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Social and Ethical Considerations of Techniques of Reproduction

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Introduction

The Medically Assisted Reproductive Technologies affects many births in developed societies and it is steadily increasing each year. It covers two aspects: on the one hand AID (Artificial insemination by donor) that gives rise to 1500 births per year, and secondly IVF (In Vitro Fertilization), which relates to 4500 births per year. Given the technological development and its applications in medicine, an urgent need to control and setting limits arises. This is the objective of the various ethics committees (present at several levels) and various bioethics laws. Their role is to preserve the freedom of man and science as much as possible to allow the advanced discoveries and their application, while defining safety margins should not be exceeded in order to avoid abuse. Abuse can be of a commercial nature (babies or bodies catalog), or social and political (deviation towards eugenics, creating a superior race).

Donor Insemination and Surrogacy

Surrogacy, also called contract or surrogacy contract surrogate mother is one of the new reproductive technologies. The surrogate mother may be artificially inseminated with the sperm of the father who retains his services, in which case it becomes the genetic mother (genetic surrogacy) child, or it may have an embryo produced by IVF using the gametes of the couple who retains his services, in which case the surrogate mother provides the uterus for pregnancy

and makes no genetic contribution (non-genetic surrogacy). The contract may be made through a broker, a lawyer and accompanying fees.

Surrogacy is directly linked with the boom of reproduction tourism where individuals cross borders in search of assisted reproductive technologies, which often includes the selection of gender, maternal substitution, and genetic manipulation. In India, the industry is estimated at half a billion dollars and continues to grow. Ethical challenges presented by this phenomenon lead us to reassess our values and definitions of family, fatherhood, and citizenship. Policies addressing these challenges must also consider the distinctions of class, gender, relations between nations, and how we conceptualize informed consent and individual autonomy (MacCallum et al., 2003).

According to the ethical, moral and social perspectives, children should know everything about their identity. Over 80% of adopted people are trying to trace their biological families; many are motivated by this desire, common to most humans, to finally learn their origins. Nearly 70% want important information about any medical conditions inherited from their real parents. It has been reported that many children have gone through an identity crisis and experienced a feeling of abandonment. They felt betrayed and lost confidence in their family.

Gamete Donation

Gamete donation is also used as a technique of reproduction. This donation may be intra- or outside the conjugal couple. These donations are governed by principles based on blood donation: free donation, volunteer and donor anonymity, warranties of non-commercialization etc. However, although many precautions are applied in Gamete donation process, all these precautions do not yet prevent the proliferation of sperm banks, while the medical, social and

ethical risks are not negligible. We can take the example of the risks of transmission of infectious or hereditary diseases, or risk of inbreeding (Van et al., 2012). But the general ethical issues seem more numerous, take the example of the difficulties of medical information and informed consent, confidentiality, and the faults listed, that of health economics and the definition priorities of the valuation techniques, the value of testing, and uncertainty in medicine, or even that of the difficulty of defining the normal and the pathological problems.

On the other hand, this issue raises the following social and ethical considerations associated with such a birth are:

- What will be the long term, the emotional aftermath of parents of such a birth, if only one of them is the genetic parent, or even if neither is?
- How the child will react upon learning that his birth was the result of a form of unusual design?
- If the child would be informed of the nature of his parentage, should he or she be allowed to find his father or mother?
- What are the legal and moral rights and duties of the donor? Etc.

Vitro Fertilization

The human embryo "in vitro" is defined as: an embryo from a fertilized conducted outside the mother's body, kept in an artificial environment, and eventually transferred into the uterus. It thus differs from embryos obtained "in vivo" by natural fertilization or artificial insemination. Obtaining embryos in vitro is done in several steps. The mature oocytes are initially taken directly from the ovaries. These eggs are then placed in contact with the sperm: This is the "in vitro fertilization". Then embryonic cells that are derived were grown for 1 to 3

days (possibly more) at 37 ° C, in specific environments. One of the embryos thus obtained is then transferred into the uterus (Papanikolaou et al., 2006).

This raises the problem of the fate of surplus embryos in vitro (non-transplanted). Among these embryos there are two groups: one that embryos will be frozen to allow further attempts to transplant, and secondly, the surplus embryos. These are either retained (freezing), or for research, which is not without raising ethical questions. It may be noted again that the long-term effects of the freezing technique, possible zygote to blastocyst, are not yet fully known.

Ovarian stimulation techniques may, in addition to the physiological context (induction of ovulation or improving its quality), be used to collect more oocytes during IVF. These techniques take place in two phases. A first stimulation phase allows several oocytes to mature, with the administration of molecules that stimulate the floor hypothalamic pituitary ovarian or directly. A second phase is to trigger ovulation by administration of hCG.

Although effective, these techniques cause severe complications for both the mother and her child. In women there is an "ovarian hyper-stimulation syndrome", including an increase in ovarian size and the appearance of multiple cysts, hemo-concentration, ascites, etc. which can be life threatening in some cases. Regarding the long-term effects on the mother's body, epidemiological data are insufficient; however these inductions were implicated in the onset of hormonal ovarian dystrophy, endometriosis, early menopause, and even tumors (increase the incidence of cancers of the ovary, granulosa cell tumors, breast cancer).

The second part of the complications arising from these inductions is that multiple pregnancies are serious for the mother and children. In fact, these situations increase the risk of complications during pregnancy (prematurity, Caesarean section) and infant's mortality. The

effects are often encountered serious and may require neonatal resuscitation. To try to reduce these risks, doctors try increasingly to reduce the number of embryos transferred.

Given these consequences, supporters of ethics insists that in vitro technique which involves ovarian stimulation, embryo transfer, should not be undertaken without the support of the medical team, a reflection on their possible consequences. Although most of the religious groups accepted surgical conventional artificial insemination with the husband's sperm and in vitro fertilization, provided the egg and the sperm belong to married couple. One factor is the status of the human embryo. An important question arises about this: When does life begin it? At conception, or later during pregnancy? For many married couples, the choice of treatment depends on the answer to this question. Indeed, they believe for example that life begins at conception, they need to consider some key points:

- The couple should allow doctors to follow the usual protocol, which is to fertilize more eggs than will be implanted and to keep embryos for future use?
- What would happen to these frozen embryos if the couple could not or did not want to raise any more children?
- What would happen if the couple divorced or if one spouse dies?
- Who is solely responsible for the overwhelming destruction of these embryos?

Sex Selection

Predetermination of the sex of the unborn child is an old problem. In many cultures, the challenge was to obtain a boy (Arnold, Kishor & Roy, 2002). The techniques used were not supported by reliable chance of births. Today, children's rights and gender equality in developed

countries allow us to consider these facts with a certain distance. However, since the sixties, the progress of our knowledge gives rise to more techniques to choose the sex of the unborn child.

Some people believe that not to allow choosing the sex of the child is a hindrance to freedom while the other believe that freedom is not without limits. One can discern first reproductive freedom. It would be inappropriate to interfere in matters which are strictly in God's hand. It is said that a child cannot blame his parents for having chosen a sex he disapproves because if parents did not choose the sex of their child, that child would not have existed or would not been the same. If a boy was born girl (part sex selection) he would be just someone else. But precisely this principle can be refuted. For example, a girl who wanted to be a boy, can blame her parents for choosing her gender, for personal reasons. Sex selection would also give imbalance to the society and there is a real danger for society to let the parents choose. Hence, sex selection cannot be supported and encouraged.

Parental Diagnosis of Fetus

Prenatal screening became commonplace. Persons affected by Down syndrome have more than 1% probability of having a disabled child. The issue what freedom does the couple have to refuse to have this child and go for abortion. There is a social and ethical pressure to use the right given by a company to remove a new life, judging who is worthy or not to live. Can we determine a threshold in embryonic development?

The simple solution to this is instead of relying on hypothetical refusal to know or heroic behavior of parents who decide to continue the pregnancy despite the possibility or sometimes strong incentive to interrupt, should we not make a firm commitment to enhance the reception, accompaniment, support. Parents take their decision in conscience, but their decision has been

based on solid information. They will be able to measure the support brought by the company to partner with others.

Cloning

Cloning is relatively recent laboratory phenomenon. In recent years, the cloning is used as a synonym of any copy of a genetically identical artificial life. However, cloning is highly debatable issue. According to most of the people making a clone copy of a human being is highly unethical. One of the reasons is that cloning of a mammal has a high failure rate and almost one out of ten reconstructed” embryos are implanted in ewes and out of them .03 percent are successfully developed. This high failure rate and a high mortality of embryos clearly indicate that these experiments cannot be applied to humans.

Regarding ethical and social considerations of cloning, global community is of the opinion that human cloning is contrary to the human dignity. It is said to be a fundamental shift in the relationship between genetic identity and personal identity in its biological and cultural dimensions (Lassen, Gjerris & Sandøe, 2005). Similarly, it is also argued that asexual reproduction through cloning would undermine the concept of family in society.

Conclusion

After discussing several manipulations performed on human embryos, through sexual reproduction or not, we find that there are many ethical issues raised. First, there is problems specific manipulation of embryos. Second, the issue of anonymity and social and medical risks involves in such births. Apparently, everything seems so perfect: "reproductive machine" seems well established and it is not so much that could darken the picture of the reproductive science. However, a key issue for parents concerned is such births are a risk whether to take or avoid.

Despite all these difficulties, the legislation is still unclear. At its inception, reproduction techniques were not unanimous and many wondered how far science can go: assisted creation of life raised fundamental questions about the limits of acceptable medical interventions on human beings.

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