The Application of Qawāʿid Fiqhiyyah in Stem Cell Research

Fahd Anwar *

Prof. Dr. Mohyuddin Hashimi **

ABSTRACT

Stem cells are the undifferentiated primary cells which can differentiate in to the specialized cells. This ability may be utilized to replace the lost or damaged organs. Hence the relief can be provided in diseases like Parkinsonism, Diabetes Mellitus etc. Stem cells may be taken from the embryos or the adult human beings. The legal status and the religious rulings of the stem cell research must be analyzed in the light of the sharī ah maxims (Qawā id Fiqhiyyah). The five universal qawā id should be studied in correlation with stem cell research. Their practical application helps in deriving the legal status of the research. The intention of the researcher, the supposed benefits, the terms and conditions on which the research is carried out, the removal of the harms, the financial benefits gained through such kind of research and the responsibility of the physician in case of unfavorable results are the issues which will be seen in the light of qawā id Fiqhiyyah

Key-words: Stem Cells, Qawā 'id Fiqhiyyah, Intention, Harm

PhD Research Scholar, AIOU, Islamabad

** Chairman, Department of Islamic Thought History and Culture, AIOU, Islamabad

1. Stem Cells: An Introduction

The human-body is made of tissues and organs which are in turn made up of different types of cells. These differentiated cells are originated from the precursor cells which are labeled as "the stem-cells". Dorland's Medical Dictionary defines the stem cell as:

"A generalized mother cell that has pleuripotentiality (descendants may specialize in different directions), such as an undifferentiated mesenchymal cell that is progenitor of both red and white blood cells." (1)

The American National Bioethics Advisory Commission declares the stem cells as those cells that can develop in to different kinds of cells. (2)

As established, the human beings start their growth process as a single fertilized egg or zygote. The zygote divides and re-divides and converts into embryo to fetus and eventually to a full-term baby. Initially, each cell of the embryo possesses the capability to make all the cells in the body.

With the passage of time, these cells start to specialize. These new cells are specialized for a particular tissue or organ, e.g. kidney, pancreas, liver tissue etc.

Stem-cells are those that have not yet differentiated. These can divide in to specialized cells.⁽³⁾They can be utilized, therefore ,to have the specialized cells of specific tissue.

2. Different Types of Stem Cells

Four different types of stem-cells are categorized by their range of flexibility. This categorization has been done because the stem-cells vary from each other in their ability to differentiate into variety of specialized cells.

These four types are as under:

- 1- Totipotent stem cells
- 2- Pleuripotent stem cells
- 3- Multipotent stem cells
- 4- Unipotent stem cells⁽⁴⁾

(1) Dorland's Pocket medical Dictionary.W.B.Saunders Company:2001,P.158

⁽²⁾ Ethical Issues in Human Stem Cell Research, National Bioethics Advisory Commission, Rockville: 2000. 1/32.

⁽³⁾ Qaisar Shahzād. Biomedical Ethics. Islamabad: Islamic Research Institute, 2009. P.219

⁽⁴⁾ Joseph Hernandez & Kevin Locke, Stem Cells, Worcester Polytechnic Institute, August 23, 2006.P.9

2.1- Totipotent Stem-Cells:

They can differentiate into the widest variety of cells. Human cells are only totipotent during the first few divisions of a fertilized egg, afterwards they become the pleuripotent cells.

2.2- Pleuripotent Stem-Cells:

Pleuripotent stem-cells or simply the stem-cells can give rise to all the different types of cells in the human body.

2.3- Multipotent Stem-Cells:

These cells are not able to grow into the specialized cells other than a specific tissue. These cells are also present in different places in the body of adult human including the skin and bone-marrow.

2.4 - Unipotent Stem-Cells: (Precursor/Pre-specialized cells).

These are more differentiated than mulipotent stem cells and are least flexible cells. They are able to specialize to a few specific cell-types

3. Sources of Stem-Cells

Stem-cells are derived from different sources depending upon their type: pleuripotent stem-cells are derived from the embryo while the multipotent stem-cells can be taken from the adults.

"Adult stem-cells may be pluripotent, multipotent and progenitor stem cells found among the differentiated cells of a particular tissue or organ in the human body. These cells are used either to replace or to repair the tissue or organ in which they are found." (1)

4. Stem-Cell Research

Stem-Cell Research (SCR) is considered amongst the burning topics of the modern medical science related to embryo and fetus. Stem-cell research involves the use of the embryonic and adult stem cells for research and therapeutic purpose. There are multiple dimensions of stem-cell research which are:

- i- Derivation of stem-cells from the embryo or adult
- ii- Providing them a special environment that enables them to divide and redivide and the formation of differentiated cells
- iii- Grafting of these cells or tissues (the cluster of cells) into the recipient. These grafted cells then help in curing of some otherwise incurable diseases.

The research on the stem cells can help in the prevention of the cancerous diseases and genetically transmitted diseases by answering how the cells undergo the abnormal development during the process of differentiation

⁽¹⁾ Ibid., P.13-16. Also see More, Keeth & Persaud, T.N. *The Developing Human* (Philadelphia: W.B. Saunders Company. E:6th 1998),225

From the research point of view, stem-cells give more accurate results as compared to the research on animal objects. (1)

5. Major Uses of Stem-Cells

- 1. The stem-cells can add healthy pancreatic cells that produce the insulin (a hormone that causes the absorption of glucose from the blood into the cells). In this way Stem Cells can help in curing Diabetes.
- 2. Replacement of Cardiac-Cells and Vessels
- 3. The stem-cells may provide healthy new skin tissues for Burn cases.
- 4. The stem cells help in improving the tremors of Parkinson's disease. The cause is the deficiency of the nerve cells that secrete dopamine. The stem-cells help in replacing the damaged cells.
- 5. Alzheimer's disease is characterized by memory disturbances. The stem-cells can replace the damaged nerve cells thus improving the patients of Alzheimer's disease.

6. Stem Cell Research and Qawā'id Fiqhiyyah

The Islamic view of the Stem Cell Research can be understood in the basic sources of sharī'ah and the sharī'ah maxims (qawā'id fiqhiyyah) derived in the light of these sources. Qawā'id Fiqhiyyah help in establishing the religious ruling of the Stem Cell Research and the associated issues. Firstly the relevance of five universal qawā'id (al Khams al Kubrā) with Stem Cell Research will be studied followed by the application of other qawā'id in Stem Cell Research.

6.1. The Five Most Comprehensive Qawā'id and their Application in Stem Cell Research

1.

"الأمور بمقاصدها"^(٢)

Matters are judged in the light of intention behind them

This is the first of all qawā'id. It stresses on the intention with which the matters are done. It means the intentions of the doers affect the religious rulings in the sense that the reward is given according to the intention. The qā'idah takes its roots from the verse of the Holy Quran:

⁽¹⁾ Ethical Issues in Human Stem Cell Research, National Bioethics Advisory Commission, Rockville: 2000,1/20 - 23

⁽²⁾ IbnNujaym,Zain al Dīn(Ibrāhīm bin Mūsā),*Al Ashbāh wal Nazāir*,(Dār al Kutub al 'Ilmiyyah,1419AH),1/23

⁽³⁾ Surah Al-Nisa:114

There is no good in most of their whisperings, unless one bids charity or a fair action, or reconciliation between people. The one who does this, to seek Allah's pleasure, We shall give him a great reward.

The famous Hadīṣ of the Prophet (PBUH) is quoted in favour of qāʿidah which is: Deeds are determined by the intentions⁽¹⁾

Intention values the deeds .An ordinary act gains value because of intention. However it must be kept in mind that a bad act cannot become good by mere intention.

Application

The Stem Cell Research must be oriented to gain the targets like the good health and to provide ease for the society within the permissible limits of sharī ah.e.g. Diabetes Mellitus is a disease in which the pancreas does not release the sufficient quantity of insulin. This is a hormone required for the regulation of sugar-levels in the blood. The deficiency of insulin leads to increase sugar level in blood and this adversely affects the functioning of multiple organs of the body. The implantation of stem cells from a donor can provide the relief to the sufferer as these transplanted stem cells can grow to the healthy pancreatic tissue. Thus the life of a person can be balanced by the stem cell therapy. If the stem cell research and related discussions are carried out with this intention of decreasing the sufferings of the human beings, it will deserve the reward by Allah Almighty.

2.

Certainty is not dispelled by doubt

The Holy Qurān rejects the conjenctures and supposition in the matter of truth as is stated in the following verse:

Uncertainty or doubt is the opposite of yaqīn .It can be:

Zann (Supposition)

Shakk (Doubt)

Wahm (Delusion)⁽⁴⁾

Doubt is the balanced possibility in both directions. Supposition is an imbalanced possibility in either direction. Delusion is the less likely possibility. None of them is sufficient to prove the opposite of certainty.

⁽¹⁾ Al-Bukhārī, Muḥammad b. Ismā'īl. *Al-Saḥīḥ*. Bāb Bad al Waḥyī, (DārTauq al-Najāh, 1422 AH.)

⁽²⁾ Ibn Nujaym, Al Ashbāh wal Nazāir, 1/47

⁽³⁾ Surah Younus:36

⁽⁴⁾ Ibn Nujaym, Al Ashbāh wal Nazāir, 1/63

The stem cell research may be seen in the light of a subsidiary $q\bar{a}$ idah of this second universal $q\bar{a}$ idah which is:

No consideration is given to the delusion

It implies that religious rulings cannot be derived on the basis of mere delusions. Rather authenticity is rendered to the absolutely proven things.

Application

Stem cell research must not be based on the mere probabilities; rather it should be based on such hypothesis which is supported by the solid facts and figures. (2)

3.

Difficulty begets ease

The legal system of sharī'ah is based upon ease and mercy. Numerous verses of the Holy Qur'ān provide the base for it.e.g:

Allah Almighty intends ease for you and does not intend difficulty for you.

Narrated 'Āisha(Allah be pleased with her) that whenever the Prophet (PBUH) had a choice between two things, he used to choose the easiest one unless it was an act of sin.⁽⁵⁾

According to the jurists all the concessions (rukhas) and reduction (takhfīf) of sharī ah are derived on the basis of this $q\bar{a}$ idah. (6)

Application

Stem Cell Research is generally oriented towards the remedy of the ailments like Diabetes Mellitus, Parkinsonism. The stem cells from healthy donor are implanted in the ill person to replace the affected cells e.g. The stem cells can differentiate in to the pancreatic cells and replace the

(5) Al BuKhārī, *Al-Sahih*, Kitāb al Adab, BābQaul al Nabī Yassirū wa lā Tuʻassirū, Hadīş No:6126

⁽¹⁾ Al Zuḥailī, Muḥammad Mustafā, Al Qawā 'id al Fiqhiyyah wa Taṭbīqātuhā, (Dār al Fikr, Damascus), 1/170

⁽²⁾ Al-Shaṣrī, Saʿd b. Nāsir. *Al-Qawāʿid al-Fiqhiyyahwa'lusūliyyahwaMaqāsid al-ShrīʻahZāt al Silah bi Buhūṣ al-Khalāyā al-Jizriyyah.* (MajallahMajmaʻ al-Fiqh al-Islāmī 18,1425AH), 236

⁽³⁾ IbnNujaym, Al Ashbāh wal Nazāir, 64/1

⁽⁴⁾ Surah Al-Baqarah:185

⁽⁶⁾ Suūţī, Jalāl al Dīn,Imām.*Al Ashbāh wal Nazāir*, (Maktabah Nazār al Bāz,1997), 1/131

damage pancreatic cells of the patient. The Pancreas secretes insulin which regulates the level of blood sugar. In this way Diabetes can be cured or minimized. As mentioned above the diseases severely affect the life of the patients, therefore, seeking their treatment through stem cell therapy will be permissible.

4.

"العادة محكمة"^(١)

Custom is arbitrator

Custom is used for the English translation of the terms 'Ādah and 'Urf. Both are used in place of others .However, some scholars differentiate between them. Ādah according to Allama Ibn Nujaym (d.970H) is:

Recurring practices which are acceptable to the people of sound nature⁽²⁾

Many rulings of shaī'ah are associated with the custom. The custom which is common or specific plays the role of the mediator for the establishment of the religious ruling against which no textual injunction is present. The Holy Qur'an uses the term ma'ruf for the good prevalent customs in the society. In the context of the women rights, the Holy Our an declares the rights of the wives similar to the men in a recognized matter as stated in the following verse:

And for women are the rights similar to what they owe in a manner which is recognized although there is a step above them for men.

The Prophet () allowed Hind (Allah be pleased with her) to take the money of her husband what would be sufficient for her and her children according to the custom. (4)

Application

The terms and conditions which are well established amongst the people should be observed in stem cell research. This is elucidated by a subsidiary qā'idah which is:

What is known by the custom is like what is conditioned religiously

Ibn Nujaym, Al Ashbāh wal nazāir, 1/79 (1)

Ibid,100 (2)

Al-Baqarah:228 (3)

Al BuKhārī, Al Sahih, Kitāb al Nafaqāt, Bāb Izā Lam Yunfiq al Rajul, Hadīş: 5364 (4)

Al Zarqā, Aḥmad bin Muḥammad, Sharḥ al Qawā'id al Fiqhiyyah, (Dār al (5) Oalam, Dimashq, 1989), 1/237

The centers for stem cell research must perform the research process keeping in view the sanctity, respect and dignity of the person who is providing his stem cells. Similarly, those which are allowed in custom will be allowed in stem cell research until and unless it opposes any religious ruling. However,in order to avoid any unpleasant situation it is good to take a particular as well as a general consent from the participants.

5.

Harm is to be removed

The $q\bar{a}$ idah is based on the the concept of the removal of harm. The famous prophetic tradition states

Neither harm nor reciprocation of harm.

This tradition has been narrated by a chain of narrators which is broken but the narrators are authentic as mentioned by Sheikh Fawād 'Abd al Bāqī in his foot notes. (3)

This tradition elucidates the fact that a person should not impose harm to his fellow human being neither in the beginning nor in return. The $q\bar{a}$ 'idah stresses on the removal of harm.

Application

The Stem Cell Research aims towards the eradication of the existing or future harm. The life quality is severely affected by the patients of Parkinsonism or diabetes etc. Thus, the stem cell therapy is permissible.

The research on stem cells will be impermissible if it imposes harm to the group of people.e.g. Taking the stem cells of the developing fetus for research purpose will be impermissible as it endangers the life of the fetus.

The stem cell research may be understood from the sharī'ah perspective with the help of following subsidiary qawā'id:

Harm is not removed by another harm

As it is established that harm must be removed, therefore, if it is removed by another harm, it will be generally incorrect.

Application

If the Stem Cell Research is endangering the life of the donor e.g. if the embryo are utilized as donor, the research will be impermissible.

(4) Ibn Nujaym, Al Ashbāh wal nazāir, 1/74

⁽¹⁾ Ibn Nujaym, Al Ashbāh wal nazāir, 1/72

⁽²⁾ Ibn Mājah,Muḥammad bin Yazīd,*Sunan*,Kitāb al Aḥkām,Bāb Man Banā fi Ḥaqqih Mā Yaḍr bi Jārih,Hadīṣ No:2340, (Dār al iḥyā al Kutub al 'Arabī,Faisal'Īsā al Bābī al Ḥalabī,N-Y)

⁽³⁾ Ibid

Another subsidiary qā'idah is:

The easier of the two evils is preferred.

This qā'idah is also mentioned in the books as:

Severe injury is removed by the lesser one

It implies that when a person confronts the two unavoidable evils, he should choose the lesser one. It is based on the following verse of surah al-Baqarah:

The companions asked the Prophet about the fight in the Sacred Month. The Prophet was directed to answer them that Fighting in it is grave, but it is much more grave, in the sight of Allah, to prevent (people) from the path of Allah, to disbelieve in Him, and in Masjid al Haram, and the expulsion of people and to create disorder is more grave than killing.

Application

The stem cell research can result in use of human tissue for financial incentives which is against the dignity of the embryonic tissue and hence an evil. However, this evil is greater than the harm suffered by the patients (like Azheimer,s disease,Parkinsonism etc. as mentioned earlier) who can be augmented by the Stem Cells. Therefore, Stem Cell Research will be permitted according to this qāʿidah. However, strict monitoring policy will be designed to avoid any misuse.

Sharī'ah is more inclined towards the removal of evil than the gain of benefit. Therefore, whenever a benefit and an evil of the same intensity confront each other, repelling of the evil will be given priority over the benefit.

Application

Stem cells, as mentioned earlier, can be obtained from the fetus and the adult human being. Transplantation of the Stem Cells from the developing fetus may lead to the following evils:

-Destruction of embryos for the suspected benefit of other ill persons

(3) Surah Al-Baqarah:217

⁽¹⁾ Al Zarqā, Aḥmad bin Muḥammad, *SharḥʾlQawāʿid al Fiqhiyyah*, (Dār al Qalam,Dimashq,1989)1/203

⁽²⁾ Ibid, 1/199

⁽⁴⁾ Ibn Nujaym, Al Ashbāh wal nazāir, 1/78

- -Creations of embryos in laboratories (as in test tube procedures) for destruction
- -Donation of embryos for financial incentives

These evils are significant and avoiding them will be preferred over securing the benefits of the Stem Cell Research.

Necessity is estimated by the extent thereof

As it is established that

-Difficulty begets ease

But it is also very important that the permission of Sharī'ah in case of extreme need should be limited.e.g. Wine and pork meat are strongly prohibited under ordinary circumstances. However, if a starving man has nothing to eat and drink except pork meat and wine, he is allowed to take them in order to save his life. However, he is only allowed to use the amount which can save his life as mentioned in the following verse:

He(Allah)has only prohibited for you carrion, blood,the meat of swine and that upon which shas been invoked a name of someone other than Allah.Then,whoever is compelled by necessity ,neither intending pleasure nor transgressing, there is no sin on him.

Also as soon as he gets the permissible food, the wine and pork meat will again become impermissible for him.

Application

Stem Cell Research is limited to the patients who have no other permissible alternative treatment.

In the presence of the effective therapy by the use of the stem cells of adults, the embryonic stem cells will not be permitted to use.

6.2. Application of Other Qawā'id Fighiyyah in Stem Cell Research 1.

Permissibility is the basic principle in things

The qā'idah implies that the acts are generally permitted except when they are declared impermissible by sharī ah.

Application

⁽¹⁾ Ibid, 1/73

Surah Al-Baqarah:173 (2)

Al Mujaddidī, Muḥammad'amīm al Iḥsān, Qawā'id al Fiqh, (Sadaf Publishers, (3) Karachi, 1407 AH), 1/59

Stem Cell Research is permitted in general as it is according to one of the principles of sharī'ah which is Protection of life. It will become impermissible if it leads to the opposition of any other religious ruling.

2

What is impermissible to be taken, is impermissible to be given

Application

It is impermissible to take the embryonic stem cells from the embryo within the womb of the mother as it poses harm to the embryo. Therefore, it is also impermissible to voluntarily donate the embryonic stem cells from the embryo within the womb of the mother

3

Legal permission is incompatible with the penalty

The Stem Cell Research when carried out according to the permissible techniques will not pose any penalty on the Physician if the results are not favorable or if the adverse affects occur .The treating person must be competent as is the condition for every physician.

4.

One cannot take in exchange of impermissible things

Wine has some benefits and great harms but as The Holy Qur'ān says its sin is greater than benefits. (4)

As the sharī'ah has not permitted to gain the apparent benefits of wine, therefore, sale and purchase of wine is not allowed. A starving person is allowed to drink the quantity of wine that can save his life. But even then one cannot take money in exchange of it.

Application

It is not allowed to utilize the stem cells from the embryo and also to use the stem cells of a person without his consent. According to the $q\bar{a}$ idah, no fees can be charged on sale or purchase of these stem cells. 5.

⁽¹⁾ Al Zarqā, Aḥmad bin Muḥammad, Sharḥ 'lQawā 'id al Fiqhiyyah.1/215

⁽²⁾ Ibid, 1/449

⁽³⁾ Al-Shaṣrī, Saʿd b. Nāsir. *Al-Qawāʿid al-Fiqhiyyah wal usūliyyah wa Maqāsid al-Shrīʿah Zāt al Silah bi Buhūṣ al-Khalāyā al-Jizriyyah*, (Majallah Majmaʻ al-Fiqh al-Islāmī 18,1425AH),243

⁽⁴⁾ Surah Al Baqarah:219

The management of the public affairs is conditioned with the welfare

The qā'idah defines the limits of the government upon the public affairs. The government and also the people appointed by it for the public affairs should care for the benefit of the public in every matter. If their disposal is associated with the benefit of the people under their custody,it will be obligatory to act upon their commandments until and unless it is not against any textual injunction of Qur'ān and Sunnah. The qā'idah is based on the prophetic teaching which is:

"Anybody who has been made the care-taker of the citizens by Allah almighty and he dies in a condition that he betrays the citizens, Allah has made jannah ḥarām (impermissible) for him" (2)

The custodians may be those who have assigned duties by the government related to the public affairs.

Application

The Stem Cell Researchers and therapists must be well wishers for their patients and society in general. The process should not be purely oriented towards the economic incentives. The public in general does not know the pros and cons of Stem Cell Research.So,the concerned authorities must be well wishers for the public 7.

A condition must be fulfilled as far as possible

To fulfill the terms and conditions is the responsibility of a Muslim in every field of life. The Prophet (**) directed:

"The Muslims are on their conditions(in their dealings), except the condition that permits the impermissible or impermits the permissible thing" (4)

It is, therefore, necessary to take care of the conditions.

Application

The Stem Cell Research must be carried out keeping in view the consent, the confidentiality etc. If a person while becoming a part of the research process puts the condition that his name will be kept in

⁽¹⁾ Al Zarqā, Aḥmad bin Muḥammad, Sharḥ al Qawā 'id al Fiqhiyyah, 1/309

⁽²⁾ Muslim b. al-Hajjāj, Imām. *Al-Saḥīḥ, Al-Mukhtasar*. Kitāb al Amārah,Bāb Faḍilah al Imām al 'Ādil, (Beirut: 'DārIhyā al-Turāth 'al-Arabī, Year not metioned)

⁽³⁾ Al Zarqā, Aḥmad bin Muḥammad, Sharḥ al Qawā 'id al Fiqhiyy, 1/419

⁽⁴⁾ Al 'Asqalānī, Ibn Ḥajar.*Fatḥ al Bārī*, Qauluh Bāb al Shurūṭ allatī lā Taḥil fī al Nikāḥ, (Beirūt: Dār al-Ma'rifah, 1379 AH),9/219

confidentiality then the researcher or the physician is bound to keep it in secret.

Conclusion

Qawā'id Fiqhiyyah help in establishing the religious rulings of the stem cell research and associated issues. The five universal qawaid imply that stem cell research will be appreciated if carried out with intention to provide the relief to the sick people. Because the harm is to be removed and relaxation is given in difficulty, therefore, transplantation of stem cell from healthy donors to the ill persons is allowed. The terms and condition on which a person donates his sample for stem cell research must be followed. The research process must be carried out on the basis of solid facts and figures not on mere delusions.

Qawaid Fiqhiyyah help us in establishing that no fees can be charged on sale or purchase of the embryonic stem cells. No penalty will be imposed on the physician in case of the adverse affects if the adult stem cells are used after the consent. The stem cell researchers and therapists should fulfill the conditions like the confidentiality etc. as far as possible.

