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GESTATIONAL SURROGACY. MEDICAL, PSYCHOLOGICAL AND LEGAL ASPECTS

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Abstract: *Background.* Infertility is a topical issue in our society and should be considered a disease in all aspects, affecting both health and well-being of the people who suffer from it. The advances made in medicine allow to the infertile couples or individuals to enjoy a family life with children with the help of a surrogate. Surrogacy is the process whereby a woman carries and gives birth to a baby for a couple who cannot conceive naturally and it has become increasingly popular worldwide. Although mentioned even from religious books, it still raises controversies nowadays in several fields.

Objective. To determine the medical, ethical and psychological aspects regarding gestational surrogacy. Materials and methods: We performed a systematic review by searching relevant information in ScienceDirect and PubMed databases using keywords as: assisted reproduction technology, gestational carrier, gestational surrogacy, intended parent, surrogacy, surrogate mother. Out of the results obtained, we sorted only articles regarding medical indications, ethical and legal aspects worldwide and psychological implications.

Results. This type of assisted reproductive practice can be justified only in the case of a congenital or acquired absence of a functioning uterus. In many countries that accept this practice, the surrogacy is mostly altruistic, with little example of commercial surrogacy (e.g. Ukraine, India). Due to the fact that there is an increased concern about human exploitation, coercion or womb commodification, in order to prevent any violation to human rights, surrogate carriers are encouraged to enter in with a contract which assures her about all rights and responsibilities, compatible to the country's legislation. Regarding psychological implications, opinions are divided: some experience states of depression, anxiety after delivery, while others do not consider the child as their own, bearing that there is no genetic connection.

Conclusions. The future will decide more on the subject, but competent entities from all over the world should watch for the primary purpose of this procedure - the help for individuals or couples (regardless of their gender) to complete their family with a child. Concerns on human rights violation should draw attention to the dangers these women are facing, obliging each country to ensure appropriate regulations in order to protect both the gestational carrier and the unborn fetus.

Keywords: assisted reproduction technology, gestational carrier, gestational surrogacy intended parent, surrogacy, surrogate mother.

INTRODUCTION

The willingness for fertility has led to several solutions, among which there are still some controversies nowadays. Surrogacy is one of them, being a form of medical assisted procreation in which a woman carries and gives birth to a baby for a person or a couple who is not able to have children due to congenital or acquired problems. It involves many ethical and psychological aspects that are not yet well defined, considering that depending on the country, it is permitted, forbidden or restricted.

Types of surrogate and selection criteria

There are two types of surrogacy: traditional and gestational. In the traditional surrogacy the surrogate mother is the genetic parent of the fetus after artificial insemination with the intended father's sperm, while during gestational surrogacy the embryo from the intended parents or from a donated gametes is transferred to the surrogate uterus, in this case the surrogate mother has no genetic connection to the fetus [1].

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Considering the material benefits of „carriers" in surrogacy there are mentioned two categories: commercial and altruistic. If the surrogate receives money or any kind of material support (except the one for the pregnancy good standing) for the surrogacy agreement contract, it is classified as a commercial one, but if the surrogate receives no remuneration, but the payment of the medical care and pregnancy expenses it is referred to as an altruistic surrogacy [2, 3].

Worldwide, the criteria for selecting a surrogate depends on the acceptance of this procedure in each country. The choice of a surrogate mother is of highest importance in order to achieve the success of the treatment. For example, in India, the surrogate should be 23–35 years old, married woman having one child of her own and of minimum 3 years old, with not <2 years interval between two deliveries, willing to participate, knowing advantages and disadvantages, risks and potential prejudice to self and also mandatory to have her spouse consent [4]. Similar criteria is applicable also for Mexico.

After matching the general criteria and personal consent, the gestational carrier is submitted to a whole screening process, involving both a medical (routine blood tests, serologies for hepatitis, HIV, electrocardiogram, Pap smear, mammogram and echography are recommended) and a psychological assessment. Also, the legal record and financial status of the future mother is being investigated.

MEDICAL ASPECTS

Indications

The surrogate gestation is a subject of interest regarding both medical, psychological and ethical aspects, but its purpose, as it can be understood from the Latin terminology "subrogare" it means "appointed to act in the place of", expressing the physical condition in which a woman gestates an embryo in her womb for another beneficiary (the intended parents), due to medical conditions affecting the process of conceiving of these last mentioned.

The absolute indication for surrogacy is the congenital malformation of the uterus [5]. A diagram in an article published by Cabra in Human Reproductive Open, mentions a 3% rate of uterine agenesis. It can occur due to Mayer-Rokitansky-Küster-Hauser syndrome, a rare cause of uterine agenesis [6, 7]. Regarding acquired comorbidities, women with reproductive age and functioning ovaries can lead to hysterectomy in connection to intra and postpartum obstetrical complications, like heavy bleeding or uterine rupture that oblige the obstetricians to perform emergency hysterectomy, or in relation to gynecology, hysterectomies for gynecological indications such as uterine and cervical cancers (32%) [6]. Apart from this, repeated implantation failures (21%), structural abnormalities such as uterine malformations or multiple fibroids, women's severe medical conditions (heart or renal diseases) which are contraindication of pregnancy (14%) also constitute indications for surrogacy. Another indication for surrogacy are repeated miscarriage (11%) or severe endometriosis with multiple implantation failures due to the abnormal endometrial receptivity [8]. Lastly, surrogacy can be a solution for biological impossibility to conceive or bear a child which applied to same-sex couples or single men also may necessitate surrogacy (14%) [6]. Still, nowadays many issues relating to surrogacy remain unresolved, with significant disagreements and controversy within the scientific community and public opinion.

Maternal risks

Even in healthy, young, fertile women medical problems associated with pregnancy may arise. The pregnancy complications incidence in gestational carriers is the same as in any other normal pregnancy, such as multiple pregnancies, spontaneous abortion, ectopic pregnancies, intrapartum and postpartum obstetrical complications.

The major obstetrical complication associated with surrogacy is the multiple pregnancy. Although, the American Society for Reproductive Medicine (ASRM) and the European Society of Human Reproduction and Embryology committees recommend single embryo transfer, only 15%–20% of clinics follow the single embryo transfer policy [9]. During pregnancy and delivery medical complications with no specificity to surrogacy such as hypertensive disorders, gestational diabetes, but also rare complications such as amniotic fluid embolism or postpartum hemorrhage, may appear [10, 11].

Beside the physical risk, there is the emotional involvement, depression, anxiety, feelings of insecurity or even suicidal tendencies [10]. As cited in the literature, the moment of birth and baby discard can cause serious trauma to many surrogate mothers, although some of them declare lessen of these the weeks following delivery [12].

Fetal and neonatal outcome

When discussing about fetal outcome, the

most important aspect that must be evaluated is the conceiving technique used in surrogacy. The literature indicates that children born after IVF technique are more susceptible to adverse secondary problems than those born from a spontaneous pregnancy [13].

Studying the influence of gestational surrogate on gestational age, it was observed that the preterm birth rate (PTB) in surrogate singletons varied between 0 and 11.5% as compared with 14% for IVF singletons and the mean gestational age was 37.2 weeks compared with 37.7 weeks for IVF singletons [14]. When referring to birthweight, studies from USA, Canada and Brazil showed a weight between 3309 g and 3536 g for surrogate singletons, compared with 3100–3240 g for IVF singletons [15]. Also, an increase in birth defects in surrogate neonates was observed through these studies.

An important discussion is to be made when a surrogate fetus/neonate is detected with a disability or malformation. With respect to the surrogacy arrangement there are three possibilities:

a. the intended parents accept the disabled child and assume his/her care;

b. that intended parents do not accept him/her, and the responsibility is transferred to the surrogate mother, attempting to resolve it by abortion. There is when the difficulty arises and when it's needed a clear and detailed assisted reproductive technology contract to certify one's rights on the fetus according to the country's rules and regulations on the subject. Frequently, it is the contracting parents who decide, so they can impose an abortion on the pregnant surrogate. In any case, the decision to abort, although it may be contractually supported, does not exempt one from the moral responsibility that abortion entails;

c. the surrogate is obliged to take care of the disabled child, with the intended parents being relieved of any responsibility [16,17].

A famous case mentioned in the literature is about an Australian couple who contracted a Thai woman as surrogate; she was having a twin pregnancy with one twin developing Down syndrome. After birth, the couple took only the baby Gammy, the healthy one and left the child with Down syndrome with the surrogate mother [16].

Ethical and legal considerations

In Europe, surrogacy is not officially allowed in Austria, Bulgaria, Denmark, Finland, France, Germany, Italy, Malta, Norway, Portugal, Spain, Sweden and Romania. Altruistic, but not commercial, surrogacy is allowed in Belgium, Greece, the Netherlands and the UK. Some European countries, such as Poland and the Czech Republic, currently have no laws regulating surrogacy [18]. Commercial surrogacy is legal in Georgia, Israel, Ukraine, Russia, India and California, USA, while in many states of the USA as well as in Australia, Canada and New Counselling of all members involved in surrogacy arrangements is of extreme importance. Both the surrogate mother and the intended parents should be aware of the full implications of this procedure and the risks that come along with, even the risk of losing the fetus before birth, the psychological involvement and risk for depression, but also the social implications despite the patient's religion or environment. The multidisciplinary team should provide an appropriate way of explaining, psychological support and comfort both surrogate and intended parents for the best outcome.

A prime ethical debate, in regard to legal aspects, raised in the system of surrogacy concerns the human exploitation and/or coercion when women are offered material benefits in exchange of bearing and delivering a child, even they are obliged by any means to do it. Such cases are especially related to huge differences between social classes, wealth intended parents and very poor surrogates. Womb commodification is another term frequently used with the procedure, due to relationship with economics, arguing whether the woman has her rights respected or somebody is taking advantage of her body for personal interests. To prevent any violation to human rights, surrogate carriers are encouraged to enter in with a contract which assures her about all rights and responsibilities, particularly to the right of making decisions regarding her own body [19,20].

A secondary ethical aspect of this system of surrogacy is the relationship of the carrier mother to the intended parents and also her motherhood status. The availability of new reproductive technologies has led not only to the dissociation between procreation and sexual intercourse, but also to the redefinition of the terms "mother" and "family" [21]. With the practice of surrogacy, a subdivision of motherhood has also been created, resulting in a genetic mother, a gestational mother and a social mother [22]. In gestational surrogacy, due to the fact that the embryo has no genetic connection to the surrogate, arrangements prior to the procedure can more easily define the motherhood status, if one is desired. This situations differ from country to country, bearing in mind religious aspects, but also cultural ones regarding the importance of a family, the appreciation shown to the child, but still little is well defined [23]. On the short-term, in UK and USA, just one third surrogates remain

in contact to the intended family, surrogates declaring to visit the infant once a month during the first year of life, but on the long term, the relationship becomes only one of friendship, communicating once mostly by phone, surrogates reported being happy with their level of contact with the child and declare that they do not view the child as their own child , although 41% report feeling a 'special bond' towards the child, a finding that does not differ according to surrogacy type [23].

A third aspect with high importance is the legal status and citizenship of the future child, challenged by surrogacy. Traditionally, "Jus soli" (right to soil) and "Jus Sanguinis" (right to blood) have been used for deciding citizenship, which is still a constraint in surrogacy [1]. In the Permanent Bureau Study from 2014 , the Hague Conference Permanent Bureau identified this as a "pressing problem" [24, 25]. For the US Department of State, Bureau of Consular Affairs states that a child can be an US citizen, one or both genetic parents must be a U.S. citizen. Moreover, there are countries in which the child will not be a citizen of the country in which he/she is born because the surrogate mother is not legally the parent of said child. As this system evolves and cases become more often, ambiguities in laws are decreasing. Also, to prevent any injustice that may emerge, the surrogacy arrangements should contain information about financial support for the surrogate child in case of deceased or divorce of the commissioning couple before delivery of the child, if there is no willingness of any to take care of him. As mentioned in most of the reproductive technology regulation arrangements, surrogate mothers should not have any parental rights over the child, and the birth certificate of the baby should bear the names of intended parents as parents in order to avoid any legal complications.

The religious point of view must not be disregarded. Various religions around the world take different stances with regard to surrogacy practice and ART in general. For example in the Catholic religion there is stated that any method of dissociating the bonding between husband and wife by another person are considered immoral [26]. The Islamic religion has a similar approach, while Jewish religion has accepted only gestational surrogacy, with gametes from intended parents and IVF technique [27, 28].

Psychological impact

Surrogacy is the last option treatment solution for several medical indications, with a complex involvement on psychological aspects. When desiring to opt for this reproductive method, a multidisciplinary team manages the case for the best outcome for both surrogate, intended parents and fetus. ASRM guidelines recommend psychosocial education and counseling by a qualified mental health professional to all intended parents, especially because in the case of gestational surrogate the personal relationship between parents and carrier will often last beyond the childbearing and delivery [29, 30]. During the pandemic Covid-19, all couples and surrogate mothers, had serious problems due to travel restrictions as well as access to medical services, which led to additional stress [31-33].

In conclusion, the World Health Organization (WHO) has recognized that infertility should be considered a disease in all respects, affecting the health and well-being of the people who suffer from it. Reproductive problems and infertility have always exerted a strong psychological pressure. The advances in the field of medical technologies have provided more solutions to the problem of infertility and surrogacy has opened a new frontier. It has been a blessing for many families with infertility problems, but its social, ethical and legal status has encountered and still does, many barriers. Beside the carrier and intended family, the medical personnel should bear in mind the responsibilities and the ethics of dealing with the production of a new life by surrogate and watch for their human rights being respected beyond everything.

All positives and negatives taken into consideration, we cannot negate the fact that gestational surrogacy gives hope to individuals and couples who could not otherwise build a family outside of adoption.

The future will decide more on the subject, but competent entities from all over the world should watch for the primary purpose of this procedure - the help for individuals or couples (regardless of their gender) to complete their family with a child. Concerns on human exploitation, coercion or womb commodification should draw attention to the dangers these women are facing, obliging each country to ensure appropriate regulations in order to protect both the gestational carrier and the unborn fetus.

Conflict of interest

The authors declare that they have no conflict of interest.

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