



Ethical Issues of Human Cloning

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Cloning can help us in the research field and medical sciences. But due to ethical and moral values, this idea is not supported. Moreover, it is against ethical values as well. According to modern studies, Human moral values are preferred rather than emotions, but they cannot be ignored. Despite the progress in the stem cell culture, it is still unable to avail the therapeutic benefits. It is said that cloning could be done in the near future, and it is closer to the reality and away from science fiction. Cloning can be carried out by two techniques termed as the somatic cell nuclear transfer and cell mass division. The cloned animal products obtained by the somatic cell nuclear transfer can be used, as they cause no harm and are safe as the noncloned animal products are. Certain harms are related to the twin's growth produced by the cloning procedure that also reinforces on the inhibition of human cloning, as it causes the psychological distress and destroys the universality of an individual, as well as certain ethical and moral values despite which human clones cannot be made. In somatic cell cloning the nucleus (nuclear mass/DNA) can solve many health problems for example organ transplantation, or organ rejection issues. Resulting of all these give rise to a great controversy that either clone of human beings should be produced or not. Although in the near future, the possibility of human clones and their use for different purposes cannot be ignored.

Key words: Cell mass division, dolly sheep, human embryo, somatic cell nuclear transfer

INTRODUCTION

Human cloning can be defined as, the production of individuals, entities or populations, identical or nearly identical to the parent or original organism, from which they were obtained or derived. Herbert Weber, a plant physiologist, termed it as “clon” (excluded “e”) and used it for plants in agriculture. However, people tried to get popularity while making the science fiction stories about a human being copied formation through cloning.¹ Haldane went on in his 1963 speech on “biological possibilities for the human species of the next ten thousand years,” to introduce the scientific community the word “clone” (including “e”) to denote the superhumans by genetic cloning.²

ROLE OF DOLLY SHEEP IN CLONING

Lederberg gained the noble prize for recommended tools for cloning for human beings in 1966 but his two opponents;

Paul Ramsey and Joseph Fletcher opposed this idea.³ Someday, human might be cloned from a single adult somatic cell without sexual reproduction. The idea is opposite to the science fiction and near to the genuine possibility. In Scotland Scientists at the Roslin Institute talked about the cloning of a sheep by a technique that had never succeeded in mammals, technique involves the transplant of genetic material of an adult sheep obtained from a well-differentiated somatic cell inserted into the egg from which nucleus was removed. The sheep born after using this technique was named Dolly on July 5, 1996.⁴ Just 20 years after the Dolly sheep cloning, monkeys were cloned. Then, Dolly did not produce identical offspring like prior attempts as Dolly has the genetic material of one of the parents not both.⁵ This technique was named “somatic cell nuclear transfer and other.” Basically, two techniques are available for human cloning, one somatic cell nuclear transfer and other one is cell mass division. Somatic cell nuclear transfer

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is an artificial technique which produces numerous number of clones as compare to embryo splitting technique which is a natural process produces less or limited number of organisms and cell mass division is a technique which was used for the first time in October 1993.⁶ The products of cloned animals can be used, yet there is a controversy on this view that either its use is safe or not never the less, still they are being used as the US has allowed them and said how to use it.⁷ Moreover, Science fiction stories and the bioethics as well inspire the human ethics, despite they do not think about the moral values of these sources.⁸ The clones are due the fetal cells cloning instead of the adult cells that are well differentiated.⁹

ROLE OF CLONING IN RESEARCH AND HUMAN HEALTH

Cloning has a great role in human health, life also in the research's discoveries. Human embryonic cells were separated firstly in 1998.¹⁰ It is being used to cure diseases such as neurological problems, Parkinson's disease, and heart problems. Although cloning has all those benefits still scientists, ethicists, policy-makers, and religious scholars forbid the cloning in human beings, as it has raised many questions such as ethical, emotional, and moral questions as well by the people, it is dangerously prohibited as it is against like the "playing God" yet according to Islamic point of view the cloning is strongly discouraged, as it is against the lows and against Islamic believes,¹¹ as Islam say that only Allah almighty can create or destroy anything so cloning equals to the God's creation, as scientists cannot take a place of God and cloning is forbidden by Muslim scholars as it has both types of impacts on human and has many risks on human development and health. Moreover, as cloned organisms have lost the ability to grow into an adult, so medical science has improved and related to the stem cell culturing so it could be used to cure many diseases and improvement of fertility.¹²

THE LOW SURVIVAL RATE OF CLONES

There are a lot of risks for the growth and survival of the clones, and most criticism comes from the scientists who knew about the risks and dangers of human cloning as most of the embryos are lost before they reach their birth stage, and the clones would have certain abnormalities as well. The percentage of cloned organisms to reach the period of adulthood is very low at 0.3% for cows and <1% for sheep. Scientists viewed that the clone's production is the wastage of embryos and fetuses. They performed the experiment on the blastocyst of a human. They obtained 242 eggs from 16 women that produced only 30 embryos.¹³ Then, they said that

it could be abuse for women that gave their eggs but lost the fetuses, and the organisms produced in such a way may suffer certain health issues. The cloning in human may produce certain psychological problems like psychological distress that affects the uniqueness and individuality of an organism. Moreover, it may cause certain issues in earlier or later twin's growth.

CLONE AS AN INDIVIDUALIZED ENTITY AND STAGES OF HUMAN DEVELOPMENT

A human embryo is used for cloning and research purposes, but ethics and moral values oppose it as this destroys the human embryos. Some persons regard the human embryo as an "individualized entity or a person" that reserve all rights as a human being should have it, as it is the initial stage of human development.^{14,15} Some theological perspectives consider the human beings as an individual, but there are different views about what stage of human beings should be considered against the dignity of an individual.¹⁶ From the 1st day of the human embryo, it has its own existence, and it has a right to live, so we have no right to kill the embryo. However, there is a difference between the different stages of human embryo development. According to the Holy Quran, "We created man of an extraction of clay, then We set him a drop in a safe lodging, then We created of the drop a clot, then We created of the clot a tissue, then We created of the tissue bones, then We covered the bones in flesh; therefore We produced it an another creature. So blessed be God, the Best of Creators." According to these verses, we can clone a stem cell at the preensoulment stage, and the elimination of an embryo at this stage is also a sin, but its punishment is less than that of the abortion that is equal to murder.

MORAL ISSUES RELATED TO THE HUMAN CLONING

There are certain moral and ethical values that oppose the cloning in human beings. These moral values are dearest to the people from different religious backgrounds. US President Clinton banned the funding related to being given to the trials on human beings cloning and asked the Advisory Commissions to report about the views of peoples within 90 days, as it was a tough job due to conffliction in moral and ethical values. Hence, the National Bioethics Advisory Commission consulted to the scientists, theologians, physicians, etc., to collect the data about ethical and moral values and information about the safety issues of the organism produced by the somatic cell nuclear transfer which was the main issue.¹⁷ However, it raises the questions about the social relations (about families and generations relationships) of the

clones, as they may be treated as objects or may disturb the family system.

RELIGIOUS VIEWS RELATED TO HUMAN CLONING

The technology has many good and bad impacts on human health so is case with the human cloning which has many advantages and disadvantages as well that's why prohibited by most of the religious scholars. It may be accepted before the ensouled stage. Iran is of one of the first countries that had carried out the cloning process according to the values of Islam for therapeutic purposes. They have used this technique for the organ transplantation by following the ethical values at each stage of the embryo by developing the stem cell culture.^{18,19} Hence, it is permitted to be carried out for therapeutic and research purposes while taking out of all the possible measurements.²⁰

ISSUES RELATED TO THE USE OF CLONED ANIMAL PRODUCTS AND THEIR SAFETY

Cloning produces similar individuals that are useful for the animal breeders, as they have good traits in the same to their parents.²¹ The cloned animal products faced moral and ethical issues due to controversial views, yet the reports submitted by the US and National Academy of Sciences, National Research Council reveals that the cloned animal products have no side effects and are as safe as are noncloned or commercial animals also no differences in scientific research bases according to the Food and Drug Authority (FDA). The FDA reported the foods such as milk and meat obtained from the cloned organisms is same as noncloned one.²² That's why FDA has allowed the use of cloned animal products along with their wide range cloning.²³

CONCLUSION

Cloning is banned due to many ethical and moral values. Moreover, it faces many emotional reactions, psychological, and social issues as well. According to the Islamic point of view, the cloning of an embryo is a sin, and it is against nature due to the hazards that an embryo faces during a cloning process. However, Islam gives its permission to be applied only all the moral and ethical values are followed during the human embryo cloning for therapeutic and research purposes.

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Conflicts of interest

There are no conflicts of interest.

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