

Commentary

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Assisted reproductive technology (ART) - ethics, religion and the law

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This discourse is by no means comprehensive but provides an overview of the ethical, religious and legal perspectives of ARTs concluding with some remarks on the need for a regulatory framework for Sri Lanka. I have focused on some common ARTs and highlighted significant controversies with some anecdotes from my experience and those of others.

Bioethics, the study of the moral dimensions of the life sciences and healthcare (Reich 1995), began as an amorphous expression by medical professionals and moral philosophers, the guardians of ethics, in response to the concerns of the moral challenges of abortion, euthanasia, organ donation and assisted conception, evolving into more robust national and international assemblies (Jonsen 1998). For ARTs, the oath of the Hippocrates' school, the quad of beneficence, non-maleficence, autonomy and justice, and utilitarianism provide the essentials for safeguarding and protecting the mother, child and embryo, in that order.

Religious evaluation of ARTs is based on weaving through the maze of hermeneutics of religious, mainly divine, texts and where scripture or equivalent texts falls short of definite answers, it is complemented by deliberations and resolutions of religious leaders.

Howard Jones Jnr. (1999), the American IVF pioneer, states that though not all are practicing believers, religious authority has played a very influential role in moral decisions on reproduction and according to Andrew Dutney (2007) an Australian theologian, it has served as a moral brake in clinical practice and medical research.

Reproductive choice is a basic human right and legislation to dictate how or when a woman should conceive infringes on her procreative freedom. Nevertheless, community and state concerns have led to regulation of the practice of ARTs by statutory law, licensing bodies and professional organizations.

While ethicists, theologians and the legal fraternity concur in protecting and safeguarding the

embryo, child and mother, the broader scope of bioethics, the immutability of religion and the rigidity of law have led to controversies in the practice of ARTs.

I would like to discuss first In Vitro Fertilization (IVF), the pivotal axis of all ARTs. Till the late seventies, the only hope for a woman with blocked fallopian tubes was tubal surgery the results of which were very disappointing. Pioneers in IVF, mainly in the UK, Australia and USA, engineered an innovative, ingenious and revolutionary technique to bypass the fallopian tube. The technique involved aspirating the eggs, fertilizing it outside the body (in vitro) and transferring the embryo in to the uterus a couple of days later. Patrick Steptoe, a Manchester Gynaecologist and Robert Edwards, a Cambridge Biologist delivered Louise Brown, the first IVF baby on the 25th July 1978. IVF was a milestone in reproductive medicine in the 20th century and served as a platform for the phenomenal expansion into many techniques collectively labeled as Assisted Reproductive Technologies (ARTs).

IVF has been hailed in some quarters as the panacea for all infertility ills, so much so, it has been alleged, perhaps undeservedly, that infertility specialists are resorting to IVF prematurely, inappropriately and unnecessarily. Other ethical objections are the non-availability of IVF to all and mandatory selection of parents.

From a religious viewpoint, the Catholic requirement of conjugal sex for conception (Jones 1999) and conferring 'personhood' at fertilization (Colombo 2005) results in a resounding "no" to all IVF technologies (Ratzinger 1992). The Protestants are more flexible accommodating the welfare of mother and child (Appleton 2007 - personal communication). Muslims and Jews approve IVF (Mahmoud 2010) and in Hinduism and Buddhism, IVF is no different to normal pregnancy, the man, woman and child having a karmic connection (Ven. Dhammavihari 2008 - personal communication, Crawford 2003a and Dutney 2007).

Legally, the welfare of child clause and restriction of ARTs to hetero-sexual and married, if not, stable relationships imposed on those seeking assisted conception as in the UK is discriminatory when compared to those conceiving naturally. IVF per se

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poses no legal obstacles provided informed consent, confidentiality and clinical governance are observed. While statutes are lacking in most parts of the globe, there are regulatory frameworks which oversee the practice of ARTs.

The days when the IVF specialist posed alongside a sextuplet mum are over and fortunately the magnitude of this problem has diminished markedly because of the reduced number of embryos transferred now in most countries. When high-order multiple pregnancies do occur, embryo reduction may be necessary to prevent extreme prematurity and its sequel of high mortality and cerebral palsy. This is performed by injecting a feticide to reduce the embryos to two or one.

Is it ethical to perform embryo reduction? Most ethicists concur on the permissibility of embryo reduction on the grounds of the utilitarian argument that 'it is the lesser of two evils' and 'it is better to save some (potential) lives than lose them all' (Shenfield 1999). In my experience most patients were not enthused with the idea of what they describe as 'killing some of their babies'.

Religious evaluation is governed by the status accorded to the embryo. While there is unanimity that a fertilized embryo has the potential for life, there is controversy as to whether life begins at fertilization (Mori 1998). Catholics, Hindus and Buddhists hold life sacred from conception and the latter two reject embryo reduction because their cardinal virtue of *ahimsa* precludes any harm (Crawford 2003a). Because of the "lesser status" of the embryo in early pregnancy, Protestants, Muslims and Jews permit embryo reduction on the grounds of 'greater good' for the welfare of some babies (Mahmoud 2010).

The legal position is variable and largely rests on the status accorded to the fetus at 8-10 weeks and also on religious decrees prevailing in that country. Generally, countries which allow therapeutic abortion permit embryo reduction.

While ethicists concur on providing protection for embryos in line with the 1996 ruling of the Council of Europe (Shenfield 1999), the benefits of embryo research outweigh the loss of spare or unwanted embryos (de Lacey 2007). Moreover, stem cell research is vital for cell and tissue replacement therapy which has enormous potential to treat coronary heart disease, stroke, spinal cord injury, burns, diabetes, Alzheimer's and Parkinson's diseases (Bongso 2004). Also, therapeutic cloning provides a model for learning about embryology, embryopathy and teratology.

Hindus and Buddhists concur with Catholics (Ratzinger 1992), who stipulate that any research with risk to the physical integrity or life of the embryo is illicit. Jews, Protestants and most Muslims prefer research to discarding of embryos (Natour, Bakri and Rispler-Chaim 2005).

Many countries are unclear but most countries prohibit embryo research (Cohen and Jones 2001) but some including the UK permit it.

Gamete or embryo donation are indicated when parents lack their own. In cases where the ovaries are either absent or in premature (or after normal) menopause, the only avenue for conception is ovum donation. Special sperm-retrieval techniques coupled with intra cytoplasmic sperm injection (ICSI) has revolutionised the need for sperm donation. It is now indicated only when there is complete absence of sperms.

Ethical issues pertaining to donation of gametes or embryo comprise anonymity, commercialism and incorporating the genes of an outsider. The practice of anonymous donations and secrecy denies the child of knowing his or her origins (Shenfield 1999) with the rare possibility of incest. Should this be disclosed in adulthood? Donors would not be enthused with a son or daughter turning up at their doorstep when they are eighteen and declaring "Hi Dad or Hi Mom"! Moreover, withdrawal of anonymity leaves room for lingering long term attachments. The Human Fertility and Embryology Authority (HFEA) and European Society for Human Reproduction and Embryology (ESHRE) lifted the rule of anonymity in 2005 and now Austria and Sweden permit offspring to access information about their donor (Tizzard 2002).

Though the Bioethics Convention of the Council of Europe states that "The human body, parts and products should remain outside the province of commerce", according to Françoise Shenfield (1999), the benefits of discounted IVF or sterilization permitted by the HFEA or more generous financial inducements as is practiced in the USA is hardly exploitation. Payment for gametes is more pragmatic in a materialistic world and John Harris (1998) argues that it seems unreasonable not to pay.

Islam places strong emphasis on familial lineage and transmission of genealogy and along with Catholicism prohibits third party contribution, be it sperm, egg or embryo (Mahmoud 2010). Shi'a Islam however permits egg and embryo donation by mut'ah arrangement which is a form of temporary marriage exclusive to the Shi'a. Protestants, Jews, Hindus and Buddhists do not have a problem with donation, with the latter two actually viewing it as a blessing (Crawford 2003a and Keown 2000).

In Jewish matrilineal society, the origin of the sperm is not significant, the egg taking pride of place. Interestingly, Judaism prohibits Jewish sperm while sperm from a non-Jew is permitted (Kahn 2000b) in line with the commandment “Thou shall not implant thy seed into thy neighbour's wife” (Leviticus 18:20).

France, Spain and the UK permit donations while Egypt, Saudi Arabia, Japan, Norway, Sweden and Turkey forbid the use of donor sperm, eggs or embryos. With anonymity and secrecy rules being lifted, there would be an inevitable decline in potential donors and the emergence of contesting of rights between biological and social parents.

While carrying your own pregnancy is fulfilling, carrying someone else's pregnancy may not be. Ethical problems of surrogacy constitute charges of exploitation, lowering of human dignity and risks of pregnancy. The case of Baby M in the USA illustrate well the renegeing by a surrogate and conflict between genetic and gestational parentage; the ensuing legal quagmire of surrogacy arrangements finally ended with the genetic couple being awarded custody of child over the birth mother (Brinsden 2001). An interesting twist was when one of my patients engaged a surrogate and it turned out to be twins. When the time came to hand over the babies, she insisted that she must have one. The commissioning couple finally had their say and went home with both babies after increasing the financial inducement to the surrogate.

Catholics prohibit surrogacy; Sunni Muslims also do but the Shi'a permit it under the umbrella of mut'ah marriage (Mahmoud 2010). Protestants advise to proceed with caution. Hinduism considers surrogacy a generous act and a blessing (Crawford 2003b); so does Buddhism which emphasizes that rearing is more important and confers parenthood on rearing parents (Ven. Dhammavihari – Naradha Centre, Colombo – 2007 – personal communication).

From a legal standpoint, infringement on procreative autonomy is not justifiable and John Robertson (1992) states that surrogacy has become an accepted thread in the social fabric despite the troublesome financial implications, psychological sequel of surrogate to relinquish the baby and the child to accept dual mothers. Nevertheless, surrogacy remains a legal minefield with renegeing by both parties, non-viable contracts, and legality of motherhood.

In a high risk case, despite the necessity of an expensive IVF, the psychological advantage of avoiding a genetic lottery of an affected child makes pre-implantation genetic diagnosis (PGD) ethically acceptable (Holm 1998). While accepting the need to exclude major defects as the lesser of two evils by

avoiding a later abortion, ethicists fear that genetic manipulation may lead to the emergence of eugenics.

Moreover, the definition of a serious handicap is variable (Shenfield 1999) and an embryo aborted for a less severe abnormality may well ask ‘why he or she was not given the chance to live’. I remember one patient who adored her Down's syndrome son; she had earlier contemplated having an abortion following PGD.

PGD for gender selection for non-medical reasons may lead to abortion of unwanted sex which is of course unethical.

Islam, Hinduism and Judaism approve PGD (Mahmoud 2010) but Catholicism does not, even for medical indications, because of the inevitable discarding of abnormal embryos (Colombo 2005). Protestants approve it while Buddhism advocates balanced judgment (Keown 2000).

PGD is permitted in most countries including the UK, most states of Australia, France, Scandinavia and Egypt.

Finally, I would like to address the need for a regulatory framework for the practice of ARTs in Sri Lanka. The Sri Lanka College of Obstetricians and Gynaecologists (SLCOG) must be congratulated for maintaining the standards of obstetrics and gynaecology despite the turbulence prevailing in the country during the past 30 years. However, the current practice of ART in Sri Lanka without a formal infrastructure or regulatory framework needs to be addressed.

While no statutory law or regulation can encompass features palatable for all, the Human Fertilization and Embryology Authority (HFEA) come close to the ideal. By its licensing authority, it ensures that institutions are medically and scientifically competent and conform to HFEA guidelines and provide governance, protection and safety to mother, baby and genetic tissue. However, Sri Lanka will not be able to afford this complex infrastructure at this juncture. Nonetheless, in this era of medical awareness and litigation, it is incumbent on us to provide a framework which ensures competence of staff, safety of patient, fetus and genetic tissue, informed consent and confidentiality.

A suitable and pragmatic framework needs to be formulated under the aegis of the SLCOG based on the HFEA model but compatible with the religious and ethical sensitivities prevailing in Sri Lanka. All ART units must be registered and clear guidelines provided for the practice of ARTs with transparency and clinical governance with some modicum of monitoring and accountability.

Conclusion

There is an inherent interplay between ethics, religion and the law in issues related to reproductive medicine. Moral, religious and legal responses to community concerns have resulted in a plethora of controversies. The status accorded to the embryo, incorporation of non-parental genes and welfare of child issues are mainly responsible for non-homogeneity and lack of unanimity in the evaluation of ARTs, be it ethical, religious or legal. In Sri Lanka there is an urgent need for us to formulate a regulatory framework for the practice of ARTs.

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