



Human Rights Challenges in Discarding Excessive Embryo from Gender Selection through PGD Approach

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ABSTRACT

One of new scientific innovations which increased human selection latitude is children gender selection through pre-implantation genetic diagnosis (PGD). Gender selection through this approach has some proponents and opponents and according to opponents in addition to neglecting the legal dimensions of embryo gender selection, the concerns about gender imbalance, sex discrimination and preferring sons on daughter in the societies have doubled the importance of this subject. Unlikely, proponents set forth some arguments such as increase of parents autonomy, parents control increase on family composition and balance and preventing the unbridled growth of population. Regarding extirpating excessive embryo in laboratory in gender selection method, also different views are set forth which some consider the illegality of this deed for extirpating embryo after implantation in uterus not before that.

Keywords: Gender Selection, PGD, Implantation, Laboratory Embryo

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INTRODUCTION

The tendency of human for enjoying to have child is justifiable and any one inherently wants to have a child to show fondness to it and find himself in it and thus the continuance of generation and reproduction would be existed. One of concerns which have overshadowed throughout the history the personal and social life of people has been sexual impotence and impossibility of fertility among men and women. This concern is decreased now by various types of in vitro fertilization approaches to a great extent. One of important themes emerged during recent decades in medical genetics and in addition to significant progresses and developing new opportunities has entailed many legal and ethical challenges is birth of infants which are formed out of womb by in vitro fertilization in a laboratory environment and

come to being. In biology the early stages of embryo growth takes place either through sexual intercourse and naturally or through growth at laboratory environment which is referred as artificial or laboratory embryo. These embryos are developed by in vitro fertilization between sperm and ovum and get through its growth procedure in laboratory. In this approach, ovum cell is inseminated by sperm from man in a glass vessel and after growth in laboratory environment it is prepared at the end of sixth day for implantation in womb. Preimplantation genetic diagnosis (PGD) is a new medical innovation with many scientific and medical gains, this approach also provides a new opportunity for parents regarding selecting their child gender. What we want to answer in this paper by descriptive-analytical method is that what is legal nature of laboratory embryo? What is the difference between laboratory and natural embryo in legal terms? Is it legal to extirpate the excessive or frozen embryos after implantation in the womb or before it? Since when does the life of laboratory embryo begin?

***In vitro* fertilization and embryo**

Definition of in vitro fertilization

Fertilization lexically means fertilizing and in vitro fertilization means to fertilize a woman by artificial means and without sexual intercourse [1]. For shaping an embryo, fertilization between sperm and ovum is necessary and after fertilization something is emerged that is named as zygote. Therefore one refers to the cell emerged from fertilization of ovum and sperm before onset of cellular division as zygote. Zygote formation is recognized by observation of two pre-nucleus inside the ovum, and 12-18 hours after fertilization, one can observe the ovum fertilization. After nearly 24 hours since fertilization, the first cellular division is started in zygote. From zygote primary cell division until eight weeks after zygote the zygote is named as embryo [2]. In vitro fertilization is a new phenomenon which can tackle fertility obstacles and it significantly helps to reproduction of the couple. It is obvious that how effective is tackling these problems when it comes to psychological health, and maintaining the emotional closeness of couples and survival of family basis. Nevertheless, one should pay attention that such any other innovation, various approaches of in vitro fertilization itself raises theoretic and practical hitches and questions. Most of these questions are beyond medical realm and can be found in ethical, legal and jurisprudential areas [3]. From scientific viewpoint, the fetus intended by law is in accordance with concept of zygote and embryo, however as common and lexical meaning of fetus spans from fertility stage to childbirth all the way, therefore, fetus donation law like other laws of our country takes the common meaning of fetus into consideration with the difference that formation of fetus considered by new law takes place out of the womb and in laboratory milieu. Therefore, reference to fetus as laboratory embryo is also correct. Now one can note that the view of some lawyers who considering the lexical meaning of fetus, consider it as the established embryo in the womb is problematic. Some believe that fertilization takes place when semen enters the women womb and the sperm and ovum are mixed which is named fertilization. In the confirmation of the same view, one notes that the beginning of fertilization is coagulation of embryo and its end is the moment before childbirth.

History of in vitro fertilization

In vitro fertilization is to some extent a scientifically new phenomenon and it is result of human present-day knowledge. This phenomenon tackled the fertility barriers and paid a great contribution when it comes to reproduction. Medical science obtained this ability to compensate by in vitro fertilization many reproductive deficiencies of men and women. This has been first time used for breeding and reproduction of domestic animals and first experiment has been conducted by German scientist Ludwig Jacobi in 1765 on fish and then scientists conducted the experiments in 1799 in England and in 1866 in United States, in 1868 in France and in New York City hospital. ten years later, one of French scientists reported that among 72 women on which in vitro fertilization have conducted, 41 cases received positive response and have become pregnant and since then this subject has been addressed by medical scientists and it entailed many achievements to date. Infertility problem and approaches to treat it has been addressed by physicians from long time ago. Even in Egypt, Greece and Ancient Rome, some scripts are left about treatment of infertility. Medical sciences such as infertility became more flourished during 7th to 12th century. Razi prescribed some drugs for treating infertility. Since 16th century, infertility subject has been raised in "Qanun" by Avicenna and "Alhavi" in a specialized manner [4]. In natural fertilization, the penetration of a sperm to the ovum takes place without use of assisted fertility technology and it takes place within woman body, when there is none of conditions required for realizing natural fertilization, fertility or fertilization is not feasible in natural way and in this case one turns toward use of assisted fertility technologies or advanced infertility treatment to in vitro fertilization. Some methods of assisted reproductive technologies (ART) are referred to as in-womb approaches in which fertilization takes place in the womb while in some methods, actualization of fertilization between male and female gametes takes place out of body and in laboratory milieu which is referred to as out-womb approaches [5]. In Iran in 2003, a law titled as the law of the manner of embryo donation to infertile couples and its administrative regulation, the extrauterine fertilization in IVF manner assumed legal aspect. In this approach, after providing man and woman gamete, they are formed beside embryo in laboratory environment and its growth is started.

At cellular proliferation stage and during two days from fertilization date, i.e. when embryo has four to eight cells, it is inserted in womb pipe to continue its own natural growth inside womb. In five articles of law of embryo donation, one hasn't specified what one means by embryo and this law silent is regarding presenting a definition and concept of embryo and thus it seems to be deficient. However, law administrative regulation at article B has tackled this deficiency to some extent and defines the embryo as: "the embryo is fetus coming from extrauterine fertilization of legal couples which is from fertilization stage to maximum five days. This embryo can be in two forms namely fresh and frozen".

Legal status of laboratory embryo

One of important discussions in jurisprudence is problem of embryos produced in laboratory embryo. These embryos are developed through in vitro fertilization between sperm and ovum and the get through their early growth steps in laboratory milieu. In this method, ovum cell is derived from women body and it is fertilized in laboratory in vitro by sperm derived from man and after growth in laboratory milieu it is prepared at the end of sixth day for implantation in the womb. One refers to this fertilized ovum as laboratory embryo. Maybe for more being more sure about the procedure outcome, instead of one ovum, sometimes up to forty ovum are fertilized, then one transfer one or two embryos in the womb pipe so that their growth take place in a natural manner. After implantation of chosen embryos, the rest of them are frozen so that its outcome would be specified. If necessary, one uses them again. In case of success of fertility, the remnant embryos are annihilated to be used for therapeutic usage [6].

Valuation of laboratory embryo

There is no consensus in this regard among lawyers. Some believes that basically the laboratory embryo is a property and the concluded contract between donor and requestor is seemed as a property contract and they set forth some arguments for proving their conviction:

- There are two fundamental components once defining the property:

The usefulness and the ability to meeting need [7]. Some added to above two components, the economic value feature and ability to be converted

to money [8]. By usefulness of property, one means the use, legitimacy and reasonability, a use that wise people of the society evaluate it. Although it seems that rational use of an object is sufficient to deem it as property and legitimacy makes the transaction allowable. Given the definition of property one can deem the laboratory embryo as property and tradable. Because it is a being that as yet it has assumed a human feature and there are many uncertainties for it to be actualized as human being. For reaching to social objectives and interest, trade of such phenomenon is important. Therefore, it usefulness and valuation is proved. There is no doubt about featuring by conditions for being tradable, because in addition to be featuring by existent property feature and being known, there is transferability and ownership of transferor. The contradiction of embryo transaction with human dignity is obvious, because as long as the embryo is not transferred to intended womb, there is no doubt when it comes to conditions of dealt subject in addition to property feature existing and known feature, there is also the transferability [9].

Laboratory embryo personality

Against the property feature conviction, some criticized it. Examining the nature of embryo, one shouldn't neglect that the action of fertilization and production of laboratory embryo is taken place through two steps. First step, sperm and ovum are surrendered to the institute and the institute fertilizes the gametes by specialized procedure and the second step is done, namely putting the embryo in the womb. Therefore, one should examine the nature and property feature of sperm and ovum as well as the embryo separately. About property feature of human body organs, one may differentiate between organs which their loss may cause damage to physical integration and the organs that their lack doesn't entail any damage. Regarding the first case it is obvious that trade and reasonable legitimate usefulness is annulled and about second case, if it brings about social interest, its trade is reasonable and legislator confirms the legitimacy of such transaction [10]. The question is when the laboratory embryo is featured by human rights because the right assigned for human and the honor that man should attain hinges on human existence and among these rights one can note the independency and non-transaction. Biologists failed to offer an exact definition for life, and all of their views regards the life effects not the life

itself. The life includes manifestation of some features that is specific to live substance and these features can be found in it during its development and the most important is nutrition [11]. Also in jurisprudential books, one assigns different amounts of blood money for harming the embryo regardless to the time of blowing spirit during various stages of embryo formation. Jurisprudence also implicitly considers human life since the fertilization, and by assigning the term embryo one can interpret that as laboratory embryo has no special feature these amounts can be applied to embryo developed through in vitro fertilization too [12].

Gender selection in PGD approach

Gender selection

One of human dreams from long time ago has been ability to choose the gender of embryo. Many families have been afflicted to many problems due to lack of child with a specific gender and many families have experienced many fertilities one after another with short intervals for having a child with specific gender, yet they failed to attain the desired outcome. Today by progress of science and technology, man managed to attain to a lot of his dreams that someday they were a mere mirage, one of them is technology of embryo gender selection. Since many years scientists believe that each one of parents provides half of their child genetic structure. Also it is the case about gender determination so that two sex chromosome for each individual, one from father and one from mother is provided. There are two types of sex chromosome in the body: X chromosome and Y chromosome. Women gamete (ovum) has XX formula and it can give to her child only one X chromosome, however, man gamete (sperm) has two kind of sex chromosome X and Y. therefore, the gender hinges on which type of sperm (X or Y) is mingled with ovum containing X chromosome. If sperm containing Y chromosome manage to penetrate in ovum, the embryo would be male and if sperm containing X enters the ovum the embryo would be female. In fact all of recommended methods for choosing child gender before pregnancy are effective. Even few seconds after fertilization one cannot change the embryo gender, as immediately after first sperm enters the ovum, a stiff membrane is developed around it which prevents the other sperm. One of important problems which cause gender determination is various features of sperms. In other word, sperms

containing X are different in terms of speed, movement, life pertinent environment, and duration of life etc with those of sperms containing Y. there are differences in ovum membrane, womb environmental conditions and many known and unknown factors and they determine the embryo gender. Prevention from childbirth of infants with gender-related genetic diseases, such as hemophilia is one of most important of objectives of gender determination before PGD which undoubtedly calls for reliable approach. Implantation approach as an advanced technic not only can provide the possibility of embryo gender selection, but also it can be considered as a great step to diagnosis of genetic diseases before embryo implantation. Apart from genetic diseases, embryo gender selection based on parents wish faces with some agreements and disagreements [13].

Gender selection by PDG approach

One of scientific advancements which increase the latitude of man selection is selection of children gender through PGD. One of new approaches of embryo gender determination before fertilization is PGD, in this library approach the ovum is fertilized in laboratory conditions then it is implanted in womb. In fact, gender selection is use of technology of reproduction for consciously and unnatural selection of embryo gender. Now IVF-PDG approach is the best method for attaining an embryo with intended gender [14]. Studies showed that 76 to 82 percent of women who have been fertilized by this approach their children have been born with male gender [15]. Requesters of embryo gender selection due to non-medical reasons are divided into two groups: first group are those who want to choose the gender of their first child and usually this group choose the male gender due to sociocultural reasons. Second group have child and want a child with a gender other than that of the first child [16]. In this method, gender determination is taken place by examining the embryo existing in the woman womb. For this purpose, one can use medical ultrasound, Amniocentesis, Chorionic villus sampling (CVS) etc. the PDG aspect is able to give child without special disorders to couples who are at higher risk without exposing them at prenatal and pregnancy termination invasive diagnosis methods. For this reason, parents prefer avoiding the implantation of an afflicted embryo to abortion. PGD is a very appropriate method in physical, emotional and ethical terms. This approach can come with first

or second trimesters prenatal diagnosis methods [2]. Incidence of birth deficiencies is nearly 3% and when one uses fertility assisted methods 1 % is added to this amount. Existing evidences show that frequency of birth deficiencies in infants fertilized from PGD is similar to its amount in laboratory fertilization without using PGD. Among undesirable effects in laboratory fertilization one can mention the increase of change of multiple twin pregnancy, pre-eclampsia (PE), pregnancy hypertension, placental abruption, placenta previa and precocious birth. Similarly, risks and effect of ovary hormonal irritation are among other PGD approach effects [2]. People use this technology of gender selection through PDG due to various reasons. Some diseases are genetic and parents turn toward this technology so that their infant would not be afflicted by the disease dependent to special chromosome. Among other reasons of gender selection is gender moderation of family children. These people don't discriminate among boy and girl, yet they like to have children from both gender. Sometimes parents like to have a child with specific gender as they believe in gender selection freedom, and our discussion mostly considers this group [5]. In gender selection contract, couple asks the physician the XY sex chromosomes take place in laboratory and after injection of sperm to ovum and formation of laboratory embryo the gender of the embryo would be identified by this method then it would be transferred to the womb. Since this kind of contract is in close relation with rights of human personality it should not be in contradiction with human personality rights and contracts [2].

View of opponents on use of PGD method

Opponents believe that gender selection may disturb the gender balance of society, while experts believe that only reliable methods of embryo gender determination can yield 100 percent chance to parents for selection and only limited number of couples who undergo costly and difficult approaches. For this reason, given the few number of them such risk doesn't threat the society. Proponents of embryo gender selection believe that one of facilities which child gender selection bring about for societies is family adjustment and population control. In many cases tendency to have for example a daughter in a family urges them second and third and more pregnancy, while by carrying out reliable approaches of gender selection, maybe the family tackle this problem in the first pregnancy and

subsequent pregnancies wouldn't take place. Gender determination by PGD is a fully appropriate method which makes impossible the pregnancy with undesired gender embryo [13]. Preventing genetic diseases is one of the most important objectives of embryo gender selection by PGD and the first application of this embryo gender recognition method is for genetic vector couples. The second application is gender determination due to interest of parents to a special gender or bringing about gender balance in family. The point is examining the jurisprudential basics of theory of illegitimacy of gender selection due to non-medical reasons. Children gender determination through this approach though may be confirmed prom legal, Sharia and ethical views to help vectors of genetic diseases who previously encountered with selection options such as acceptance of donated gamete, pregnancy termination and finally sterility, yet it may face with criticisms such as change in god will, prevalence of sex discrimination and lack of gender balance in society. Gender selection due to non-medical reasons is in limelight due to its importance from Sharia and ethical viewpoint and some criticisms are made regarding it.

PGD use proponents

The opponents of this technology believe that this phenomenon is heinous and diabolic, a fundamental error which crush all of principles of justice and fairness as justice and fairness urges that embryo with no matter which gender would be cared and cherished equally and its existence should not denied merely due to a special gender. One should not prefer one to another and man shouldn't be able to choose it and interfere about god will and creation and if this result in abortion it would be more unethical as it is a breach of god will and man honor and it is considered as a big sin. Similarly, this is a kind of discrimination against women as the most requests for use of this technology is related to have male embryo [17]. Human rights law assumed a conservative attitude toward laws regarding gender selection. Article 14 of human right and biological research convention states that gender selection should be allowable only for medical reasons in the cases for disease depending on inherited x gender. The reason of this prudence is occurrence of problems of population balance in a country such as china. In this country, value of having son in families is more than having daughter. In USA, gender

selection is allowed based on medical and non-medical reasons, yet the acceptance and administration of gender selection has not been voted with full precision. In UK also gender selection for gender balance in family is banned by human fertilization and embryology association. In France no special law is enacted in this regard to cover research on embryo and administration of PGD [2]. Some relies on verse 49 of Sura Shoura (he creates everything he wants and gives daughter to everyone wants and gives son to everyone wants), some other relies on verse 119 of Sura Nisa that considers the change in God creation as intervention in his action and these verses are raised as ethical reason by opponents. Extirpating female embryos among formed embryos to choose female embryo, other reasons such as gender selection may be dragged toward race consideration, that is, couples request a child taller height and eyes with a special color etc. some seem this as most important obstacle for gender selection, or this may cause children objection to their parents in the future for selecting their gender by parents. Gender selection may cause intensifying gender discrimination in the society and on any basis it is done it implies that gender is a reason for overvaluing someone to another. Another problem is that maybe a child which is born with the gender intended by parents would be cherished more by parents and as they spent exorbitant costs for him, they would have high expectations from him, therefore the child may be put under unnecessary pressures [18]. Proponents against the reasons of opponents believe that there is no script on opposition of Sharia and ethics against it, and some cases can be considered which suggest its usefulness. Gender selection prevents from abortion due to gender type and causes robustness and warmth of family and allows parents to have a child with desired gender. Finally one can conclude that in terms of Sharia it would be understood that this action is not against Sharia [19]. Proponents of this approach believe that gender selection is among parents' rights and it fosters autonomy and human honor and since this approach doesn't entail any danger to others it doesn't contradict ethical principles. Although individually gender selection by parents is not considered as an unethical deed, however in some societies with gender preference, gender selection may lead to gender imbalance. This problem is among new discussions for jurists and given the verses

and Hadith and jurisprudential rules in Islam help the lawyers to study and state the reasons of legitimacy of this action for devising law in this regard [20].

Extirpating laboratory embryos deriving from gender selection by PGD

Among human rights documents, namely Universal declaration of Human rights (UDHR), International Covenant on Economic, Social and Cultural Rights (ICESCR), and international covenant of civil and political rights, observing human inherent honor is considered as the common basis of all of documents for defending fundamental rights and freedoms of human individuals. In primary documents of biological ethics, namely Nuremberg code, Helsinki declaration and Belmont report, also supporting human inherent honor is considered. In new documents of biological ethics that given the biological developments, possibility of intervening and manipulating in genetic structure of live creature is provided by human, such as human right convention and biological medicine of European council, human genome universal declaration and human rights, the concept of human inherent honor has found more extensive dimensions. In these documents, observing human inherent honor, in addition that is deemed as the basis of necessity to observe and support individual fundamental rights and freedoms in scientific examinations and research in some cases such as human race genetic improvement, production of laboratory embryos, selection of infant gender and trade of body members in which human honor is jeopardized, it is defined as a basis for restriction of freedom of will. Two opponent and proponent viewpoints regarding continuance or negation of life for laboratory embryos are available. From opponents' viewpoint, fertilization between sperm and ovum in laboratory pipe is considered as abortion and calls for blood money payment. In fact, extirpation of origin of human creation is a title which is established for extirpating embryos formed out of womb, because these embryos are of the same capability which embryos formed inside womb do. For this reason, these beings have inherent honor and any initiative which prevent its growth and attainment to a complete human is not allowed. The concept of honor has two main dimensions. This concept, though in individual dimension discuss about rights and honor of people who

have personality and are present among us, however at collective dimension of honor, the discussion is on humanity among us and in this dimension that beings such as ovum, few-days-old embryo or human cadaver which usually are not deemed as human person are encompassed under concept of human honor and any behavior to them is not allowable as these beings are strongly belonged to humanity set-up and this special belonging transfer the requirements of human honor to them and consequently they assume some degrees of honor [21]. Regarding biological honor or life right of laboratory embryo which we didn't made any difference between it and human natural embryo in terms of similarity of development procedure within embryonic period, one should note that one cannot consider absolutely the human embryo as what has life right. However, one should differentiate the period before blowing the spirit and after it. Since before blowing spirit there is basically no life for the embryo to consider it possessing life right and effort to recognize life right for embryo before 17th week which medically embryo has life thereafter is proof of what is not necessary. Therefore it doesn't seem that extirpating the embryo before blowing spirit contradicts ethics, however, after 17th week one should consider the embryo possessing relative life right. That is, since it is a being with life, one should try to keep it, unless a greater gain which is not opposite to ethical principles would necessitate the abortion. For example keeping mother life necessitates the embryo extirpation. This subject is mentioned in Iran statutes and jurists valid views. Given these details, it is better that human embryo whether natural or laboratory would be considered respectable not honorable, because featuring by honor calls for featuring all of rights and duties deriving from it, while not in jurisprudential views nor legal regulation, nor based on ethical principles one cannot have this view. Nevertheless, this respect doesn't mean the allowance to instrumentally use the laboratory embryo, yet as this embryo is related to human, one should observe its human respect and as stipulated in biological ethics documents, one should refrain to use it instrumentally [22]. Considering the embryo before moving to womb as human necessitates giving it human rights. There is a viewpoint that embryo is a potential human being. Based on this view, entrance of sperm in ovum and their mingling is a gradual process and before entering to womb, the embryo

gets through a stage of human growth, though people haven't human functions in embryonic stages, but they have this ability in their basis. For this reason, laboratory embryo deserves the respect at least as a potential human being and it deserves the rights such as life and health right. Another view in rejecting human feature of embryo states that in any embryonic stage, one cannot know it as human being, as during early months of embryo formation there is no life and this argument that embryo has potential life is disputable and such human certainly is a form of human life which has the ethical primary value, but it cannot be named as human as human features cannot be seen in it [23]. Based on this attitude, the criterion for banning the waste of laboratory embryos is its ability to become human if the conditions are provided for its development to human. Therefore, this human entity should be respected from the moment that it is established and all of human rights such as life right should be observed about him [24]. Ayatollah Safi Golpaygani's view in this regard states: as long as the sperm is not established in the womb, the allowance of wasting and discarding it is disputable and one should be prudent for keeping it to full growth. Yet one should consider the necessity of preserving it [25].

Viewpoint of Imamiya jurists on extirpating laboratory embryos deriving from gender selection through PGD

From famous viewpoint of Imamiya jurists, the embryo that as yet is at early stages and hasn't transferred to mother womb, before transferring to womb doesn't assume any Sharia verdicts, such as preservation necessity and extirpation illegality and negating life from it before transferring to womb has no problem, because the arguments for illegality of embryo waste and necessity of blood money payment directs to stage after placement and its implantation in the womb. From famous Shia viewpoint, one can say that human formation begins since the placement of sperm in the womb and from this point the special verdicts are applied. The difference of conditions before embryo implantation in the womb and after it is that embryo before implantation is not capable to develop. However, thereafter it is featured by the capability. Thus, laboratory embryos as long as have not the conditions to turn this potential into realization have no difference with other body organs which lack this ability. In this view, placement in womb is the condition of laboratory

embryos to be featured by life right, as the embryo from fertilization of sperm and ovum if it is placed in the womb can get through various embryonic developmental stages. Therefore, special observation for laboratory embryos before implantation in the womb more than it is observed for other organs has no necessity.

Sunnite jurisprudents viewpoint about extirpating laboratory embryos deriving from gender selection by PGD

Among Sunnite jurisprudents although it is unlikely that the subject of laboratory embryos would be raised in a modern meaning, however since many verdicts about embryo are related to laboratory embryos, the discussions raised in this regard though different, however they have many common aspects, as in vitro fertilization doesn't make any difference in development of embryo and finally its conversion into a full human being when compared with natural embryo. Three viewpoints are available among Sunnis viewpoints in this regard:

- In first viewpoint, the embryo from the beginning of fertilization and placement in the womb (7 days after fertilization) is respectable as it has human life. Thus the illegality of embryo life negation is related to after implantation in the uterus and there is no reason on illegality of waste before placement in uterus. The famous viewpoint of Imamiya jurisprudents also is in the same vein.
- Second view relied on this basis that fertilization and placement in the uterus is not respectable yet the honor of embryo commences 40 days after the fertilization. Therefore based on this view of Sunnite jurisprudents life negation is allowable until embryo formation.
- Third view is relied on this basis that since spirit blowing, namely 120 days after fertilization the embryo has human life, and previously it has no illegality and its preservation is not necessary. The Sunnite contemporary jurisprudents famous view in this regard is close to Shiite jurisprudents famous view as they also believe that embryo has life right immediately after implantation in uterus. Therefore, medical tests on laboratory embryos and extirpating them after placement in uterus is forbidden and before that it is allowable. Islamic organization of medical sciences in third meeting is recommended that the number of fertilizations out of uterus should be only as required and if it is excessive than required amount, discarding and

their natural death that occurs after six days is the best solution.

CONCLUSION

Different beliefs are available regarding embryo gender selection through PGD, some consider it as change in God creation and believe that if legislator doesn't consider the gender determination as an unethical and inhuman action, it has assumed a violent and inhuman attitude. Some consider it as a symbol of human advancement in medical science and they do not consider it inhuman at all. It seems that this approach calls for a kind of control and regulation of some laws for supervising it. Because its damages have been mentioned before, it causes gender imbalance and sex discrimination in the future. In PGD approaches the embryos are developed through in vitro fertilization and they get through their early stages of growth in laboratory milieu. In this approach, for more certainty, many ova even up to forty ova are fertilized instead of one ovum, and then one or two embryos are transferred to uterus pipe to get through its natural growth. Remnant embryos are frozen after implantation until the pregnancy result would be revealed. Remnant embryos are either extirpated or used for therapeutic usage. As study findings suggest extirpating these embryos is not allowable in terms of human rights after implantation in uterus, as after placement in uterus it would be of legal and human nature. However, extirpating these embryos before placement in the uterus has no problem.

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