"Application of the Legal Maxim 'Harm is Not to Be Removed by an Equivalent Harm' in the Case of Medical Stem Cells: A Contemporary Applied Study"

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Abstract:

This study addresses a significant contemporary medical issue related to stem cells, including the methods of obtaining them, their uses, and the potential positive or negative consequences based on modern medical findings. The study aims to clarify what is meant by stem cells, how they are obtained, and the Islamic legal ruling on their use. Thus, we approached the topic from both a medical and jurisprudential perspective.

The study concludes that if the method of obtaining these cells is prohibited (haram), then conducting research and studies on them is also prohibited. However, if the method of acquisition is permissible, the research is also considered permissible, based on the following principles:

- These studies aim to eliminate disease and alleviate human suffering, and such objectives are permissible under the principle that “hardship brings ease” (Al-Zarqa’, 1998).
- Many diseases can potentially be eliminated through such research, and the principle in Islamic law that “harm must be removed” supports their permissibility (Al-Zarqa’, 1998).

Keywords: Contemporary medical issues, stem cells, Islamic legal maxims.

Introduction

All praise is due to Allah, Lord of the Worlds, as is befitting His glory and greatness. May peace and blessings be upon the noblest of messengers, our Prophet Muhammad, his family, his companions, and those who follow them with righteousness until the Day of Judgment.

It is well-known that Islamic jurisprudence holds great honor and encompasses a wide field. Its need is both religious and existential. The Prophet Muhammad (peace be upon him) emphasized its importance, saying, “Whomever Allah wishes good for, He grants

them understanding of the religion" (Al-Bukhari, Hadith 71). Since mastering jurisprudence without understanding its maxims and methods is difficult, these principles are indispensable. Their significance is especially apparent when applied to contemporary issues, including medical cases, such as stem cell acquisition. This study endeavors to clarify the ruling on this crucial issue by evaluating medical and jurisprudential opinions.

Importance of the Study

The importance of the study lies in the following:

A. Contemporary issues and recent developments are of high relevance, warranting deep scholarly attention. These matters combine tradition and modernity and directly affect people's lives, particularly in the field of contemporary medical concerns due to their widespread relevance and frequent evolution.

B. Stem cells represent the fundamental building blocks of the human embryo, forming all its cells and tissues. Understanding how these cells function and differentiate into specific types (e.g., heart, liver, kidney, blood, bone, brain cells) is vital to comprehending embryonic development, uncovering its mysteries, and treating related disorders.

Research Objectives

The study seeks to achieve the following objectives:

A. Understanding what stem cells are and how they are obtained.
B. Emphasizing the significance of Islamic jurisprudence and its principles in addressing modern medical issues just as it applies to worship, criminal law, and financial transactions.
C. Providing clear Islamic legal rulings on the topic for practical application.

Research Problem

The research aims to answer the following questions:

- What are stem cells, and how are they obtained and used?
- What is the Islamic legal ruling regarding their acquisition and usage?

Previous Studies

Upon reviewing existing literature in the field of legal maxims, no specific study was found to have addressed this exact issue. However, some studies relate generally to the topic:

- Ahmad, Y. A. (2006). *Islamic Rulings on Organ Transplantation*. Riyadh: Kunooz Ishbilia. [Focuses solely on organ transplantation, while this study addresses harm removal in stem cell cases.]
- Al-Salhi, S. Z. (2007). *Artificial Insemination: Between Islamic Law and Secular Law*. Cairo: Al-Ilm wa Al-Iman Publishing. [Covers artificial insemination, not stem cells.]
- Fawzan, S. M. (2008). *Cosmetic Surgery: A Medical and Detailed Jurisprudential Study*. Riyadh: Al-Tadmuriah Publishing. [Covers cosmetic surgery exclusively.]
- Ahmad, I. E. (2003). *Genetic Engineering Between Science and Islamic Law*. Amman: Dar Al-Fath. [Deals with genetic engineering generally.]

Research Methodology

The study employs an inductive-analytical method. It begins with extracting jurisprudential principles from their diverse sources, analyzing their validity, and interpreting them with all their meanings, rules, and implications. Afterward, the study presents textual or rational evidence and applies these principles to the modern medical issue of stem cells wherever applicable.

Section One: Terminology Related to the Study

This section is divided into two parts to explain the key terms involved in the research: the jurisprudential maxim "harm is not to be removed by a similar harm" and the concept of stem cells.

First: Definition and Evidence of the Jurisprudential Maxim “harm is not to be removed by a similar harm”

A-General Meaning of the Maxim:
This principle qualifies the maxim “Harm must be removed.” It implies that while harm should be eliminated under Islamic law, it should not be done by inflicting equal or greater harm upon others. Therefore, harm must be removed without causing additional harm, or at the very least, by causing a lesser harm (Al-Zarqa’, 1998).

B-Evidence for the Maxim:

1. Allah says: “Mothers may breastfeed their children two complete years for whoever wishes to complete the nursing [period]. Upon the father is the mothers’ provision and their clothing according to what is acceptable. No person is charged with more than his capacity. No mother should be harmed through her child, and no father through his child.” (Quran, 2:233)

Ibn al-Qurtubi interpreted this verse to mean that neither parent should inflict harm on the other under the guise of parenting duties (Al-Qurtubi, n.d.).

2. Allah also says: “When you divorce women and they have fulfilled their term, either retain them according to acceptable terms or release them according to acceptable terms. But do not keep them intending harm to transgress [against them].” (Quran, 2:231)

This is a clear prohibition against harming a divorced woman, even if she may have caused harm to her husband.

3. The Prophet Muhammad (peace be upon him) said: “There should be neither harming nor reciprocating harm.” (Ibn Majah, Hadith 2340)

This hadith conveys a general prohibition against all types of harm, including retaliatory harm.

Second: Definition of Stem Cells

A-Definition of “Cell”:

Cells are the fundamental units of living organisms, whether plant or animal, and are usually microscopic.

B-Definition of “Stem”:

In Arabic, the root of the word indicates “the trunk of a tree,” which metaphorically represents the source or origin. In biology, “stem” refers to the foundational or primitive form from which other cells develop.

C-Technical Definition of Stem Cells:

Stem cells are primitive cells that have the ability to divide and multiply to form various types of specialized cells such as muscle, liver, nerve, and skin cells. These primary cells are found in early-stage embryos and, to a lesser extent, in specific parts of the adult human body.

D-Alternate Terms for Stem Cells:

They are also referred to as root cells, primary cells, progenitor cells, or origin cells. However, “stem cells” remains the most accurate description as it denotes their foundational role.

E-Types of Stem Cells:

Human development begins with the fertilization of an egg by a sperm, resulting in a single totipotent stem cell that can generate all cell types including supportive tissues like the placenta. These are called Totipotent Stem Cells.

Within days of fertilization, the zygote divides into more cells, forming a hollow sphere known as the blastocyst, which contains:

- An outer layer that forms the placenta and supporting tissues
- An inner cell mass that forms the embryo.

This inner mass consists of Pluripotent Stem Cells, capable of forming almost all cell types but not the supporting tissues for the fetus. Later, these cells differentiate further into Multipotent Stem Cells, which can give rise to specific lineages (e.g., hematopoietic stem cells form all blood cells, muscle stem cells form muscles, etc.).

Results:

Thus, stem cells are categorized into:

- Totipotent Stem Cells – capable of forming all embryonic and extra-embryonic tissues.
- Pluripotent Stem Cells – capable of forming most tissues but not the placenta.
- Multipotent Stem Cells – capable of forming cells within a particular tissue or organ system.

Section Two: The Jurisprudential Ruling on Stem Cells

Application of the Jurisprudential Maxim: “Harm is Not to Be Removed by an Equivalent Harm” to the Case of Stem Cells—Acquisition and Use.

A-Methods of Obtaining Stem Cells:

Stem cells can be obtained through several methods, including:

1. *From surplus fertilized eggs* from in vitro fertilization (IVF) projects. These surplus

embryos are typically stored in fertilized egg banks. On the fifth or sixth day of development, the embryo is destroyed to extract the stem cells found in the inner cell mass of the blastocyst.

- This method was first used by Professor James Thomson at the University of Madison, USA, in 1998 (Thomson, 1998).

2. *Deliberate fertilization* of a donated egg with donated sperm to create a fertilized egg. Physicians then cultivate the embryos to the fifth or sixth day and extract stem cells from the inner cell mass, similar to the first method.

- This approach was adopted by the Jones Institute in Virginia, USA (Jones Institute, 2000).

3. **Somatic Cell Nuclear Transfer (SCNT)** or cloning. A nucleus from a somatic cell of an adult human is extracted and inserted into a human egg cell that has had its nucleus removed. Once the nucleus is implanted, the egg begins to divide and form a blastocyst, from which stem cells are harvested.

- ✓ This method is not intended to create a full human but to generate a blastocyst for harvesting genetically matched stem cells. While this approach solves the problem of immune rejection, it is ineffective for treating genetic diseases since the cells already carry the genetic condition (Wilmut et al., 1997).
- ✓ Although controversial and generally rejected globally, reports such as one in *Time Magazine* (July 23, 2001, pp. 24–29) noted that the Advanced Cell Technology Institute in Worcester, Massachusetts, was conducting such experiments.
- ✓ By February 27–28, 2002, British media reported that the UK had officially approved therapeutic cloning for stem cell harvesting, making it the first country to do so. Researchers began to flock there.
- ✓ South Korea reportedly led a breakthrough in 2004 by successfully cloning a human embryo and extracting genetically matched stem cells for the first time (Hwang et al., 2004).

4. ***From early-stage aborted embryos (4–5 weeks)***, where primordial germ cells—which later form reproductive glands (testes or ovaries)—can be isolated. These are considered multipotent stem cells.

- Dr. Gear Hart from Johns Hopkins University first isolated these cells in 1998 (Shamblott et al., 1998).

5. **From aborted embryos at any gestational stage**, whether the abortion was spontaneous or induced. Embryos contain multipotent stem cells in various tissues and organs.

- In 2001, Dr. Snyder and Dr. Freed transplanted neural stem cells from a 15-week-old human fetus into monkey brains. The human cells integrated and developed inside the monkey brains (Snyder & Freed, 2001).

6. **From placental and umbilical cord tissues**, which are rich in multipotent stem cells. Since these tissues are typically discarded after childbirth, collecting stem cells from them is relatively easy and cost-effective (Ballen et al., 2001).

7. **From child and adult tissues**, including bone marrow, skin, subcutaneous fat, gastrointestinal tract, respiratory system, liver, and nervous system. The number of stem cells decreases with age.

- In adults, one stem cell is found per 10,000 bone marrow cells and one per 100,000 blood cells (Weissman, 2000).

Legal Ruling on Establishing a Stem Cell Bank

No explicit prior legal opinion (fatwa) was found regarding the establishment of a stem cell bank. However, the ruling appears to depend on the source of the stem cells collected, as follows:

- If the method of obtaining the stem cells is prohibited (haram), then establishing and maintaining a stem cell bank would also be considered prohibited.

- If the method of obtaining them is permissible (halal), then establishing such a bank is allowed, especially for the legitimate purpose of conducting scientific research and studies.

Legal Ruling on Research Conducted on Stem Cells

The permissibility of research conducted on stem cells is contingent on the method of obtaining the cells:

A-If the source is impermissible, then conducting research is also impermissible, based on the Quranic verse: “And cooperate in righteousness and piety, but do not cooperate in sin and aggression” (Qur’an, 5:2, Sahih International).

B- If the method of acquisition is permissible, then such research is considered legitimate due to several foundational legal principles in Islamic jurisprudence:

C-The primary aim of such research is to cure diseases and alleviate human suffering. According to the maxim: “Hardship brings ease” (Al-Zarqa’, 1998).

D - Many of the diseases afflicting humanity can be addressed through this research, which aligns with the principle: “Harm must be eliminated” (Al-Zarqa’, 1998).

E- Avoiding such research would lead to harm, and hence conducting it is permitted under the maxim: “Necessities permit prohibitions” (Ibn Abidin, 2003).

Recommendation:

Stem cell research holds tremendous potential for medical advancements in curing diseases and alleviating human suffering, aligning with the Islamic jurisprudential principles that advocate for removing harm and easing hardship. To ensure compliance with Islamic law, it's crucial to prioritize the following:

- Halal Sources: Encourage the use of halal methods for stem cell acquisition, such as utilizing placental and umbilical cord tissues, which are naturally discarded after childbirth. This approach eliminates ethical concerns while offering a sustainable source of stem cells.
- Stem Cell Banks: Establish dedicated stem cell banks that exclusively collect and store stem cells from permissible sources. These banks can support medical research and applications while adhering to Islamic principles.
- Ethical Research Framework: Develop a comprehensive ethical framework for conducting research on stem cells, ensuring that acquisition methods align with halal standards and that research objectives focus on alleviating human suffering.
- Education and Awareness: Promote education on stem cell research within the Islamic community, highlighting its benefits, permissible practices, and the jurisprudential rulings that support its ethical application.
- Ongoing Jurisprudential Studies: Invest in continuous scholarly efforts to address emerging medical technologies through Islamic jurisprudence. This will ensure that advancements in medical science are met with clear, well-informed Islamic rulings.

By focusing on permissible methods and maintaining a balance between scientific innovation and adherence to Islamic ethics, stem cell research can flourish as a vital tool for improving healthcare and reducing harm in society.

Conclusion

In conclusion, with the help and guidance of Allah Almighty, this study has led to several important findings:

- Necessity (darura) is a foundational legal principle in Islamic law. It is part of the broader legal framework and allows for legal rulings that do not contradict the texts but align with their objectives and consequences. It represents a secondary path of legitimacy in exceptional situations.

- Medical procedures, like many human practices, are subject to various rulings in Islamic law. They may at times be obligatory, permissible, or prohibited depending on their nature and consequences.

- The default ruling on medical interventions is that they are permissible as a form of treatment, which is encouraged. However, this permissibility may be revoked if the procedure explicitly violates core Islamic texts, principles, or objectives, as may be the case with certain methods of acquiring or using stem cells.

- The richness and comprehensiveness of Islamic jurisprudence, along with its legal maxims, offer flexibility and adaptability. The principles of Islamic law are deeply rooted and provide a solid foundation for addressing emerging issues, affirming the suitability of this divine legal system for all times and places.

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