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Research Paper

REPRODUCTIVE CLONING IN HUMAN BEINGS: A CHALLENGE TO HUMAN RIGHTS

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ABSTRACT

In the present times the knowledge of biological and chemical sciences is being applied to living organisms like plants, animals and micro-organisms to modify and manipulate their genetic makeup in order to obtain desired products and characteristics. This technology known as biotechnology and genetic engineering has already invaded each and every facet of human life and environment and its profound effect on our everyday life may become more prominent by the end of this decade

The application of biotechnology to genetics and human embryology promises to be the greatest and most exciting scientific revolution in human history. It has helped to understand the structure and functions of genes, the reasons for different diseases and genetic disorders and to develop gene therapy for their treatment. It has helped to know the formation and development of the foetus or life itself. Thus biotechnology and genetic engineering is a powerful technique and offers many advantages and benefits. However we cannot afford to be ignorant about its possible risks and adverse effects on the environment and health of the people. Today scientists are going far ahead and uncontrolled experiments known as cloning experiments are going on to create an exact copy or replica of living organisms, not only of animals and birds but also of human beings. This attempt to create human clone has sparked a debate all over the world about the proper use of biotechnology and its ethical, social and legal impacts. There is no coherent government policy anywhere in the world for the regulation and control of these experiments. On the contrary the countries are divided about the need to carry on such experiments on humans. Therefore it is necessary to examine the benefits and possible adverse effects of cloning and prevent its misuse. The present paper attempts to analyse cloning technology with respect to the ethical, social, medical and legal impacts on human rights.

Cloning: Technique and Meaning

In simple terms a clone means an identical copy or a replica of the original. Cloning means the production of multiple and identical copies of the genes, organs and even whole living organisms identical to the parent species. It is not an entirely new concept because genetically identical copies of whole plants known as varieties are very common in horticulture. Though vertebrates do not have this ability, the cloning of vertebrates does occur naturally through the formation and birth of identical twins with the chance separation of a single embryo into halves during early development.

Artificial cloning involves the relocation of genetic material. Though efforts were made from 1960s, the major success was obtained in 1997 when the research team headed by Dr. Ian Wilmut a Professor and Embryologist of Roslin Institute in Edinburgh, Scotland announced the successful cloning of a sheep, Dolly, by using the technique of Nuclear Transplantation Cloning.The advantage is that the embryo is created outside the body of the female and then implanted into the uterus of the surrogate mother where it further develops. The practical effect is that surrogate mother gives birth to an organism which is exactly identical to the donor.

By using this technology in humans it is possible to create not only copies of genes, cells and organs but may also be possible to create an exact copy of any person who acts as the donor. Thus a child may be created identical to an earlier child or may be created identical to the parent or just about anyone.

Cloning and its Challenges to Human Rights:

Cloning technique in humans can be distinguished into two types i.e. therapeutic cloning and reproductive cloning. Therapeutic cloning is at present allowed in some countries and being done for medical research to develop embryos for obtaining stem cells which are then used for treatment and repair of damaged organs or for study of diseases. It uses stem cells obtained from very early human embryos of only 7 days old. However the procedure of obtaining stem cells involves destruction of the 7 days old embryo. Reproductive cloning is banned in most of the countries as it may lead to the creation of a human clone similar to the donor.

Both the types of cloning are highly controversial and raise many medical, social, ethical and human rights issues which are as follows:

·**Medical Issues-**

Cloning technique is still in experimental stages even in animals and therefore its application to humans is very scary. Concern is there about the possible harm to the children who may be born. As it involves manipulation of the nuclei, ova and embryo it may unknowingly result in physical or mental harm to the child. The original cell used for cloning is old and it might have accumulated many mutations which may have a long term effect on the health of the clone. Experiments on animals have shown that cloned cells and organisms age quickly and therefore the life span of the clone may be reduced. Most scientists agree that the cloning technology has not yet advanced completely and its safety in humans is questionable.

Religious and Ethical Issues-

The possibility of achieving success in cloning human beings would put man in the position of creator of life. This has hurt the moral and religious sentiments of people all over the world. Questions are being asked as to whether man should become the architect of life itself? Should biotechnology be allowed to play God and whether man should become a puppet in the hands of biotechnology? Critics also point out that reproductive cloning may reduce the value of procreative process and affect the very structure and meaning of family in the long run. Though a man is required as a donor to produce a clone of a man and a woman donor is required to make a clone of a woman, the critics say that cloning may reduce the intrinsic value of a human being to merely a clone produced by technology. Therapeutic cloning of embryos to obtain stem cells for medical research involves the use and destruction of early human embryo. It is criticised by many people as similar to abortion and as unethical and immoral. It raises the question whether man has the right to destroy an early embryo or potential life for the purpose of research.

Human Rights Issues-

Cloning of humans is criticised on the grounds that it would violate the basic human rights of the clone who will be born and also of the donor parents. It is feared that a cloned child may be treated as an object or product rather than as an individual. There is a case of doctors creating a child termed as 'designer baby' for the purpose of producing solid organs or tissues for transplantation into an existing child who is seriously ill and needs organ transplantation. Such approach would affect the concept of considering a child as a happy addition to the family and will violate the dignity of the cloned child. It would reduce its value to merely a product made for some use.

The cloned child may suffer from loss of identity and individuality. Though it would be exactly similar to the parent donor in appearance, there is no guarantee that it will have the same qualities and skills. Just as an individual is compared with his elder brother or sister, the cloned child may be constantly compared to the parent donor. Therefore it is argued that the clone would be virtually living a 'life in the shadow' of the person from whose genes he or she was cloned.

Cloning is also criticised as a violation of the basic human rights and dignity of a woman. The woman may be used as a donor to provide an egg or used as an incubator or surrogate to develop the embryo. It also raises a highly emotional and sentimental issue that who will be considered as the real mother of the cloned child- the genetic/donor mother or the surrogate mother? What will be the remedy available in case the surrogate mother does not want to part with the baby? It is therefore argued that misuse of this technique for profits or ulterior motives may lead to exploitation of poor woman for sale of embryos.

Thus cloning raises many medical, ethical, social and human rights issues. However the supporters of cloning assert that all these fears are imaginary and can be removed with further development in the field. It is not a rule that everyone would want to clone a baby. It would be only by those couples who are desperate for having a baby of their own and hence the cloned baby would also be treated with love and affection by the parents. They argue that technique of in-vitro fertilization and test-tube baby were also initially criticised. But now they have been accepted in society and there are no social prejudices against such babies. The scientists also claim that the human embryos used for therapeutic cloning research are only 7 days old blastocyst of only about 100 cells and therefore its destruction does not amount to abortion. Moreover this technique offers hope for curing many of the life threatening diseases affecting mankind and hence a complete ban on cloning is not desirable.

In spite of all these claims and counter-claims it cannot be denied that there is every possibility of misuse of this technology. If cloning is used for publicity or for monetary gains it would be a violation of human rights and human dignity. Hence there is a need to look into the present legal framework related to the control and monitoring of cloning technology.

Legal Perspectives on Cloning:

The manipulation of genetic material and creation of new life forms has serious legal implications. A patent was granted for the first time in the world to Dr. Anand Chakraborty for creating genetically engineered bacteria capable of breaking down multiple components of crude oil. In subsequent cases patents have been claimed even on cell-lines and tissues obtained from human beings. For example in John Moore's Case, the doctors at University of California applied for a patent on a cell-line obtained from the spleen of John Moore. The market potential of the cell-line was 3 million dollars. Moore sued the doctors on the grounds of breach of fiduciary duty and conversion. Though the Supreme Court of California observed that it was doctors duty to inform Moore, the Court held that medical research was very important and the doctors were not guilty of conversion as the subject matter of patent i.e. spleen cells was not the property of Moore. In another case of Guayami Woman patent was filed in US Patent Office on a cell-line obtained from the blood of a woman of Guayami tribe. The patent claim was however rejected after objections were taken by international community. More recently Licences for Cloning Embryonic Stem Cells and Human Embryo have also been granted to scientists.

The grant of such patents and licences raises the question whether the cells, blood and body parts of human beings can be patented and owned like property in the name of research. The concern is also whether human body can be subjected to such medical research and procedures without consent of that person. At international and regional level there are many documents which recognise the basic human rights and dignity of human beings and aim to protect them from such medical and scientific experiments.

· International and Regional Documents for Regulating Cloning Experiments-

Since the formation of United Nations in 1945 it has been recognised that 'Human Rights' are the basic and inalienable rights of every human being and available to all without any discrimination. The need to protect human beings from intrusive biological, medical or scientific experiments has also been recognised and expressly prohibited in many of the international declarations and conventions.

In 1993 UNESCO created an International Bioethics Committee for preparing an international instrument for protection of human genome and finally the Universal Declaration on the Human Genome and Human Rights 1997 was adopted. The declaration recognises that research on human genome has opened up vast prospects for progress in improving the health of individuals and of humankind as a whole. But at the same time such research should fully respect human dignity, freedom and human rights. Article 1 recognises the inherent dignity of the human genome. Article 2 proclaims that, "everyone has a right to respect for their dignity". The Declaration emphasises that any research,

treatment or diagnosis affecting an individual's genome shall be undertaken only after prior free and informed consent and after prior assessment of the potential risks and benefits and in accordance with any other national law. Article 11 clearly states that, "Practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted." It invites the States and competent international organisations to cooperate in identifying such practices and in taking measures at national and international level to ensure that the Declaration is respected.

At Regional Level the European Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine, 1997, was adopted by member states of the Council of Europe.. This convention aims to prevent misuse of biological and medical advances. It affirms that progress in biology and medicine should be used for the benefit of present and future generations. The interests and welfare of the human being shall prevail over the sole interest of the society or science. It also provides that the person who has suffered undue damage resulting from an intervention is entitled to a fair compensation according to the conditions and procedures established by law.However Article 18 is confusing because it prohibits creation of human embryo for research purpose and it also provides that where the law allows research on embryos in-vitro, it shall ensure adequate protection of the embryo. The question is how can an embryo be ensured protection if it is used for research purpose? Nonetheless the Convention is remarkable for its attempt to include biological and medical developments in the legal framework.

Further the Additional Protocol to the European Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, on the Prohibition of Cloning Human Beings 1998, was opened for signature on 12th January 1998. It considers the cloning of human beings as contrary to human dignity and a misuse of biology and medicine and specifically bans human cloning, without exception. Article 1 prohibits any intervention seeking to create a human being genetically identical to another human being, whether living or dead.

Thus there are various instruments at international and regional level that can be used to prevent misuse of cloning technique. But there is no specific machinery for monitoring the implementation of these documents. Moreover in many situations the conventions and declarations clearly point out that the matter will be treated as per the national laws. Thus it is the responsibility of the States to cooperate and take proper measures for implementation of these documents.

· Response of Various Countries-

Different countries have either enacted new legislations or amended existing legislations to deal with issue of cloning technology.

In Britain, the Human Reproductive Cloning Act 2001(UK) provides that, "A person who places in a woman a human embryo which has been created otherwise than by fertilization is guilty of an offence." Though the Act does not use the words cloning or reproductive cloning, it uses the words human embryo which has been created otherwise than by fertilization and thus focuses on implantation of cloned embryo.

In Australia there are regulations at both State and Federal Level. Western Australia and South Australia have legislations prohibiting cloning directed at producing duplicates or descendants that are genetically identical to the original. In States with no specific legislation, The National Statement on Ethical Conduct in Research Involving Humans 1999 and The Ethical Guidelines on Assisted Reproductive Technology 1996, are applied and prohibit the creation of two or more genetically identical individuals as well as prohibit development of human embryonic stem cells for producing clone of individuals. At Federal level the Gene Technology Act 2000 prohibits the cloning of whole human beings. The Canadian Government has also amended its Criminal Code and the manipulation of genetic material for creating zygote or embryo containing same genetic information as living or dead human being was made a criminal offence.

The position in United States has however changed with the passage of time. Initially in 1997 it did not introduce a complete legislative ban on cloning. It was recommended in June 1997 that Federal legislation should be enacted to prohibit anyone from creating a child through cloning. But such federal or state legislation should also contain a clause that Congress or appropriate body will review it after specified time period of 3-5 years to decide whether prohibition should be continued. Thus US did not approve a complete ban on cloning as it may affect possible beneficial applications of the technology. But in 2004 the Bush Administration asked the United Nations to take quick action to ban all forms of cloning including therapeutic cloning for medical research as it may lead to exploitation of poor women for sale of embryo. This proposal for complete ban on cloning was supported by 63 countries led by Costa Rica. Further the then US President George Bush threatened to veto any legislation for federal funding of embryonic stem cell research as it involved destruction of life. However the US House of Representatives voted in favour of federal funding for embryonic stem cell research as it would help to find cure for diseases.

India is in favour of banning only reproductive cloning. It supports therapeutic cloning for medical research. At present there is no legislation in India related to cloning. However there are guidelines for stem cell research, which provide that the stem cells cannot be used for cloning purposes. But the embryonic stem cells could be **used with safeguards for medical research and t**here should not be commoditisation of women to obtain the embryonic stem cells.

Thus different countries have different approaches and are divided in their opinions with respect to complete ban on cloning. It is high time that a uniform approach is adopted to prevent misuse of cloning technology.

Conclusion:

The application of cloning technology to human beings has opened up vast prospects for progress in medical research and offers hope to the entire mankind. The cloning of embryonic stem cells is very important for research in many of life-threatening diseases like Motor Neurone Disease, Alzheimer's, Parkinson's, heart diseases, diabetes, paralysis etc. and to find an effective treatment. If used properly cloning can help to manufacture stem-cells, tissues and even organs like kidney, cornea and liver which can be used in transplantation. It can also be a boon to couples who desperately want to have a child of their own.

However in the absence of appropriate standards and guidelines the cloning technology may be misused and lead to violation of human rights and dignity of human beings. It not only affects the rights of women and that of **the unborn cloned child but also raises serious medical and ethical**

issues. The safety of the technique has not yet been established even in animals and therefore the attempt by scientists to clone human being is medically unsafe and socially unacceptable. It cannot be denied that under the pretext of experiments, today many of the scientists are crossing the limits of morality and ethics. The various international and regional declarations and conventions focus on protection of the inherent dignity and human rights of all persons without any discrimination. The Universal Declaration on Human Genome and Human Rights 1997 as well as The Additional Protocol to the European Convention on Human Rights and Biomedicine 1997 specifically ban human cloning. There are more than 50 countries, which have legislations banning human reproductive cloning. However the countries are divided with respect to therapeutic cloning and there is no global consensus on the issue. Though the United Nations agreed for a ban on all human cloning in 2005, the declaration is non-binding. It means that countries can continue therapeutic cloning and can even undertake reproductive cloning if the national law does not prohibit it. Such ambiguities may lead to gross violations of human rights and human dignity. Hence there is a need to have a strict convention for the monitoring and control of cloning technology.

Suggestions:

· The advances in the field of biotechnology and cloning must be used only for the benefits of the present and future generations and with full regard to the protection of basic human rights and human dignity.

· Medical Research is essential in order to study and understand the various diseases and to find out their effective treatments. Hence medical research should be encouraged by the international community and the States.

· The cloning technique must be applied in medical research only for improving the health and life of human being. The potential benefits and possible risks on human health and society must be considered. It must not be misused for financial gains or for publicity.

· It is the duty of the State to ensure that the results of research are used only for peaceful purpose and for improving health of individuals. It should make strict laws and set up appropriate machinery to monitor research on cloning.

· Therapeutic cloning is necessary for medical progress and must be allowed in the interests of human society. At the same time the countries should enact stringent laws to prevent misuse of therapeutic cloning. Licences and registration for research must be compulsory. There must be close monitoring and review of the research by a competent authority and the results must be published.

· Research on an individual's genome must be undertaken only after rigorous and prior assessment of the potential risks and benefits and only after prior free and informed consent of the individual. Compensation must be provided to an individual for any harm suffered due to such research.

· The creation of a human clone is not in the interests of society as it will create newer medical, social and ethical problems. The countries should enact strict legislations to ban human reproductive cloning and the creation of human clone. Instead they should promote in-vitro fertilization and adoption of the girl child.

· Unethical and medically unsafe experiments like creation of chimeras must be strictly prohibited. Punishments must be imposed for such misuse of technology.

· A mere national ban on human reproductive cloning is not sufficient because the scientists and researchers can continue research in other countries where it may not be banned. Therefore it is essential to have a global convention which bans human reproductive cloning or the creation of human clone. The international community should cooperate and arrive at a global convention which bans human reproductive cloning in the interests of the society and human rights.

· There should be strict guidelines at international level for monitoring and control of therapeutic cloning only for medical research.

Today research is being carried out at a very rapid pace and our legal system is unequipped to tackle these changes. It will not be surprising if tomorrow some scientists claim that they have created a human clone. It is high time that the countries and the human society wakes up and decides whether it wants to misuse cloning technology for violation of human dignity and human rights or whether it wants to use this technology for medical research and progress of mankind.