became more favourable as the number of fetuses in a pregnancy increased. While it would likely not be contentious to argue that risks are always present in multifetal pregnancies no matter their size, some may argue that the ethical justification for fetal
reduction becomes more difficult to defend when less risk of harm exists. In response to such an argument, some have suggested that such a position may be too myopic in that it limits a conception of harm to that which is solely biological. For instance, McClimans argues that, by viewing ‘health’ as a simply biological concept, desiring a ‘healthy’ child would preclude the desire to raise a child with financial security or adequate attention and emotional support. Within such a biological conceptualization of health, threats to financial or psychological desires and needs may not constitute a harm and may therefore serve as inadequate justification for fetal reduction. Thus, it is of importance to determine precisely which justificatory conditions ought to be met for fetal reduction procedures to be deemed ethically permissible.

It may be proposed that the evidence for the clinical effectiveness of fetal reduction procedures ought to be used to adjudicate between competing claims of moral permissibility. For instance, some may argue that evidence of clinical effectiveness alone ought to be used to determine whether reductions of different orders (higher or lower) ought to be permitted, or whether one ought to reduce a high order pregnancy to twins or a singleton. While we no doubt require more evidence to inform the medical appropriateness of fetal reduction procedures, no amount of clinical evidence will provide a moral panacea. In addition, empirical information beyond clinical effectiveness ought to be carefully considered in this discussion. For instance, the longitudinal impacts of reduction procedures must continue to be studied and considered, including potential psychological, biological, and social impacts, and the impacts reduction may have in regard to familial relationships. It will be important to carefully reflect on empirical evidence regarding the effectiveness and safety of fetal reduction procedures to inform the ethical debate, but it should not preclude the debate from occurring.

Professional responsibility

Some commentators suggest that the majority of multifetal pregnancies ought to be considered iatrogenic in nature as they are caused by assisted reproductive technologies. This claim may sometimes contain an implicit (or explicit) argument that consists of a “you broke it, you fix it” mentality (p 60). This has led some to argue that, by classifying multifetal pregnancies and their associated risks as iatrogenic, reductions ought to therefore be considered a part of the fertility process. Under such a view, fetal reduction may not only be ethically permissible but even ethically obligatory if requested by a patient. Conversely, it may also be argued that fetal reduction should not be permissible in cases where physicians and patients were aware of the risks associated with assisted reproductive technologies yet decided to use them anyhow. This raises important concerns about the professional responsibility of the medical community to patients with multifetal pregnancies.

While it is certain that the irresponsible use of assisted reproductive technologies is ethically dubious, it is less clear that the iatrogenic or spontaneous nature of a pregnancy ought to provide the grounds for the moral justification for or against fetal reductions. While preventive ethics might direct us to prevent multifetal pregnancies from occurring if it is within our power to do so, the obligations to pregnant women, irrespective of their means of becoming pregnant, ought to be unwavering. That is, professional obligations of beneficence and nonmaleficence do not disappear, nor do they weaken or strengthen, depending on the history by which a patient finds his or herself in need of medical care.
**Assisted human reproduction oversight**

In light of the risks that assisted reproductive technologies can pose to the public’s health, several countries have developed policies that restrict, control, and/or fund ARTs in an attempt to ameliorate those risks. For instance, in the United Kingdom, regulation limiting the transfer of only two embryos per IVF cycle resulted in a nearly 10% decrease in multifetal pregnancies. Moreover, the provision of state funding for IVF resulted in a 60% reduction in twin rates in Belgium within its first year of implementation. In 2006, elective single embryo transfer was performed in just 2.8% of all IVF cycles in Canada, while double embryo transfer was performed in 55.8% of cycles. Increased oversight and control of ARTs in Canada may be one way fetal reductions and their associated ethical issues, including those raised in this case, could be altogether avoided.

Due to a sometimes ambiguous division of legislative authority between the federal and provincial/territorial governments with regard to public health in Canada, either jurisdiction is able to enact health-related legislation depending on the case, issue, or scope being addressed. The legislative authority in the domain of assisted human reproduction has been hotly contested in the past decade, which has resulted in a constitutional challenge to the Supreme Court of Canada (SCC) following the passage of the federal Assisted Human Reproduction Act. As a result of the challenge and subsequent 2010 ruling that much of the Act was unconstitutional, provinces and territories are again charged with addressing this issue. As a result, across Canada there is little or no legal restriction or oversight of the ART practices that often lead to multifetal pregnancies.

Besides legislative authority, the moral authority to control procreative activities has also been contested. These debates typically surround the moral legitimacy of restricting individual procreative liberties and rights for the sake of promoting and protecting public health. Conversely, the issues of access to fertility treatment, equity, and the right to procreate have catalyzed debates regarding the need for uniformity and regulation of assisted human reproduction across provinces and territories in Canada. Due to the lack of (consistent) regulation and oversight in this area, increased ethical awareness is particularly important. In the absence of improved ART practices and oversight, fetal reduction procedures continue to represent an important yet ethically controversial step in mitigating the adverse outcomes associated with multifetal pregnancies.

**Conclusion**

The increased use of assisted reproductive technologies in the past few decades has led to an increased proportion of multifetal pregnancies, which is concerning due to the latter’s correlation with adverse obstetric, perinatal, and neonatal outcomes. Evidence has increasingly demonstrated that multifetal pregnancy reduction has the ability to improve obstetric, perinatal, and neonatal outcomes for multifetal pregnancies, and as such, fetal reduction may be more frequently requested by patients or, indeed, may be considered by some to be medically indicated. There is therefore an ethical impetus to increase awareness of the ethical issues and considerations associated with these procedures.

This discussion has considered some of the ethical issues involved in multifetal pregnancy reduction. The case and the subsequent questions and discussion asked whether ethical distinctions ought to be made between singleton abortion and multifetal pregnancy
reduction, the reduction of high order and low order pregnancies, the reduction of pregnancies to twins and reductions to a singleton, the reduction of spontaneous multifetal pregnancies and the reduction of multifetal pregnancies caused by ARTs, and whether 'elective' reductions truly exist and if so, whether they are ethically permissible. In sum, this case was meant to probe the reader to clarify the morally relevant features of fetal reductions and to specify the conditions that must be present for different forms of fetal reductions to be considered ethically permissible.

While abortion has historically raised many ethical issues, it is clear that multifetal pregnancy reduction requires unique ethical consideration due to the fact that fetal reductions aim for a successful birth. Careful reflection about whether this distinction ought to be considered morally relevant in the Canadian context, where few restrictions exist for singleton abortion, must occur. In any case, traditional arguments in favour of, and in opposition to, singleton abortion may still be present in the debate about the ethics of multifetal pregnancy reduction, and thus require scrutiny.

It is important to recognize that multifetal pregnancies can present in different forms (e.g., low order, high order) and multifetal pregnancy reductions can be pursued with different intended outcomes (e.g., reductions to twins, singleton), and these factors may be interpreted by some as raising unique ethical considerations. Some evidence suggests that there is higher support for the reduction of high order multifetal pregnancies due to their inherent risks, or that reduction to twins rather than a singleton is preferable because twins do 'well enough,' but it is not clear that any multifetal pregnancy is without risk. As such, health care practitioners ought to reflect critically upon the role of evidence and the nature of harm and benefit for all multifetal pregnancies and multifetal pregnancy reductions.

For the purposes of clarity and brevity, several other closely related ethical issues have been purposively excluded from this discussion, such as the selection of sex when determining which fetus to terminate during a fetal reduction, the identification and termination of a fetus in a multifetal pregnancy due to a suspected or confirmed fetal anomaly (commonly referred to as 'selective termination' or 'selective reduction'), and the gestational age when reduction occurs. These issues, while also of great significance to the ethical justification of fetal reduction practices, are addressed elsewhere in the literature on sex selection, selective termination and disability ethics, and the ethics of late-term abortion, respectively.

References

Multiple Births

Further Reading

Short Biography
Maxwell J. Smith is a PhD Candidate in Social and Behavioural Health Sciences and Bioethics at the Dalla Lana School of Public Health and Joint Centre for Bioethics, University of Toronto. Max is a Canadian Institutes of Health Research (CIHR) Fellow in Public Health Policy, a Lupina Research Associate Fellow with the Comparative Program on Health and Society at the Munk School of Global Affairs, University of Toronto, and holds a CIHR Frederick Banting and Charles Best Canada Graduate Scholarship and the CIHR Douglas Kinsella Doctoral Award for Research in Bioethics. Max has an Honours Bachelor of Arts in Bioethics from the University of Toronto and a Master of Science in Bioethics from Union Graduate College and the Ichan School of Medicine at Mount Sinai, where he also holds an Adjunct Faculty position.