

## Genetic and Gestational Surrogacy: an Overview

**Sambhu Charan MONDAL, Anuradha VERMA, Shiv Kumar GUPTA and Babita KUMAR**

*College of Pharmacy, Shree Ganpati Institute of Technology, Jindal Nagar, Ghaziabad-201302, Delhi-NCR, India*

**(Corresponding author; e-mail: shambhu.mondal@sgit.ac.in)**

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### Abstract

Surrogacy is a method in which a woman bears a child for another woman. The indications for treatment include absent uterus, recurrent miscarriage, and repeated failure of *in vitro* fertilization (IVF) and certain medical conditions. It also defines the process in which a woman gestates a fetus, gives birth to a child, and then relinquishes her parental rights to another couple. This third party relationship to the intimate process of producing children is not a contemporary concept and has been recorded in our history in several forms. In colonial America, children were sent to other childless families to learn trades or provide extra help to the family. More recent forms of surrogacy in the U.S. are adoption, fostering, and step-parenting. In this review, various techniques, law issues, and drawbacks of surrogacy are synchronically described and postulated.

**Keywords:** Surrogacy, *in vitro* fertilization, genetic and gestational, surrogacy ethics, adoption

### Introduction

Surrogacy or surrogate means substitute. In medical parlance, the term surrogacy means using of a substitute mother in the place of the natural mother. Surrogacy is a method in which a woman bears a child for another woman. It can be for commercial purposes or for altruistic purposes. The word surrogate originates from the Latin word 'surrogates' and means substitution. Surrogacy's are two types such as traditional surrogacy (the surrogate provides the egg and the intended father provides the sperm) and gestational surrogacy (the surrogate carries the pregnancy but genetic material like sperm and egg are provided by donors). In Debora Spar's historical account of surrogacy, she finds trends in Vietnam and Greece, where until recently; infertile women "adopted" the later-born children of families with many children. Gestational surrogacy is a treatment option available to women with certain clearly defined medical problems, usually an absent uterus, to help them have their own genetic children. IVF allows the creation of embryos from

the gametes of the commissioning couple and subsequent transfer of these embryos to the uterus of a surrogate host. The indications for treatment include absent uterus, recurrent miscarriage, repeated failure of IVF and certain medical conditions [1].

Surrogacy was first described in the USA in 1985 [2], but a guideline on this subject was not issued until 2008 [3]. In Europe, legal surrogacy started in the year 1989, after publication of the Warnock report on human fertilization and embryology in 1984 [1,4-6]. Surrogacy is now also available in the Netherlands, Finland and Belgium [7,8], whereas in Greece, its introduction is under discussion [9]. Israel has had guidelines for surrogacy since 1997 [10]. Surrogacy fails to respect the dignity or primacy of the welfare of the child. It ignores the fact that foetal/early infant development is a critical determinant of a child's welfare [11]. Surrogacy is not a simple arrangement; it is extremely complex. The surrogate relationship should be limited so as to

avoid unwarranted scrutiny [12]. Although surrogacy has some drawbacks but simultaneously it provides significant utility. Medical sciences have paced up tremendously in the last two decades. Most couples are struggling in the area of conceiving due to the infertility problem and this condition is extremely troublesome as well as stressful. Due to recent advances in medical technology, the number of women willing to supply their gestational services has increased. It should be helpful to clarify the intention of the contracting couple to become the parents of the child born.

### **Kinds of surrogacy**

There are two types of surrogacy:

#### **a) *In vitro* fertilization (IVF) / Gestational surrogacy**

Gestational surrogacy is one in which a woman has her uterus removed but still has ovaries. She can provide the egg to make a baby, but has no womb to carry it. The egg of the wife is fertilized *in vitro* of the husband's sperms by IVF or Intra-Cytoplasmic Sperm Injection (ICSI) procedure, and then the embryo is transferred into the uterus of the surrogate mother which she carries for nine months.

#### **Features of gestational surrogacy**

1. Gestational surrogacy is an Assisted Reproductive Technology (ART) where the surrogate plays 'host' to the embryo that is transferred to her uterus.
2. The embryo is produced through the IVF process, that is, the biological mother's egg is mixed with the biological father's sperm in a glass dish in the lab.
3. The gestational surrogate acts as a carrier to the baby with whom she shares no genetic bonds. The baby carries the genes of the intended parents and not the surrogate.
4. As gestational surrogacy clearly demarcates the relationship between the three parties involved - intended parents, surrogate, and baby - it is much preferred over traditional surrogacy.
5. As gestational surrogacy involves IVF, it is usually more expensive than traditional surrogacy.

#### **b) Traditional / Natural surrogacy**

In natural surrogacy the surrogate is inseminated with the sperm of male partner of an infertile couple. The child thus produced is genetically related to the surrogate and the male but not to the commissioning female partner.

#### **Features of traditional surrogacy**

In traditional surrogacy, the surrogate uses her own eggs, either because the intended mother does not have her own eggs or because her eggs are of poor quality. Pregnancy occurs through artificial insemination. The sperm of the biological father is placed in the vaginal canal or directly in the uterus of the surrogate. In this method, the surrogate has a biological/genetic relationship with the baby because she uses her own eggs. It has the potential to cause legal complications, should the surrogate change her mind at the last moment. Traditional surrogacy is usually cheaper than gestational surrogacy as no IVF is required. It also has a faster rebound time than gestational surrogacy, that is, if one attempt fails, another can be made in a matter of weeks.

#### **Surrogacy and genetic relationship**

According to Trowse, surrogacy legislation should subject to encourage surrogacy arrangements where the child and the surrogate are not genetically related [13]. The surrogate mother carries a baby who is biologically related to the commissioning parent as a result of IVF by using the commissioning woman's egg (IVF-S), and her partner's spermatozoa. In other cases, the child may be related genetically to the surrogate mother and not to the mother who adopt and bring up the child. Parents who decide surrogacy as a means of creating their families differ from others in terms of experiencing infertility and infertility treatment. Additionally, in many cases parents are not related genetically to the children born as a result of surrogacy [14,15].

#### **Ethical aspect of surrogacy**

Surrogacy arrangements are a complex and challenging issue for legal regulation. Commercial surrogacy is legal in India. Surrogacy in India is unregulated as they do not yet have legislation controlling surrogacy although the Indian Council of Medical Research (ICMR) has set "national guidelines" to regulate surrogacy, these are simply guidelines. This means that surrogate mothers need

to sign a “contract” with the childless couple. There are no stipulations as to what will happen if this “contract” is violated. It also emphasizes that surrogacy should not be legally prohibited [15].

#### **The legal, ethical, psychological and religious issues about surrogacy**

In the National Reference Center for Bioethics Literature, a critical view from Sue A. Meinke suggests that surrogate contracts are illegal when a fee is involved. But in 1983, according to the Kentucky Circuit Court it ruled that a fee paid to the natural mother is not equivalent to the sale of a child. Furthermore, in the year 1986, the Supreme Court ruled that state statutes baby-selling but allows surrogate arrangements. In the United States, according to a 1987 American College of Obstetricians and Gynecologists’ compilation, there are 64 state bills that were introduced in the current legislatures from January to June 1987. An ethical issue is abounding. Many argue that surrogate arrangements depersonalize reproduction and create a separation of genetic, gestational, and social parenthood. Others argue that there is a change in motives for creating children: children are not conceived for their own sakes, but for another’s benefit [16]. Surrogacy raises not only ethical but also psychological issues, said psychiatrist Anita Chauhan. Surrogate pregnancy should be treated as a high-risk psychological experience. In addition, it is recommended that surrogates receive professional counseling before, during and after pregnancy [17,18].

On the view point of Schenker’s research it shows that Islam supports fertility treatment but IVF can be performed only with the egg and sperm of the husband and wife, because they view any other arrangement as adulterous. Donations of embryos are prohibited. It is also stated that, the resistance to donor tissue transplants might be found in some Muslim communities. Catholic doctrine forbids IVF because discarding embryos may be part of the process. Embryo freezing is also problematic, and so is embryonic stem cell research. Christians and Muslims were strongly against “mechanization of birth” [19]. Christian and Muslim leaders have resented a reported move to popularize surrogacy in India. Recently, a tremendous amount of concern has arisen regarding a popular Indian actor who claimed at the birth of son that he and his second wife had

resorted to the method and wanted to popularize it. According to the Octogenarian Vivian Flory a lot of young women are going in for surrogacy. “Not due to infertility problems but to avoid hampering their professional lives [20].”

#### **Surrogacy vs adoption**

Adoption and surrogacy are both wonderful ways to create or add to families. The real reason for having a surrogate mother than to adopt is so that one can have a biological blood connection to the baby. The parent can carry on their bloodline and family name into the future using either his or his partner’s egg or sperm or both. Adoption gives no such connection or control. The infertile couple maintains full control over the entire process from picking the woman to become a surrogate mother to conception to birth. Couples have all the surrogate mother information and background about both the egg donor and sperm donation. It is usually one or both of the intended parents. It must be stated that both adoption and surrogacy are viable ways to create or add to families and will encourage the infertile couple to explore all the options and choose what they think best [13].

#### **Drawbacks of surrogacy**

Surrogacy is very expensive which its major drawback. Not to mention the possibility that a surrogate mother may have a second thought and decide to keep the baby. On the other hand in adoption this is not the case as the birth mother has already given up the baby and also adoption is very cheap and not to mention that adoption will help the poor children in terms of a family, proper food, shelter, education etc.

#### **Non-commercial surrogacy**

According to Sylvia Dermout, surrogacy was prohibited in the Netherlands until 1994, at which time the Dutch law was changed from the general prohibition of surrogacy to the prohibition of commercial surrogacy. They describe the results from the first and only Dutch Centre for Non-commercial IVF Surrogacy between 1997 and 2004. More than 200 couples applied for surrogacy in the Centre, of which, after extensive screening, 35 couples actually entered the IVF programme and 24 completed the treatment, resulting in 16 children being born to 13 women. They showed that non-commercial IVF surrogacy is feasible, with good results in terms of pregnancy outcome

and psychological outcome for all parents, and with no legal problems relating to the adoption procedures arising. The extensive screening of medical, psychological and legal aspects was a key element in helping to ensure the safety and success of the procedure. Non-commercial IVF surrogacy is of benefit to both the intended and the surrogate parents in terms of pregnancy outcome and psychological outcome. The psychological findings were analysed before the IVF procedure was started and again at least 1 year after the IVF procedures. It is a very strong belief, that 'commercial' surrogacy should be prohibited in order to prevent its abuse, and non-commercial surrogacy should be an 'ultimum remedium' [14,15].

#### **Gestational surrogacy is better than Traditional surrogacy**

Most couples today use a gestational surrogate meaning that they have no genetic link to the woman carrying the fetus and some choose to maintain friendships with the surrogate after birth. In gestational surrogacy, the surrogate mother has no genetic ties to the offspring. Again, the unused embryos may be frozen for further use if the first transfer does not result in pregnancy. But in the case of traditional surrogacy it is not like that. Hence, gestational surrogacy is better than partial or traditional surrogacy. Further, more women are expected to agree to be gestational surrogates and not traditional surrogates. Similarly, there are commissioning couples who would probably prefer to engage a gestational surrogate and not a traditional surrogate. Traditional surrogacy can be done via intrauterine insemination (IUI) or IVF. With gestational surrogacy IVF is used to fertilize the eggs in a laboratory. If the fertilization is successful, a doctor transfers some or all of the resulting embryos (often 2 or 3) into to the surrogate's uterus. If all goes well, the surrogate/gestational carrier delivers the baby and immediately relinquishes him/her to the parent(s).

#### **Conclusion**

In the past two decades, there has been a spectacular change in the field of reproductive technologies. Reproductive sciences have come in with techniques such as donor insemination; *in vitro* fertilization and embryo transfer methods, which have completely revolutionized the

reproductive environment. These techniques have given hope to many infertile couples, who wish to have a child of their own. This paper reviews some medicolegal, ethical and social aspects of surrogacy.

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