



Is the Furghanization of Surrogacy Acceptable as an Alternative Method of Assisted Reproduction for Women with Uterine-dependent Infertility, in Yemen?

Ahmed Kaid Allow^{a++*}, Belqees A. Alaw^b,
Bracamonte Maryam^{c#} and Saeed M. Saeed^{d†}

^a Department of Physiology, Faculty of Medicine and Health Sciences, Sana'a University, Sana'a, Yemen.

^b Preclinical Department - Anatomy, Widad University College, Kuantan, Pahang, Malaysia.

^c Department of Human Physiology, Faculty of Medicine and Health Sciences, Sana'a University, Sana'a, Yemen.

^d Department of Embryology and Histology, Colleague of Medicine, Sana'a University, Yemen.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The objective of this outstanding research is to examine whether surrogacy (Furghanization of surrogacy) is a legal and ethical alternative method proposed to women who are unable to carry a developing fetus in our country.

Methodology: 208 infertile couples were involved in this clinical pilot study. The data was collected

⁺⁺ Fertility Consultant at Alaw Fertility and Medical Center Sana'a Yemen;

[#] Obstetric and Gynecologist Alaw Fertility and Medical Center Sana'a Yemen;

[†] PhD, Senior Consultant;

*Corresponding author: E-mail: ivf2007@med-su.edu.ye, a.allow@alraziuni.edu.ye; ivf2007@gmail.com;

anonymously and using a face-to-face questionnaire. Written consent has been taken from all women. The questionnaire was approved by the local ethical committee of Alaw IVF Center.

Results: 191/208 were agreed with the Furghanization of surrogacy, on one condition, “the surrogate mother should be a second wife for a man/partner who required surrogacy as an alternative method of assisted reproduction.

Conclusion: Human rights and ethics accept the surrogate mother to be co-wives (Furghanization of surrogacy as an alternative method of assisted reproduction) for the same husband, and the indication for surrogacy should be only medical.

Keywords: Assisted reproduction; Furghanization of surrogacy; infertility; in vitro fertilization.

1. INTRODUCTION

Worldwide-reaching, almost 259,200 children are given birth to everyday [1]. That is almost 3 babies are given birth for each second. To be a mother and father is usually a goal-stone for each couple, families and society. Unfortunately, some couples are unable to have children a condition we called infertility [2]. In many societies, infertility problems are usually attributed to women [3].

Surrogacy, in the last 3 decades, has become a well-known alternative money-wise method in the field of assisted reproduction and in the centers of assisted reproductive treatments (ARTs) to help women who are unable to go through the gestational period. The reason for it gaining grounds stormed from the delivery of the first test-tube baby [4]. Before that, exactly at the end of the 4th quarter of the 20th century, infertile couples had agreed for treatment of their infertility problems (Allow Ahmed Kaid, 2016). In 1978 when the first test-tube baby Lewis Brown was born, from that time, the infertile couples found a please where they can get an own child. Generally, there are many ways to treat infertility. They include the assisted reproductive techniques/treatment like In Vitro Fertilization (IVF), intracytoplasmic sperm injection (ICSI), and embryo transfers (ET) or intrauterine insemination (IUI) [5]. Doctor Edward pioneered the team that lead to the conception and the delivery of the 1st IVF test-tube-baby “Lewis Brown”, and later on he suggested surrogacy as a method for resolving infertility problems among infertile couples [4,6,7].

The word ‘surrogate’ means ‘substitute’ [8]. Surrogacy is a kind of treatment of infertility where the surrogate mother carries deliver a child on the behalf of another couple. There are many types of surrogacies. The most popular surrogacy is commercial surrogacy where the surrogate mother impregnated by using the

sperms and oocytes of another couple until the delivery of a healthy babies through the use of IVF. The surrogate mother should be undergoing the full IVF procedures. Some of these (surrogate mothers) might be complicated with recurrent miscarriage, repeated failure of assisted reproduction, and certain very serious medical conditions like ovarian hyperstimulation syndrome. So this kind of surrogacy is called commercial medical surrogacy [3,1].

Commercial surrogacy is a method of commercial reproduction where the woman is hiring her uterus to become pregnant from another couple until the delivery of an alive child without any medical indication in the commission couple (biological mother and father). For that reason, it is known as commercial surrogacy. It is (as mentioned early) a money-wise dependent contract between a commercial surrogate mother (surrogate mother) and a couple owner of gametes or embryos (biological mother and father) [9-11].

According to the Oxford Dictionary, a surrogate mother defines as, “a woman who bears a child on behalf of another woman, either from her own egg fertilized by the other woman's partner, or from the implantation in her womb of a fertilized egg from the other woman” [12]. Collins English Dictionary, explains the status of a surrogate mother as “a woman who bears a child on behalf of a couple who is unable to have a child, either by artificial insemination from the man or implantation of an embryo from the woman [13].

In this study, there are many unanswered questions, as well as social, ethical, and legal issues that arise during the practice of surrogacy. For example, is surrogacy considered a method of infertility treatment in our country, and is it a legal and ethical process? Do the laws in the country allow children born via surrogacy to carry the same citizenship as their biological parents? Who is considered the father and mother of

children born through surrogacy, and who will declare the certificate of birth for them? Which passports will be considered official documents for these children, and will they be considered citizens of the country where they were born?

Additionally, questions arise regarding who will arrange for the birth certificate and passport required by the foreign couple at the time of immigration, whose name will appear on the birth certificate, and how will the commissioning parents claim parenthood. What happens if the surrogate mother changes her mind and refuses to hand over the baby or blackmails for custody? Who will take responsibility for the child if the commissioning parents refuse to take the child? What happens if the child is born disabled, abnormal, or deceased during pregnancy or delivery? What happens if the sex of the child is not to the liking of the commissioning parents?

Furthermore, it is important to consider who will be responsible for medical care during and post-delivery for both the mothers and babies who are organized via surrogacy. Additionally, regulations must be put in place to control the surrogacy process from beginning to end, and it is necessary to determine who will prepare these regulations and who will be responsible for enforcing them.

Surrogacy and surrogate mothers remain a matter of controversy in many civilized countries, and traditional surrogacy is still considered unacceptable by scientists and religious scholars. The conflict between human requirements and religious beliefs has not yet been resolved. Therefore, it is crucial to thoroughly analyze and consider all of these questions and issues before designing any policies related to surrogacy and making legal provisions.

In addition to the questions mentioned above, it is important to consider the acceptability of surrogacy as a method for managing infertility and the Islamic perspective on infertility treatment using a surrogate mother. Surrogacy and surrogate mother are the procedure which still a matter of controversy overall the civilized countries [3]. More or less, traditional surrogacy is the way in which scientists and religious scholars are, hardly, not in a suitable condition [14]. Between the human beings-requirements

and religious-scholars acts, the conflict is still not solved, yet [11]. So, the objective of the present work is to answer the following question: Is the Furghanization of surrogacy as an alternative method of assisted reproduction for women with uterine-dependent infertility acceptable in Islamic society?

2. METHODOLOGY

Two hundred and eight infertile patients who attended Alaw IVF Center were involved in this study. The age of infertile patients was more than 30 years-old and the duration of infertility was more than 9 years, too. The justification for choosing patients of this age is that the infertile couples were adult and had a good experience and awareness to make a decision as well as had been treated from infertility, with no success. Excluding criteria were only young married couples aged less than 30-years-old. Surrogacy-interview was performed by a fertility consultant who is the senior staff in our fertility center. The data via the interview (face-to-face surrogacy interview) was collected anonymously. The questionnaire was approved by the Local Ethical Committee, Alaw IVF and Medical Center (LEC-Alaw IVF center), and Faculty of Medicine Sana'a University. The duration of this study was extended from September 2018 until September 2022.

2.1 Statistical Analysis

The data obtained from the questionnaire was analyzed using Statistical Package for the Social Sciences IBM SPSS software, version 20.0. Comparison of the \pm standard deviation was done using a one-way analysis of variance (ANOVA) followed by Dunnette's post hoc test. Data were expressed as mean \pm SEM. Statistically, a significant level was taken to be p value less than 0.05.

3. RESULTS

Two hundred and eight infertile patients with an average age around SD 36.51 ± 4.8 were involved in surrogacy interviews (Eighty-three female (39.9%) and 125 (60.1%) male infertile patients). The average of infertility duration for males was 13.8 years and for females 11.29 years, Table 1 (Data of patients involved in the surrogacy interview).

Table 1. Data of patients involved in surrogacy interview

	Number of patients	Male	Female
Total No of patients involved in this study	208	30.9% % (83/208)	60.1% (125/208)
Primary infertility (%)	182	87.5%	
Secondary infertility (%)	26	12.5%	
Duration of infertility (years)	208	13.8	11.29
Average of patient-age (years)	208	33.26	31.14
Overall age-average of all patients (years)	36.51±4.8		
Region of patients:			
1. Sana'a & Alamanah	12.98% (27/208)		
2. Al-Hudidah, Thamar, Shabua Hadramout Amran and Radda	43.75% (91/208)		
3. Addan, Althali ewass	20.19% (42/208)		
4. Others (outside of country)	23.08% (48/208)		
Infertility factors:			
	W		
Male factor	25.48% (53/208)		
Female factor	46.65% (97/208)		
Male and female factors	19,71% (41/208)		
Unexplained infertility	8.17% (17/208)		
Types of female factors infertility:			
1. Uterine abnormalities	13.25% (11/83)		
2. Tubal factor	19.27% (16/83)		
3. Chronic pelvic inflammatory diseases	7.23% (6/83)		
4. Anovulatory cycle	22.89% (19/83)		
5. Female hyperprolactinemia	34.9% (29/83)		
6. Others	2.41% (2/83)		
Type of male infertility:			
1. Oligoasthenoteratospermia	20.8% (26/125)		
2. Seminal fluid infection	37.6% (47/125)		
3. Azoospermia	7.2% (9/125)		
4. Asthenzoospermia	16.8% (21/125)		
5. Teratospermia	10.4% (13/125)		
6. Others	7.2% (9/125)		

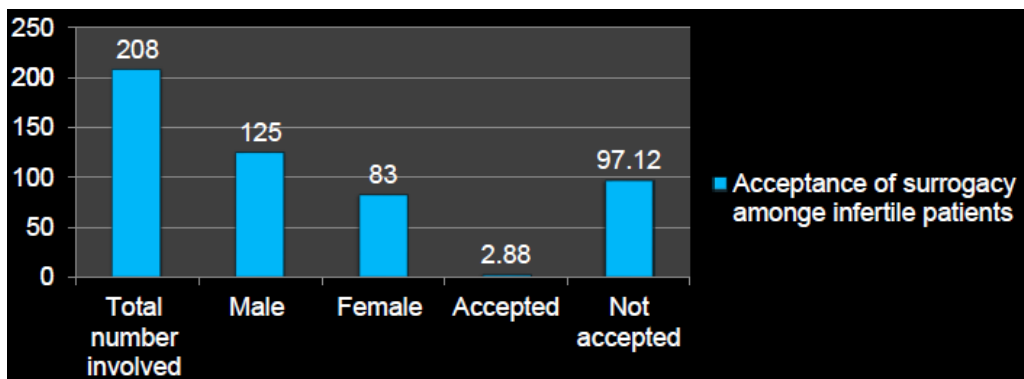


Fig. 1. Acceptance of surrogacy among infertile patients

The overall acceptance of surrogacy as one of the methods of infertility treatment is demonstrated in Fig. 1. Surrogacy, as an alternative to the fertility problem, of infertile

patients (method of reproduction), was accepted in only 2.88% (6/208) of interviewed infertile cases versus 97.12% (202/208) rejected it (Fig. 1).

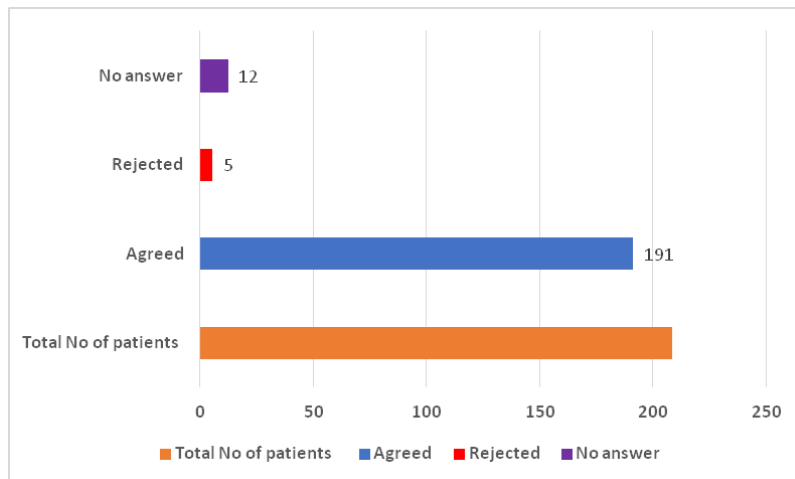


Fig. 2. Answer of question-condition in surrogacy: If the the syrrogate mother is the second wife!

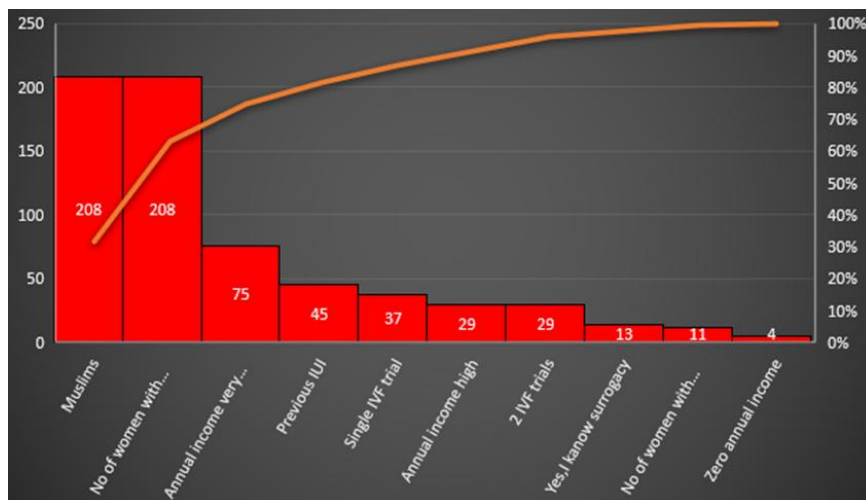


Fig. 3. General answer of the patients for different questions

One hundred ninety-one out of 208 patients (91.83%) agreed with surrogacy, in one condition, “the surrogate mother should be a second wife for man/partners who required surrogacy for solving their infertility problem”. Five women were rejected because they did not want their husbands to marry another woman. Twelve infertile women were still confused about surrogacy as an ARTs method, Fig. 2.

The general answers of the patients for different questions during the period of study which was started on 2018 until 2022 is presented in Fig. 3.

4. DISCUSSION

The term "Furghanization" was coined based on the name of my hometown, Furghan, where I

grew up and began contemplating solutions for female infertility. This led me to explore surrogacy as a method for treatment, which eventually became the focus of this study.

Terms like "baby surrogacy," "baby factories," "baby harvesting," and "baby's third part of reproduction" are relatively new and reflect the breeding, trafficking, and abuse of infants and their biological mothers. Our research shows that surrogacy can be a viable method of reproduction, with one important caveat: it should only be considered when the first wife has uterine abnormalities, and the surrogate mother is a second wife who is fertile. Additionally, it must be strictly regulated by the government to ensure that it is carried out in an ethical and lawful manner. This makes it a viable option for

females who are unable to achieve pregnancy due to uterine medical dependent infertility.

When we asked patients if they would consider using surrogacy as a method of assisted reproductive technology (ART) without regulation, over 90% disagreed. However, when we asked if they would consider using a second wife as a surrogate to treat their infertility, over 90% agreed. This suggests that patients are more receptive to surrogacy when it is presented in a different light. Initially, patients may have been hesitant about surrogacy due to concerns about the lack of legal relationships between the infertile couple and the surrogate mother, which may have made the process seem inhumane [15].

Finally, surrogacy can be a viable solution for couples struggling with infertility, but it must be well-regulated and under the strict supervision of the government. Allow and his co-workers in 2016 [3] demonstrated that by addressing patients' concerns and ensuring proper legal protections, we can make surrogacy a more acceptable and humane option for those in need.

Surrogacy should only be considered as a medical indication [3], which includes conditions such as congenital absence of the uterus, hysterectomy, uterine cancer, repeated IVF failure, repeated uterine bleeding, and untreatable uterus but functioning ovaries. Commercial surrogacy, without a medical reason, must be regulated by the law and adhere to human morals, rights, and international regulations [3].

It is crucial to emphasize that surrogacy is a medical procedure that should only be carried out when necessary to address a specific medical condition [16]. Using surrogacy for commercial purposes without a medical reason can lead to ethical concerns and human rights (Gunnarsson Payne, Korolczuk et al. 2020) violations [17]. The regulation of surrogacy is necessary to ensure that all parties involved are protected and that the process is carried out with dignity and respect for all human life involved [16].

Therefore, laws and international regulations must be put in place to govern surrogacy and ensure that commercial surrogacy is only carried out when medically necessary (Gunnarsson Payne, Korolczuk et al. 2020). By doing so, we can ensure that surrogacy is used appropriately

and for the benefit of all parties involved while maintaining ethical standards and human rights.

The process of medically indicated gestational surrogacy requires open and honest discussion between both the commissioning and host couples. Commissioning couples must consider all alternative treatment options, including the possibility of adoption instead of surrogacy. They must also be aware of the potential challenges associated [9] with surrogacy, such as finding a suitable host, surgical complications, drug intoxications, hyperstimulation syndrome, and multiple failures [14,11]. Additionally, commissioning couples must be informed of the short and long-term psychological effects of surrogacy, as well as the possibility of their baby being born with congenital abnormalities. It is also important to consider the legal implications of surrogacy in countries where it may not be enforceable for the host couple [11].

Similarly, host couples must be fully informed about the surrogacy procedure and its potential complications. This includes medical preparation, the possibility of multiple pregnancies, pregnancy and delivery complications, the possibility of abortion or termination of pregnancy, and the potential for feelings of guilt if the child is born with abnormalities [11]. The surrogacy process is complex and can be emotionally challenging for all parties involved.

Therefore, it is essential that both commissioning and host couples have a clear understanding of the surrogacy procedure's potential challenges and risks. Open and honest communication is necessary to ensure that all parties are fully informed, and their concerns and needs are addressed. By doing so, we can ensure the surrogacy process is carried out ethically and with respect for all involved.

.Unfortunately, the practice of surrogacy as a method of reproduction has been increasing without any ethical regulation from governments or organizations [18]. Many regional and international fertility centers are exploiting surrogacy as a commercial ART service, which is appealing to foreign tourists. Unfortunately, there are no regulations in place for these centers.

The cost of surrogacy is prohibitively expensive, and only wealthy couples can afford it. On the other hand, surrogate mothers are often poor individuals who live in countries with very low annual incomes. These surrogate mothers are

from either highly developed or very low-developed countries like Laos, Central America, etc. Thus, the surrogacy industry is essentially a game played by the rich on the court of the poor.

Moreover, many instances of surrogacy are carried out without any medical indication. Some wealthy couples, usually the commissioning women, opt for surrogacy simply because they do not wish to become pregnant. They are doing it simply because they have the financial means to do so.

It is crucial to regulate the practice of surrogacy to ensure that it is carried out ethically and with respect for all parties involved. Governments and organizations must establish and enforce ethical guidelines and regulations to protect vulnerable surrogate mothers and ensure that the needs and rights of all parties involved are respected. By doing so, we can prevent the exploitation of surrogate mothers and ensure that surrogacy is used for its intended medical purposes.

From a moral standpoint, all married women have the right to become mothers. However, there is a significant gap between this goal and the actions taken to achieve it. Unfortunately, surrogacy has become a process that often exploits poor women for the benefit of wealthy couples.

To address this issue, we must understand surrogacy as a method of reproduction that should only be used when there is a medical indication, such as the absence of a uterus, congenital uterine anomaly, chronic organ failure, or other absolute medical indications. In these cases, gestational surrogacy or IVF-dependent surrogacy may be considered as a method of infertility treatment, provided that the commissioning mother has functioning ovaries. In this process, the surrogate mother (who is typically the second wife of the same infertile couple) carries the genetic gametes/embryos until birth on behalf of the infertile couple.

However, it is crucial to ensure that there are strict international and local government regulations in place to control the surrogacy process. This can be achieved through the production of surrogacy laws and acts, which must be enforced to protect the rights and safety of all parties involved. By doing so, we can ensure that surrogacy is used ethically and only for its intended medical purposes, without

exploiting vulnerable individuals for the benefit of the wealthy.

Commercial surrogacy is a complex and highly problematic process, not only due to its many steps but also because of the lack of ethical and legal regulation that protects the rights of commissioning and surrogate couples. In many cases, surrogate women are treated as modern-day slaves, with minimal human rights and ethical considerations. They are often victims of poverty and an unhealthy society, which makes them vulnerable to exploitation by wealthy commissioning couples.

Furthermore, the absence of religious guidance and support for commercial surrogacy only compounds the ethical issues involved. Commercial surrogacy is a human-less and exploitative procedure that reduces reproduction to a form of touristic marketing, devoid of any ethical considerations. This type of reproduction, where fertile couples are seeking financial gain, is not a scientific or ethical way of addressing infertility. Any centers that engage in such practices should be shut down, and the medical council committee in the country should revoke their medical licenses and specialized certificates.

It is essential to establish strict ethical and legal guidelines for surrogacy to ensure that all parties involved are treated with dignity, respect, and fairness. The commissioning and surrogate couples must be protected, and their rights and needs must be respected. By regulating surrogacy and enforcing strict ethical guidelines, we can ensure that this method of assisted reproductive technology is used ethically and for the benefit of all involved.

Assisted reproduction using donor gametes or surrogacy is strictly prohibited in Islam and the Catholic Church. In Jewish society, the father is considered the biological father, and the mother is the one who gives birth to the baby. In many religions, including Islam, children are considered a gift from the Creator, and the father is recognized as the biological father while the mother is acknowledged as the genetic mother of the ovum and the one who carries and delivers the baby.

Given these beliefs, it is understandable that oocyte or sperm donation, as well as commercial surrogacy, are strongly prohibited. These practices conflict with religious beliefs that

emphasize the importance of biological relationships and natural conception.

It is important to respect the religious beliefs of individuals when considering assisted reproductive technologies. Healthcare providers must be sensitive to the cultural and religious beliefs of their patients and provide treatment options that are consistent with their values and beliefs. By doing so, we can ensure that all individuals have access to medical care that is respectful of their religious and cultural beliefs.

Commercial surrogacy has become increasingly popular among wealthy and healthy residents (commissioning couples) in high-income societies. However, this desire for surrogacy should not be fulfilled at the expense of people (hosting couples) suffering from poverty in developing or very poor-developed countries. Nonetheless, commercial surrogacy has become a thriving business, with significant sums of money going towards agencies, doctors, labs, clinics, and lawyers. As a result, surrogacy tourism has increased, leading many countries to revise their laws related to the practice.

For instance, in India, the 2016 regulation Bills prohibited foreigners from contracting with Indian surrogate mothers. The laws of surrogacy reproduction in India now stipulate that surrogacy should be between relatives and only reimbursed for medical expenses and infertility duration of not less than 5 years. Altruistic surrogacy is restricted to infertile, married heterosexual couples.

It is important to establish strict regulations to ensure that all parties involved in surrogacy are treated with dignity and respect, and that the practice is carried out ethically and within the boundaries of the law. Surrogacy should not be used as a means to exploit vulnerable individuals for financial gain, and the rights and well-being of the surrogate, commissioning, and hosting couples should be protected. By doing so, we can ensure that surrogacy is used for its intended purposes and does not perpetuate inequality or exploitation.

In 2020, New York State in the U.S., which had previously prohibited commercial surrogacy, finally legalized it under the Child-Parent Security Act. This legislation allows U.S. citizen mothers to serve as surrogate mothers for both local and international individuals seeking this service [19].

Conversely, in Turkey, the government reinforced its existing ban on surrogacy in 2017, introducing stricter regulations and criminal penalties [20]. The Health Ministry amended the law to criminalize in-vitro fertilization (IVF), except when performed between married couples [21-24]. This action was taken due to the prevalent use of heterogenous IVF by both local and international individuals.

In several Middle Eastern countries, commercial surrogacy is officially prohibited, yet it still occurs covertly. The governments of these countries do not intervene in the arrangements between commissioning and hosting couples, as there is no governmental oversight or control over the fertility centers operating within their borders.

Despite being officially prohibited or banned in some countries, the practice of surrogacy continues with the help of easy online arrangements, with surrogate sites motivating surrogates and commissioning couples to engage in surrogacy as a business. However, surrogacy should not be treated as a product in a supermarket, and laws and regulations should be put in place to ensure that motherhood is kept clean from such dirty business.

The authors of this manuscript propose an Islamic solution for surrogate mothers, which is based on Islamic regulations and faith. As mentioned earlier, all forms of surrogacy and gamete donation are strongly prohibited in Islam, except perhaps between wives of the same husband. When our patients were asked to consider surrogacy, they initially ignored it. However, when the possibility of the surrogate mother being a co-wife was presented, the majority of them accepted it. This is the beauty of the justification of marriage with multiple wives in Islam.

In conclusion, this manuscript presents a final legal solution for surrogacy that is based on Islamic teachings. It should be discussed and implemented in countries worldwide to ensure that surrogacy is regulated and carried out ethically, with the rights and well-being of all parties involved protected.

The purpose of this work is to propose a solution for managing female factor infertility through surrogacy. Becoming a mother is a goal shared by all women, regardless of whether it is achieved through surrogacy or not. When considering surrogacy, the focus should be on

motherhood and should begin with the marriage of the intended surrogate mother to become a co-wife with the same infertile couple who have a medical indication for infertility treatment using surrogacy. This approach ensures that the right to motherhood is protected, which is one of the most important women's rights.

The morality of surrogacy is a topic of discussion, but the primary concern is paternity, as mentioned earlier. However, the fact or status of a situation should not be affected by its morality. Our ethics and faith aim to protect the rights of women in the appropriate manner. Unregulated commercial surrogacy as a method of reproduction is a result of unhealthy social behaviors. When surrogacy is introduced without medical indications and court regulation, it can lead to the violation of motherhood rights and society.

In conclusion, according to Islam, all forms of surrogacy are prohibited, and co-wives can serve as surrogate mothers for managing female infertility. Human rights and ethics accept the surrogate mother to be a co-wife for the same husband. The indication for surrogacy should be only medical, ensuring that surrogacy is used ethically and with the rights and well-being of all parties involved protected.

5. CONCLUSION

In conclusion, the prohibition of all forms of surrogacy in Islam is crucial in managing female infertility. Co-wives can serve as surrogate mothers for managing female infertility, and human rights and ethics accept the surrogate mother to be a co-wife for the same husband. Finally, the indication for surrogacy should be limited to only medical reasons, ensuring that surrogacy is used ethically and with the protection of the rights and well-being of all parties involved.

6. CLINICAL IMPLICATION

Clinical implications of this work suggest that chronic medical conditions such as uterine abnormalities can delay the feeling of motherhood, which is a goal shared by all married women. Surrogacy can be considered as an option for the treatment of female factor infertility. This issue can be addressed by having the surrogate mother become the co-wife of the same husband as the infertile woman who has a medical indication for surrogacy.

CONSENT

Written consent from patients had been taken.

ETHICAL CLEARANCE OF THE WORK

The study was approved by the local ethical approval committee of Alaw IVF Center in their meeting which was held on 13th September 2018 No: S062018EAC.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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