

Ethics aspects of third party reproduction

Jack Biko, Zozo Nene

Reproductive and endocrine unit, Department of Obstetrics and Gynaecology, University of Pretoria, Pretoria, South Africa

Introduction

Advances in science and technology have made it possible for women, men and couples who ordinarily would not have been able to have children, to conceive through assisted reproductive technology. Third party reproduction or donor-assisted reproduction is a form of reproduction in which DNA or gestation is provided by a third party or donor other than the two intended parents who will raise the resulting child. It includes donor sperms, donor eggs, donor embryos and surrogacy. The indications for gamete donation include patients with primary ovarian insufficiency, those who carry genetic diseases, same sex couples and those of advanced age. It is a journey that involves psychological preparation, legal issues, sociocultural issues and ethical issues. The gestational carriers are always known to the intended parents but the sperm, egg or embryo donors may be anonymous. In their assessment of 144 couples requiring egg donation, Baetens reported that 68.8% of the couples preferred to utilize egg from known donors as they fear the origin of the unknown genetic material. Those who preferred to use anonymous donors, wanted to establish explicit boundaries between themselves and the donors.¹

Assisted reproductive technology

Donation of sperms is mostly a straight-forward procedure of simply ejaculating into a prepared container and then utilizing the sperms in artificial insemination or in assisted reproductive technology such as in vitro fertilization (IVF) procedures. Egg donation is much more involved and fraught with risks to the donor. The donor must undergo controlled ovarian hyperstimulation with various gonadotropin drugs to achieve adequate numbers of oocytes for retrieval. Current evidence recommends 8 – 16 oocytes as ideal to achieve a pregnancy. More than 16 oocytes increase the risk of ovarian hyperstimulation syndrome without increasing the chances of a live birth.²

The process of controlled ovarian hyperstimulation can lead to severe OHSS. The pathophysiology of OHSS includes increased permeability of capillaries to plasma

proteins leading to fluid shifts from intravascular to the extravascular compartment, presenting as ascites, pleural effusions, pericardial effusion, oliguria leading to renal failure and haemoconcentration leading to thromboembolism.^{3,4} Ovarian torsion, although rare, may cause significant pain.⁵ If not managed properly, affected patients may undergo oophorectomy and become sterile and some may even die.

Retrieval of oocytes is done with an aspiration needle trans-vaginally. There is always a risk of bowel and bladder injury and a risk of broad ligament haematoma and large vessel injury. Inadvertent aspiration of endometrioma has been reported to cause ovary and pelvic abscess formation.⁶ All these complications may require hospital admission for the donor, who may undergo an urgent laparotomy/laparoscopy to manage these complications appropriately. In their retrospective analysis on 674 patients who had ultrasound guided transvaginal oocyte retrieval, Howe et al reported that 1,5% of the patients required hospital admission for various complications.⁷

Exploitation of donors

Egg donors are generally young students or people with entry level jobs and of a lower socioeconomic status than the recipients. The balance of power mostly favours the recipients. Enticing young healthy people to undergo a risky process with potentially very serious consequences but with no benefits to them is ethically questionable. Making matters worse is the attempt by doctors to achieve a pregnancy in recipients at all costs by giving high dose gonadotropins to harvest excess eggs (referred to as *eggsploitation* in the lay press) and predispose the donors to the risk of developing OHSS. This practice is not only unprofessional but it is also unethical. The GnRH antagonist protocol with GnRH agonist triggering, is generally the accepted standard of care for oocyte donor cycles. This protocol greatly reduce the risk of OHSS without compromising the live birth rate.^{8,9}

Adequate donor counselling about the potential risks of oocyte donation is not always done. The risks associated with ovarian stimulation and harvesting of oocytes is often underplayed. However, many donors report no immediate adverse effects. In their post donation survey of 80 women who had undergone egg donation, most women reported post donation satisfaction.¹⁰

Correspondence

Jack Biko
email: drbiko@icloud.com

Legal aspects of third party reproduction in South Africa

Surrogacy became regulated in 2007 through the children's act 38 of 2005. The agreement between the surrogate mother and commissioning parents has to be confirmed by the high court. Both the commissioning parents and the surrogate mother need to be domiciled in South Africa and the surrogate's husband or partner, must also consent to the process. The surrogate mother and her partner have no parental rights towards the child. The law in South Africa requires that at least one of the intended parents be a biological parent of the child who will be born to a surrogate mother by providing either the sperms or the eggs.

According to chapter 8 of the national health act, egg donors are not permitted to continue donating eggs beyond 6 donation cycles or more than 12 livebirths have been conceived from their eggs. This limitation is arbitrary and creates a dilemma when a family want to have another child with related genetics to the siblings. In order to prevent consanguinity, the ASRM recommends that a donor should be limited to 25 births in a population of 800 000.¹¹

The health care givers allowed to handle gametes and embryos have to be competent persons. These are specialist Gynaecologists with training in Reproductive Medicine and those in training under direct supervision. Qualified embryologists are also included in this category.

Agreements between intended parents and gestational carriers must be undertaken prior to the commencement of the cycle. These include the donor undergoing invasive tests such as amniocentesis. The Donor and recipient should have the same beliefs in terms of right to life, selective reduction and right to terminate a pregnancy. Many legal issues can be avoided with proper mental health screening of potential gestational carriers and egg donors. Ideally counselling should be done by a psychologist.

Multiple embryo transfers to surrogate mothers

Multiple pregnancies are associated with significant maternal and neonatal complications including pregnancy induced hypertension, caesarean delivery and prematurity. It is therefore unacceptable to subject a gestational carrier to these known complications

Financial compensation

Given the time taken, the inconvenience, pain and discomfort, and the inherent risks associated with egg donation, it is not unreasonable for the donors to receive fair compensation. Eggs are not being bought or sold; the donor is being compensated for her service rather than her product.¹² From an altruistic narrative, donating gametes or embryos cannot be regarded as immoral because the gesture is done for the good of others. For the infertile couple, having a baby is the most priceless possession they can ever have.

It is true that financial compensation increases the number of willing anonymous donors¹³ as some donors do it for financial rather than altruistic reasons. Disallowing

financial compensation to donors may actually do more harm than good as the demand for oocytes already outstrips the supply.¹⁴

The hair industry like the egg industry is big. Both deal with human tissue, but it must be acknowledged that hair is an end product and gametes are a "start product". New life arises from gametes whilst hair is essentially a dead - end product. Trafficking in humans or human tissue is illegal worldwide and unregulated dealings with gametes should be regarded as illegal. We believe that hair on the other hand should be regarded as an ordinary commodity of human origin.

It is illegal to commercially benefit from brokering or participating in surrogacy or gamete donation. The South African society of Reproductive Medicine recommends that egg donors be given a stipend not exceeding R7000, 00 for the discomfort of undergoing the process. The American Society of Reproductive Medicine (ASRM) states that compensation should be structured to acknowledge the time, inconvenience and discomfort associated with screening, ovarian stimulation, and oocyte retrieval. Compensation should not vary according to the planned use of the oocytes, the number of good quality oocytes retrieved or the donor's personal characteristics. The ASRM recommends that donors be paid a maximum of \$ 5000, 00.¹¹ The human fertilization and embryology authority (HFEA) recommends that egg donor in the UK should be compensated a fixed amount of £ 750 per cycle. This amount may be increased if the cost incurred by the donor exceeds the recommended amount. However, many donor agencies advertise their services and pay premium prices for good looks, sporting achievements eye colour and other "exceptional qualities". These agencies pay for the product and not necessarily the service of egg donation just like a big soccer club pay a premium price for a top-quality player and a lesser amount for an average player.

It is immoral and unethical to devalue human life by treating gametes as commodities that are available to the highest bidder. This will make gamete donation inaccessible to the average citizen who needs it most.

Oocyte and embryo donation in women of advanced age

With aging, the quality and quantity of oocytes declines leading to low implantation rates and high pregnancy loss rates, attributed mainly to oocyte aneuploidy. It is therefore not surprising that the great majority of recipients of donor eggs are women above the age of 42 years. The prevalence of chronic medical conditions and uterine pathologies including hypertension, diabetes mellitus, hyperlipidaemia and myomatous uteri increases with aging. Patients with advanced maternal age also have a higher risk of preterm deliveries and of delivering their babies by caesarean section.¹⁵ Using oocytes donated by younger women decrease the risk of miscarriages and implantation failure, but does not decrease the obstetrics and neonatal risks that are inherent with advanced maternal age. It is therefore essential that these couples be adequately counselled

about these risks and be referred to obstetricians who manage high risk patients.

Other concern of egg donation and surrogacy in the advanced age group is the fear that one or both of the parents may die before the child becomes an adult. Concerns related to longevity and the need for adequate psychosocial support for raising a child to adulthood are amongst the major reasons why the ethics committee of the ASRM discourage the use of donor oocytes or embryos in women older than 55 years.¹⁶ The ASRM committee stated that advanced age women and their partners may not be able to meet the emotional, financial and physical demand of raising a child and maintaining a long term parental relationship. It is therefore ethically permissible to decline to provide assisted reproductive treatment to these women.¹⁶

Gamete donation for same sex couples and single people

The constitution of South Africa guarantee that all people equality before the law and does not allow discrimination of people or couples based on their sexual orientation or their marital status. It is therefore illegal to deny medical care, including offering assisted reproductive technology services to single people or those with a different sexual orientation. Reproductive medicine specialists are frequently consulted by single women and lesbian couples requesting intrauterine insemination with donor sperm. Gay couples occasional request assistance with a gestational or traditional surrogate to carry their baby.

Society's view of a family is the presence of a male and female in a household. The fear is that the absence of a male figure in the family will have negative psychological effects in the child. However, evidence does not support this view. In their longitudinal study of children raised in women headed households with no father figure present, Golombok et al reported that children raised by a single heterosexual mother and those by lesbian mothers from infancy, continue to function well into adulthood.^{17,18} Children's well-being is affected much more by their relationship with their parents, the presence of social and economic support in the family rather than the sexual orientation of their parents.^{19,20}

Surrogacy

Surrogacy refers to a contract where a woman carries a pregnancy for another couple. With gestational surrogacy, an embryo is implanted into the uterus of the gestational carrier and she has no genetic link to the child. In traditional surrogacy, the oocytes of the gestational carrier are utilized and thus she has a genetic link to the child. The surrogacy contract is usually undertaken in patients who have no uterus, those with a dysfunctional uterus (for example Asherman syndrome), patients with serious medical disorders such as pulmonary hypertension and in gay couples.

India is one of a few countries where commercial surrogacy is legal, leading to a boom in the fertility tourism trade. Unfortunately poor and illiterate women

are often persuaded to enter into these deals.²¹ These gestational carriers are housed in hostels for the duration of their pregnancy and do not have access to their own families. They often have to bear the brunt of the complications associated with pregnancy and do not get compensated for a poor pregnancy outcome.

The children born from these cross-border surrogacy arrangements may struggle to acquire citizenship of the intended- parent's home countries. There have been reports in the lay press about intended parents from foreign countries abandoning children born with anomalies in India.

The South African law through the Children's Act of 2005, does not distinguish between traditional and gestational surrogacy but requires that the intended parent/parents should have a genetic link to the child through an oocyte, sperm or embryo contribution. The surrogacy agreement has to be altruistic and be confirmed by the high courts.

Egg sharing program

In the egg sharing program, the donor shares her eggs with a recipient who does not have eggs. Typically, these would be patients of advanced age. The recipient then pays a proportion of the cost of the cycle. In this arrangement, the ART program becomes affordable to more couples and there is no exchange of money between the donor and the recipient.

Religions views on third party reproduction

Although third party reproduction is permissible in law, patients also have to abide by the rules of the religions and faiths. Believes, religion and faith are not usually subjected to ethical principles but in secular countries like South Africa, patients have a choice to practice the faith or to reject it.

Christianity

The Vatican believes that "reproductive capacity should be exercised only through a sexual act in the context of a loving marriage arising from the in-dissolvable unity of sex, love and procreation".²² They do not accept assisted reproductive technology as an appropriate means of creating a family nor do they accept third party reproduction. The Anglican, Protestants and other faiths have no objection to assisted or third- party reproduction.

Islam

Sunni Muslims comprise about 80 - 90% of the Islam faith. The religion permits intrauterine insemination and IVF using the husband's sperm in the setting of a married couple. Third party reproduction is therefore completely outlawed in countries such as Egypt and Saudi Arabia where Sunni are in the majority.²³ As a result of this the clinician either turns the patient away or refers them to countries where third party reproduction is permissible. Countries such as Iran and Lebanon, where Shi'ite Muslim are the majority, third party reproduction is permissible.^{24,25}

REVIEW

O&G Forum 2017;27:12-16

Jewish faith

The Jewish attitude towards procreation is derived from the first commandment of God to Adam to be "fruitful and multiple".²⁶ Jewishness is seen to be conferred by the mother particularly through the act of gestating and birthing a baby. Many conservative rabbi prefer the use of non-Jewish sperms to prevent future genetic incest amongst offspring of anonymous donors within the small Jewish community.²⁷ Assisted reproductive technology and third-party reproduction is permissible in the Jewish faith.

The right of the offspring to information about biological parents

Offspring have a right of access to non-identifying medical and genetic information about their biological parents that is relevant to their own health status and risks.^{28,29} In New Zealand, children derived from third party reproduction have the right to know their genetic and birth origin.³⁰ In many other countries such as Spain, France and Denmark, the anonymity of the donor is explicitly protected by law.²⁹ Failure to protect anonymity of gamete donors may result in the collapse of the third-party reproduction program.

The right of offspring to the estate of the biological parents

According to the South African Children's Act of 2005, the legal mother of a child is the woman who is pregnant with, and delivers the child irrespective of where the gametes come from. In the case of surrogacy, a contract is entered into, between the intended parents and the gestational carrier and ratified by a high court judge before the actual process of surrogacy is commenced. In general, an offspring arising from third party reproduction has no claim to the estate of the gamete donor.

Principles of ethics as applied to third party reproduction³¹

Autonomy

The constitution of South Africa guarantees the right of reproductive health for all its citizens irrespective of their sexual orientation, fertility or marital status. It would therefore be unethical and unlawful to deny patients a medical procedure because of their infertility, marital status and sexual orientation.

Beneficence and non-maleficence

Infertility has dire consequences for couples and society. These patients are often ridiculed, prevented from doing certain cultural rituals and plainly ostracised. The WHO and the American Medical Association regard infertility as a disease. Treating this disease with donor gametes cannot be seen as harmful, immoral or unethical. Evidence has also shown that raising children in same sex couple homes or women headed homes has no negative impact on these children. One would argue that it is the unavailability of affordable reproductive services that is the main contributing factor that lead to the stigmatization of the childless couple.

Distributive justice

Withholding available treatment to couples because of their sexual orientation and marital status is not justifiable. These couples also belong and contribute to the wellbeing of the society. A just distribution of resources amongst members of society is for the best interest of society. It has been shown that 67% of men with infertility tend to abuse alcohol eventually. With an infertility rate in excess of 10%, it is essential that we treat this disease of infertility to essentially save society from the negative impact of infertility such as alcohol abuse, reckless behaviour, depression and suicide.

References

1. Baetens P, Devroey P, Camus M, Van Steirteghem A, Ponjaert-Kristoffersen I. Counselling couples and donors for oocyte donation: The decision to use either known or anonymous oocytes. *Hum. Reprod.* 2000;15(2):476-84.
2. Sunkara SK, Rittenberg V, Raine-Fenning N, Bhattacharya S, Zamora J, Coomarasamy A. Association between the number of eggs and live birth in ivf treatment: An analysis of 400 135 treatment cycles. *Hum. Reprod.* 2011;der106.
3. Abramov Y, Elchalal U, Schenker J. Severe ohss an epidemic of severe ohss: A price we have to pay? *Hum. Reprod.* 1999;14(9):2181-3.
4. Fatemi HM, Popovic-Todorovic B, Humaidan P, Kol S, Banker M, Devroey P, et al. Severe ovarian hyperstimulation syndrome after gonadotropin-releasing hormone (gnrh) agonist trigger and "freeze-all" approach in gnrh antagonist protocol. *Fertil. Steril.* 2014;101(4):1008-11.
5. Gorkemli H, Camus M, Clasen K. Adnexal torsion after gonadotrophin ovulation induction for ivf or icsi and its conservative treatment. *Arch. Gynecol. Obstet.* 2002;267(1):4-6.
6. Padilla S. Case report: Ovarian abscess following puncture of an endometrioma during ultrasound-guided oocyte retrieval. *Hum. Reprod.* 1993;8(8):1282-3.
7. Howe RS, Wheeler C, Mastroianni L, Jr., Blasco L, Tureck R. Pelvic infection after transvaginal ultrasound-guided ovum retrieval. *Fertil Steril.* 1988;49(4):726-8.
8. Ragni G, Vegetti W, Riccaboni A, Engl B, Brigante C, Crosignani P. Comparison of gnrh agonists and antagonists in assisted reproduction cycles of patients at high risk of ovarian hyperstimulation syndrome. *Hum. Reprod.* 2005;20(9):2421-5.
9. Prapas N, Prapas Y, Panagiotidis Y, Prapa S, Vanderzwalmen P, Schoysman R, et al. Gnth agonist versus gnrh antagonist in oocyte donation cycles: A prospective randomized study. *Hum. Reprod.* 2005;20(6):1516-20.
10. Kenney NJ, McGowan ML. Looking back: Egg donors' retrospective evaluations of their motivations, expectations, and experiences during their first donation cycle. *Fertil Steril.* 2010;93(2):455-66.
11. Medicine PCotASfR, Technology PCotSfAR. Recommendations for gamete and embryo donation: A committee opinion. *Fertil. Steril.* 2013;99(1):47-62. e1.
12. Steinbock B. Payment for egg donation and surrogacy. *Mt. Sinai J. Med.* 2004;71(4):255-65.
13. Daniels KR. To give or sell human gametes--the interplay between pragmatics, policy and ethics. *J. Med. Ethics.* 2000;26(3):206-11.
14. Brown S. Genetic aspects of donor selection. *Principles of oocyte and embryo donation: Springer; 2013. p. 73-81.*

REVIEW

O&G Forum 2017;27:12-16

15. Sauer MV, Paulson RJ, Lobo RA. Pregnancy: Oocyte donation to women of advanced reproductive age: Pregnancy results and obstetrical outcomes in patients 45 years and older. *Hum. Reprod.* 1996;11(11):2540-3.
 16. Ethics Committee of the American Society for Reproductive Medicine. Electronic address Aao, Ethics Committee of the American Society for Reproductive M. Oocyte or embryo donation to women of advanced reproductive age: An ethics committee opinion. *Fertil Steril.* 2016;106(5):e3-e7.
 17. Golombok S, Badger S. Children raised in mother-headed families from infancy: A follow-up of children of lesbian and single heterosexual mothers, at early adulthood. *Hum. Reprod.* 2009;25(1):150-7.
 18. Golombok S, Jadva V, Lycett E, Murray C, MacCallum F. Families created by gamete donation: Follow-up at age 2. *Hum. Reprod.* 2005;20(1):286-93.
 19. Perrin EC, Siegel BS, Child CoPAo, Health F. Promoting the well-being of children whose parents are gay or lesbian. *Pediatrics.* 2013;131(4):e1374-e83.
 20. Anderssen N, Amlie C, Ytterøy EA. Outcomes for children with lesbian or gay parents. A review of studies from 1978 to 2000. *Scand. J. Psychol.* 2002;43(4):335-51.
 21. Saxena P, Mishra A, Malik S. Surrogacy: Ethical and legal issues. *Indian J. Community Med.* 2012;37(4):211-3.
 22. Klein JU, Sauer MV, editors. *Ethics in egg donation: Past, present, and future.* *Semin. Reprod. Med.*; 2010: © Thieme Medical Publishers.
 23. Serour GI. Bioethics in reproductive health: A muslims perspective. *Middle East Fertility Society Journal.* 1996;1(1):30-5.
 24. Inhorn MC. Making muslim babies: Ivf and gamete donation in sunni versus shi'a islam. *Cult. Med. Psychiatry.* 2006;30(4):427-50.
 25. Clarke M. Shiite perspectives on kinship and new reproductive technologies. *ISIM review.* 2006;17:2.
 26. Schenker JG. Assisted reproduction practice: Religious perspectives. *Reproductive biomedicine online.* 2005;10(3):310-9.
 27. Kahn SM. *Reproducing jews: A cultural account of assisted conception in israel.* Duke University Press; 2000.
 28. Medicine ECotASfR. Interests, obligations, and rights of the donor in gamete donation. *Fertil. Steril.* 2009;91(1):22-7.
 29. De Melo-Martin I. The ethics of anonymous gamete donation: Is there a right to know one's genetic origins? *Hastings Cent. Rep.* 2014;44(2):28-35.
 30. Daniels K. *From secrecy and shame to openness and acceptance. Third party assisted conception across cultures: social, legal and ethical perspectives.* 2004:148.
 31. De Wert G, Dondorp W, Shenfield F, Barri P, Devroey P, Diedrich K, et al. Eshre task force on ethics and law 23: Medically assisted reproduction in singles, lesbian and gay couples, and transsexual people. *Hum. Reprod.* 2014;29(9):1859-65.
-