

## Reproductive medicine between advancement and ethics

Napoletano S.,<sup>1\*</sup> Del Rio A.<sup>1</sup>

*Department of Anatomical, Histological, Forensic and Orthopaedic Sciences, Sapienza University of Rome, Italy*

### Abstract

Over the past five decades, sweeping changes have occurred in the realm of childbirth. Thanks to medically assisted procreation, childbirth as an event has come to be characterized by the interweaving of biological as well as social elements. Research has been forging ahead, the first uterus transplant has been carried out and the experimental cloning of apes has taken place in China. All such innovations entail a wide array of ethical and medical issues, involving different parties in the process of generating new life: parents, children and gamete donors.

*Clin Ter 2018; 169(3):e108-109. doi: 10.7417/CT.2018.2063*

**Key words:** *medically assisted reproduction; heterologous fertilization; ethics; gamete donation*

Medically assisted reproduction has gone through a very contrasted regulatory path, in Italy(1). Following heated debates, the Italian Constitutional Court decision n.162/2014 has legalized the use of heterologous fertilization. Despite unfavorable rulings from Italian and International courts, in-vitro fertilization (IVF) via embryo transfer keeps posing multifaceted ethical, medical, psychological as well as legal issues.

Medically assisted procreation has grown to be a method usable by anyone who wishes to fulfill a family objective through the birth of a child. In particular, it helps circumvent the issue of male infertility, since it enables men with genetic anomalies or women who seek to conceive without sexual intercourse to have children. Heterologous fertilization techniques therefore make reproduction without sexuality possible, giving rise to family relations devoid of any biological foundation. In addition to that, there is the opportunity to freeze embryos (2), i.e. births that can be postponed according to the will of the parents, who in the meanwhile might have changed their minds.

Furthermore, heterologous fertilization engenders a rift between biology and biography, owing to the legal parents' decision to resort to it and to the choice of a third party to make his or her gametes available. In such a way, gamete

donation determines an ostensible biological parenthood for both legal parents, yet it violates the right of children born through such a technique to establish any relationship with their biological parents, forcing them to live in a sort of feigned parenthood.

The most relevant version, in my view, would be gamete donation to same-sex couples. In that regard, two distinct positions clash: those who stress the individual right to have a child of "one's own" regardless of any sexual orientation and those who view as unalienable the right of newborn children to have two parents of different sexes, a man and a woman, and point out that there is no such a right as the one to have a child that is genetically one's own.

As it is well-known, women of older age are less likely to achieve pregnancy.

Still, nowadays, assisted fertilization techniques make it possible to achieve motherhood for women who are quite old (the so-called "mothers-grannies", thanks to the cryopreservation of oocytes or ovarian fragments). Such an issue has caused a wide-ranging debate, since becoming mothers at an advanced age (after 50) might entail risks for women's health, in addition to an inappropriate mother-child relationship. For those reasons, several nations (including Germany, Sweden and Italy) deny access to IVF to women over 50 years of age.

Surrogacy is a practice that has been banned in many countries. In Italy, it constitutes a criminal offence under article 12 of law 40/2004, and is punishable with up to two years in prison (3). The Italian legal framework makes it illegal to register a child as having same-sex parents. In spite of that, several city governments, such as Rome and Turin, have allowed birth certificates to reflect that children may have two fathers or two mothers. In such a way, the commercialization of children is fostered, at a price ranging from 120,000 and 160,000 €, resulting in the debasement of the bodies of egg or uterus donors (4), bearing in mind that through such procedures, children are born who will never be able to find out about their identity or natural descent (5).

An opportunity to avoid resorting to surrogacy is uterine

*Correspondence:* \* Simona Napoletano. E-mail: simonanapoletano85@ gmail.com

transplantation. Over the past four decades, research has zeroed in on uterine transplantation, yet the first child born out of a transplanted uterus was given birth no sooner than 3<sup>rd</sup> October 2014. Uterine transplantation, by its very nature and peculiarities, lends itself to a range of specific ethical remarks, given that it involves three different parties (the donor the receiver and the child who will be born) (6). In 2012, the so-called Montreal Criteria for the ethical feasibility of uterine transplantation were outlined and released, which gather a series of views in favor and against uterus transplant. First and foremost, the principle of “Non-maleficence”, which dictates that no harm shall be done unto others (7). In favor of uterine transplantation, the principle of autonomy can be mentioned, the right of all people to make free choices and an obligation for everyone else to respect such choices. Said principle entails the complex issue of conscientious objection for doctors (8).

The trial that took place in China, where scientists have cloned two monkeys by the same techniques that produced Dolly the sheep two decades ago. It is still unclear whether such an experiment might move scientific research closer to attaining human cloning.

That kind of research trials is highly unlikely to ever become legal in Italy: in order to make sure that a cloned embryo is healthy, it is necessary to follow its development in vivo, not merely to observe it in vitro. Hence, it is necessary to implant it into the womb and allow a pregnancy to run its course. Therefore, successful human embryo genetic manipulation is only verifiable by allowing a fetus to be born and monitor its development. Cloning, from a theoretical standpoint, holds the potential to revolutionize human reproduction, but it is still too early to determine whether animal experimentation could be applicable to human subjects.

## References

1. Malvasi A., Signore F., Napoletano S. et al. 2014-2017. How medically assisted reproduction changed in Italy. A short comparative synthesis with European countries. *Clin Ter* 2017; 168(4):248-52
2. Zaami S, Busardò FP. Elective egg freezing: can you really turn back the clock? *Eur Rev Med Pharmacol Sci* 2015; 19(19):3537-814
3. Montanari Vergallo GM, Zaami S, Bruti V, et al. How the legislation in medically assisted procreation has evolved in Italy, *Med Law* 2017;36:2:5-28
4. Frati P, Busardò FP, Vergallo GM, et al. Surrogate motherhood: Where Italy is now and where Europe is going. Can the genetic mother be considered the legal mother? *Forensic Leg Med* 2015; 30:4-8
5. Montanari Vergallo G, Marinelli E, di Luca NM, et al. Gamete Donation: Are Children Entitled to Know Their Genetic Origins? A Comparison of Opposing Views. *The Italian State of Affairs. European Journal of health law* 25 (2018) 1-16
6. Zaami S, Marinelli E, di Luca NM. Ethical and medico-legal remarks on uterus transplantation: may it solve uterine factor infertility. *Eur Rev Med Pharmacol Sci* 2017; 21(22):5290-6
7. Ricci S, di Luca A, di Luca NM. Comment on “The static evolution of the new Italian Code of medical ethics”. *European Review for Medical and Pharmacological Sciences*, 2016; 20(13):2753-4
8. Montanari Vergallo G, Zaami S, Di Luca NM, et al. The conscientious objection: debate on emergency contraception. *Clin Ter* 2017; 168(2):113-9