Chapter 13

Multifetal Pregnancy Reduction

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Reproductive technologies, specifically *in vitro fertilization (IVF)*, have made it possible for infertile couples to have children; ironically, IVF often brings these couples face to face with abortion: Assisted reproduction often results in the implantation of multiple embryos, and the subsequent expectation by medical staff that the number of fetuses will be reduced in a process known as multifetal pregnancy reduction (MFPR), by which selected fetuses are terminated by means of heart puncture.

The justification for aborting fetuses in these cases is that it will increase the chances of carrying at least one embryo to term, but the research on which this is based is usually carried out by the practitioners and advocates of the procedure. Furthermore, analysis of the results has not shown MFPR to actually improve the chances for a healthy birth. Many critics call for a curb to limit the number of embryos fertilized and implanted.

There is also the question of whether MFPR involves "informed consent" on the part of the parents because the medical profession has tended to assume that parents would not want several babies and doctors may not present parents with a choice about how many babies they can keep. The aftermath of MFPR for some parents, now becoming apparent as they seek therapy, is feelings of pain, frustration, sadness, and guilt and a sense that they have been coerced by the medical staff into aborting some of their babies. Up to this point, there are few studies looking into the impact of multifetal abortions on family life with the surviving babies. It is clear that further research needs to be done on the wider impact of MFPR.

Multifetal Pregnancy Reduction

Just as reproductive technologies have changed obstetrical practice, so too have they led to a type of abortion which affects a different population of pregnant women from those who do not want to be pregnant. These women want very much to have a child, and it is ironic that they and their partners who are suffering the problems of infertility must often come face-to-face with abortion.

There is a large literature detailing the psychological distress experienced by couples who wish to have children but who cannot conceive naturally. The following quotation captures the feeling poignantly:

> You can't have a baby – a numbness beyond desperation. Baby lust – do you know how it feels to want a baby so much that every other activity in life, everything you've worked for and planned for – jobs, friends, family, marriage, seem hollow as a tin can? To be in emotional pain so extreme that when you see a pregnant woman's stomach or a newborn baby the pain becomes physical?[1]

Laffont and Edelmann concluded that long-term infertility that is treated by *in vitro fertilization (IVF)* superimposes cycles of hope and disappointment on the already depressed and vulnerable psyche of couples who are having difficulty conceiving.[2] The process can take up to nine cycles of treatment because few couples conceive on the first attempt. Indeed, the overall success rate of IVF is a matter of continuing controversy. Oddens and colleagues found that for women involved in this treatment psychological well-being may deteriorate after unsuccessful treatment cycles.[3] Both partners experience psychological swings during treatment, and Boivin and colleagues observed that "Spouses appeared equally...to respond...with ambivalent feelings involving emotional distress and positive feelings of hope and intimacy."[4] But the literature suggests that women report greater negative reactions to IVF failures than men. The

coping mechanisms utilized by some women to face the cycles of failure, identified by Lukse and Vacc,[5] are the same denial and desensitization often seen in post-abortion psychopathology.

Following this cyclical emotional roller coaster, the fortunate couple may find themselves pregnant. In increasing numbers, however, these pregnancies are "higher order" with three or more implanted fetuses. "The international rates of triplet or higher order pregnancies after assisted reproduction are 7.3 per cent at conception."[6] In order to deal with such pregnancies, women must put themselves in the care of high-risk obstetrical experts who know the latest research on the new technologies used in the management of multiple pregnancies.

One of these new and highly recommended approaches is known as *Multifetal Pregnancy Reduction (MFPR)* – a form of abortion in which the most accessible fetuses are terminated by a needle stab through the heart and the overall pregnancy number is reduced to twins or a singleton. The dead fetuses remain in utero until the delivery of the living ones. This approach was developed by genetic researchers, some of whom are active participants in the prenatal diagnostics aspects of the *Human Genome Project*.

While many researchers end their studies with a call for curbs on the number of embryos that are implanted (which would reduce the likelihood of higher order multiple births to near-natural levels),[7] many other continuing studies are committed to the improvement of the techniques for MFPR. What is interesting about the studies in this area is the high degree of overlap between researchers. The twelve most prolific writers in this field all cite each other and often collaborate on research.[8] This self-referral or "incestuous citation"[9] is similar to that found in the general abortion literature. As in the other abortion areas the majority of these researchers are themselves practitioners of the MFPR procedure and some have the distinction of being not only practitioners but also advocates for and cited as experts on the probity of the procedure.

The procedure for aborting some of the fetuses in multiple pregnancies has been improved and expanded to the point that all major teaching hospitals in North America and Western Europe now routinely offer couples MFPR as an option for management of multiple pregnancies. One problem, however, is that the couple who never imagined themselves actually having a single child, and who have succeeded thanks to advanced IVF techniques, may feel themselves to be faced with what auto dealers call a "mandatory option" in dealing with their unexpected bounty. For many couples their new situation is very uncomfortable, not least because the gestational age at which these abortions are occurring has steadily increased to the point where Evans and colleagues are supporting the use of the technique into the third trimester (or after 26 weeks of pregnancy).[10]

The use of this technique is often a logical outcome of the psychology of desperation of infertile couples, and itself produces a logic described by Berkowitz and colleagues:

> The medical justification for performing multifetal pregnancy reduction is philosophically similar to the "lifeboat analogy"...it is justifiable to sacrifice some "innocent" fetal lives to increase the chances of survival or decrease the risk of serious morbidity in the survivors of the procedure.[11]

Compared to Genetic Abortions

In an attempt to make the use of MFPR a more readily-accepted part of obstetrical practice, the literature links the procedure to the already well-tolerated practice of abortion for genetic or fetal abnormality. The proponents of this technique believe the linkage addresses two important concerns: First, they conclude that patients will not tolerate multiple births, so the use of MFPR will avoid the "trauma"[12] of the abortion of a wanted pregnancy on the grounds that if reduction is not offered, the patient will choose to abort all the embryos. Second, MFPR will lead to the ultimate goal of having their own child. This principle of Ethical Justification has also been articulated by Chevernak and colleagues who express it in terms of three goals:

1. achieving a pregnancy that results in a live birth of one or more infants with minimal neonatal morbidity and mortality;

2. achieving a pregnancy that results in the birth of one or more infants without antenatally detected anomalies;

3. achieving a pregnancy that results in a singleton live birth.[13]

The research literature assumes that parents faced with the potential birth of three to seven children at once are "free" to choose to abort most of them to achieve a family size of their choice. Individuals acting out of desperation, however, are not "free", and without freedom there is no true choice. The psychological impact of coercive choice is well documented in the decision-making literature. Miller delineated several models that apply to the decision to abort[14] and Cassidy expanded upon these in relation to decision-making in abortions for fetal abnormality.[15] The consensus among psychologists is that major life decisions based on perceived or overt coercion result in significant psychological distress.

In North America, the prevailing model for making medical decisions is based on the concept of "personal autonomy" and informed consent which have become cornerstones for the ethical acceptability for all medical procedures.[16] Often however, the decisions taken by couples to reduce the number of fetuses can be seen as lacking true personal autonomy because of parental desperation, medical coercion, and a lack of informed consent.

Lack of Informed Consent

A couple's capacity to give full assent is badly compromised due to the pre-existing psychological trauma brought on by long-term infertility and the IVF process itself. As the number of these multifetal abortions grows, the families involved are now coming forward to discuss pursuant issues which are only just beginning to be dealt with in the clinical therapy

and post-abortion healing literature. Kluger-Bell describes a family of triplets whose IVF resulted in a quad pregnancy. As her client notes "...I really didn't feel like I had a whole lot of choice about reducing it. And I was pretty much told by the doctors, 'Oh, well, you're not going to *carry* that many babies.' And most likely it would have to be reduced to two. And not knowing anything about it, we thought that was just the way it was." It was only when this family firmly expressed their desire to have all four babies that the doctors agreed to leave three. The MFPR was successful, "but emotionally there's still an ache that will probably always be there. We had been trying for so many years to create life, it was very contradictory and painful...no one ever said we could *consider* keeping all four...why wasn't that an option?"[17]

Ninety-nine per cent of the women who go through fetal reduction had achieved pregnancy through infertility treatment. Therefore, they represent a group which Tabsh describes as "...highly motivated to have a successful pregnancy outcome. They tend to be compliant with the medical plan for their care..."[18] and will therefore, as Macones and Wapner imply, assent to whatever approach will most likely assure them of a healthy child. In general, women seeking such an outcome will do anything the medical experts deem necessary.[19]

Ironically, until 1995, the attitude of infertility patients towards multiple births had never been investigated. Gleicher and colleagues found that the medical profession's implementation of MFPR was made without input from patient populations:

> It can therefore be no surprise that the survey reported here about patient attitudes is in strong conflict with the rather universally accepted practice patterns of minimizing multiple pregnancy rates...[infertile patients] express a considerable desire for multiple births...The medical profession so far has assumed that the decision to minimize multiple births...was reflective of patient desires. This study suggests otherwise.[20]

The ethical justification for MFPR is the desperate desire of parents to have a healthy baby. But what is the psychological price?

To desperate people, the avenue that promises the greatest hope may appear to be the morally best option, especially if pregnancy reduction is presented as the medically appropriate decision – the decision that will guarantee them one live baby. To refuse such an option requires freedom from coercion and access to other management approaches that provide alternatives. It is clear that these couples do not meet the criterion for free choice and, indeed, the actual level of coercion in this procedure is striking in the recent literature on surrogacy.

Medical Outcomes of Multifetal Pregnancy Reduction

The main rationale for MFPR is clearly the birth of at least one healthy child. Does MFPR guarantee this? This seems to be a matter of debate. Groutz and colleagues found that "Contrary to previous studies we found a higher incidence of pregnancy complications after MFPR compared with spontaneous twins...."[21] Souter and Goodwin did a *meta-analysis* of all 83 of the articles published on the procedure since 1989 and found that "there is a general consensus that reducing triplets to twins results in significant secondary benefits: lower cost and fewer days in hospital and a decrease in a variety of moderate morbidities associated with prolonged hospitalizations and preterm delivery for mother and baby. However, it is not clear that couples are more likely to take home a healthy baby, if they undergo multifetal pregnancy reduction."[22]

A recent Swedish study also identified the presence of post-procedure full miscarriage in 21 per cent of the cases undertaken in that country, a further eighteen per cent died in the womb or shortly after birth, or were born with defects.[23] Likewise, Elliott has suggested that studies of properly managed triplet pregnancies "show an equal or better outcome with nonreduced triplets compared with selective reduction."[24]

Psychological Outcomes of MFPR

Given the difficulties inherent in the MFPR procedure, it is not surprising that even following the achievement of the goal of parenting a child, couples who have participated in MFPR decisions experience the grief and emotional distress concomitant with the loss of a child. Follow-up studies of these families point to the fact that the parents do not experience significant psychiatric disturbance, and that "the birth of healthy children helps reduce the traumatic impact of fetal reduction".[25] What is not stressed in the literature, however, are the following observations:

1. There is significant attrition and refusal rates in study samples.
2. Couples who miscarried the whole pregnancy following the procedure are unwilling to participate in follow up.
3. There is no study of the full psychological impact on the children who are described by practitioners as "the surviving fetuses."

Given these limitations, the studies that do address the psychological outcomes find that a significant proportion of their sample experience psychological distress following the procedure. The affective reactions are immediate, and intense grief reactions are characterized by repetitive and intrusive thoughts and images of the terminated fetus(es).

Schreiner-Engel and colleagues report that twenty per cent of those willing to participate in follow up experienced long-term *dysphoria*. "Their continued feelings of guilt appeared due to a wishful belief that some better solution should have been found." The characteristics of the most disturbed group were those who were young, religious, came from larger families, wanted more than two children, and viewed the ultrasound of the pregnancy more frequently. The authors conclude that "seeing multiple viable fetuses on repetitive sonograms may interfere with the ability of women to maintain an intellectualized or emotionally detached stance toward the multifetal pregnancy."[26]

Interestingly, the researchers assume that women who have undergone the stress and emotional impact of infertility and subsequent treatment can – and somehow should be able to – be detached from the one thing that has been a driving force in their lives, pregnancy. This expectation goes against all that is known about maternal-infant attachment and psychosocial understanding of the nature of pregnancy.[27]

Garel and colleagues had a 44 per cent interview refusal rate among reduction patients. Of those who agreed to be seen at one and two years post-procedure, one-third reported "persistent depressive symptoms related to the reduction, mainly sadness and guilt. The others made medical and rational comments expressing no emotion."[28]

In these reactions, the link becomes apparent between the lack of affect as an outcome of elective abortion and a similar lack of emotion among women who undergo abortion in the form of MFPR. Another issue of concern is the psychological impact this will have on parenting interactions with surviving children. About such parents, McKinney and colleagues noted: "Conscious and unconscious responses to the procedure included ambivalence, guilt, and a sense of narcissistic injury, increasing the complexity of their attachment to the remaining babies."[29] No research has been done on the long-term implications of parental distress on the psychological development of these children nor have any studies addressed the dynamics of *Post-Abortion Survivor Syndrome*.

Conclusion

There is still a great deal of research to be done in the area of the effects of multifetal pregnancy reduction on parents and on the surviving children of the pregnancy. What research has been done suggests similar reactions to induced abortion; namely, feelings of grief and loss, minimized somewhat by the carrying to term of at least some of the fetuses. Certainly, to enable parents to make decisions about such births, more research needs to be undertaken in this area, and subsequent findings need to be shared with them in order for their consent to be truly informed in compliance with current criteria for medical procedures.

Key Points Chapter 13

- For couples who cannot conceive a child, there is a very strong motivation to do whatever is medically recommended in order to have a child, whether using in vitro fertilization (IVF) or multifetal pregnancy reduction (MFPR). With either method there is the possibility of coercion by medical personnel.

- IVF is often used in cases of long-term infertility, and sometimes as many as nine cycles of treatment are needed for conception to take place, often resulting in three or more implanted fetuses.

- An approach doctors currently recommend to ensure a living birth in multifetal pregnancies is MFPR, a form of abortion (a needle stab to the heart) to reduce the number of fetuses. This procedure does not guarantee that the remaining fetuses will remain healthy, but it usually results in at least one live birth.

- Parents' reactions to the loss of some of the fetuses conceived are similar to those experienced after abortion for genetic reasons: sadness, guilt, and depression.

- Too often MFPR is assumed by the medical and research community to be what the parents want without obtaining true informed consent or giving them a choice about the number of fetuses to be kept alive.

- More research needs to be done into the effects of MFPR on couples and on their future family life with the surviving babies. This research should be carried out by investigators not already involved in performing and advocating this procedure.

Notes

1 Blomain K. Customer Review of *An Empty Lap: One Couple's Journey to Parenthood*, by Jill Smolowe. [http://www.amazon.com/exec/obidos/tg/stores/detail/-/books/0671004379/customer- reviews/107-9690183-1333303], 1997 October 31.

2 Laffont I, Edelmann RJ. Psychological aspects of in vitro fertilization: A gender comparison. Journal of Psychosomatic Obstetrics & Gynecology 1994 June;15(2):85-92.

3 Oddens BJ, den Tonkelaar I, Nieuwenhuyse H. Psychosocial experiences in women facing fertility problems--a comparative survey. Human Reproduction 1999 January;14(1):255-61.

4 Boivin J, Andersson L, Skoog-Svanberg A, Hjelmstedt A, Collins A, Bergh T. Psychological reactions during in-vitro fertilization: Similar response pattern in husbands and wives. Human Reproduction 1998 November;13(11):3262-7, p. 3262.

5 Lukse MP, Vacc NA. Grief, depression, and coping in women undergoing infertility treatment. Obstetrics & Gynecology 1999 February;93(2):245-51.

6 Cohen J. How to avoid multiple pregnancies in assisted reproduction. Human Reproduction 1998 June; 13(Supplement 3):197-214; discussion 215-8; p. 197.

7 Cohen 1998. See n. 6.

8 Cassidy, Elizabeth. Multifetal Pregnancy Reduction (MFPR): The psychology of desperation and the ethics of justification. In *Life and Learning IX: Proceedings of Ninth Annual Meeting, University Faculty for Life in Trinity International University 1999*, ed. Koterski, J.W. 331-46. Washington, D.C.: University Faculty for Life, 2000.

9 Crutcher M. *Lime 5: Exploited by Choice*. Denton, Texas: Life Dynamics, 1996.

10 Evans MI, Goldberg JD, Horenstein J, Wapner RJ, Ayoub MA, Stone J, and colleagues Selective termination for structural, chromosomal, and Mendelian anomalies: international experience. American Journal of Obstetrics and Gynecology 1999 October;181(4):893-7.

11 Berkowitz RL, Lynch L, Stone J, Alvarez M. The current status of multifetal pregnancy reduction. American Journal of Obstetrics and Gynecology 1996 April;174(4):1265-72; p. 1270.

12 Evans MI JM, Quintero RA, Fletcher JC. Ethical issues surrounding multifetal pregnancy reduction and selective termination. Clinical Perinatology 1996 September;23(3):437-51.

13 Chervenak FA, McCullough LB, Wapner R. Three ethically justified indications for selective termination in multifetal pregnancy: A practical and comprehensive management strategy. Journal of Assisted Reproduction and Genetics 1995 September;12(8):531-6; p. 531.

14 Miller WB. An empirical study of the psychological antecedents and consequences of induced abortion. Journal of Social Issues 1992 Fall;48(3) pp. 67-93.

15 Cassidy E. Psychological Decision-Making Models: An Extension of Miller's Abortion Decision Models to Miscarriage and Genetic Abortion in Light of the Human Genome Project [Unpublished Conference Paper]. University Faculty for Life, 1997 June.

16 Beckwith FJ. Absolute autonomy and physician-assisted suicide: Putting a bad idea out of its misery. Joseph Koterski SJ, ed. Life and Learning VII. Seventh University Faculty for Life Conference; 1997; Loyola College, Baltimore. Washington, D.C.: University Faculty for Life; 1998.

17 Kluger-Bell K. *Unspeakable Losses: Understanding the Experience of Pregnancy Loss, Miscarriage, and Abortion*. New York: W.W. Norton, 1998.

18 Tabsh KM. A report of 131 cases of multifetal pregnancy reduction. Obstetrics & Gynecology 1993 July;82(1): 57-60.

19 Macones GA, Schemmer G, Pritts E, Weinblatt V, Wapner RJ. Multifetal reduction of triplets to twins improves perinatal outcome. American Journal of Obstetrics and Gynecology 1993 October; 169(4):982-6.

20 Gleicher N, Campbell DP, Chan CL, Karande V, Rao R, Balin M, et al. The desire for multiple births in couples with infertility problems contradicts present practice patterns. Human Reproduction 1995 May;10(5):1079-84.

21 Groutz A, Yovel I, Amit A, Yaron Y, Azem F, Lessing JB. Pregnancy outcome after multifetal pregnancy reduction to twins compared with spontaneously conceived twins. Human Reproduction 1996 June;11(6):1334-6; p. 1334.

22 Souter I, Goodwin TM. Decision making in multifetal pregnancy reduction for triplets. American Journal of Perinatology 1998 January;15(1):63-71; p. 63.

23 Radestad A, Bui TH, Nygren KG, Koskimies A, Petersen K. The utilization rate and pregnancy outcome of multifetal pregnancy reduction in the Nordic countries. Acta Obstetricia et Gynecologica Scandanavica 1996 August;75(7):651-3.

24 Elliott JP. Multifetal reduction of triplets to twins improves perinatal outcome. American Journal of Obstetrics and Gynecology 1994 July;171(1):278.

25 McKinney M, Downey J, Timor-Tritsch I. The psychological effects of multifetal pregnancy reduction. Fertility and Sterility 1995 July;64(1):51-61, p. 59.

26 Schreiner-Engel P, Walther VN, Mindes J, Lynch L, Berkowitz RL. First-trimester multifetal pregnancy reduction: acute and persistent psychologic reactions. American Journal of Obstetrics and Gynecology 1995 February;172(2 Pt 1):541-7; pp. 545, 546.

27 Campion B. An argument for continuing a pregnancy where the fetus is discovered to be anencephalic. In *Life and Learning IX: Proceedings of Ninth Annual Meeting, University Faculty for Life in Trinity International University 1999,* ed. Koterski, JW. Washington, D.C.: University Faculty for Life, 2000.

28 Garel M, Stark C, Blondel B, Lefebvre G, Vauthier-Brouzes D, Zorn JR. Psychological reactions after multifetal pregnancy reduction: A 2-year follow-up study. Human Reproduction 1997 March; 12(3):617-22; p. 617.

29 McKinney MK, Tuber SB, Downey JI. Multifetal pregnancy reduction: psychodynamic implications. Psychiatry Winter 1996;59(4):393-407; p. 393.