

Learning from the Dead: Body Donation for Research

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Abstract: Human bodies are needed and widely used in the development of medicine and medication though not much attention is given to promote it. The objective of this paper are two folds, namely to analyse the significance of human body donation and evaluate the procedures applicable including challenges faced in promoting it. Body donation is important and it provides massive benefit to the entire society. Unfortunately supply is very limited even though they are mostly preferred to be used in conducting research and experiments, as they form the best type of experimental subjects. Some countries already have laws governing this practice, nevertheless a standardised procedural guideline to legally regulate this activity is necessary. As for Islamic countries, clear rulings in the form of contemporary *fatwas* regarding the permissibility of this practice are equally needed, to help Muslims make a decision whether or not to contribute as a body donor.

Key words: Body • Donation • Islam • Research • Dead

INTRODUCTION

Human organs donated are commonly used to help cure patients who are in need of those particular organs, to help them survive and continue living. This is one of the miracles in medicine, particularly when precious human lives are able to be saved, just by transferring organs from donors to recipients. However, another side of donation that has been hiding in its shadow and not been given much publicity, is donation of the whole human body, made after death, for the purpose of research and experimentation. Body donation provides huge benefits and contributions towards the society. A wide range of human bodily material may be provided by one person for the treatment of others, or for medical research that aims to improve medical treatment in the future. This time, it does not provide immediate cure for just a few patients, but it actually benefits the whole society including our future generation. It provides for the need of a population seeking health, or better health than presently enjoyed. For example, the fact that the population is aging increases the number of patients suffering from diseases of old age. Likewise, the changing

in patterns of diet and lifestyle contributes towards more people suffering from obesity and diabetes [1]. Therefore, in order to provide new solutions and strategies of overcoming diseases, continuous therapeutics and non-therapeutic researches need to be carried out [2].

Therapeutic research aims to improve treatment to a class of patients while non-therapeutic research is to enhance the furtherance of purely scientific knowledge. Therefore, the human bodies are used to teach students about the structure of the body and how it works; they may also be used to train surgeons and other healthcare professionals. People have to decide in advance whether or not to donate their body after death. These donations are highly valued by staff and students at anatomy establishments. Moreover, a donated body can be used for a number of possible purposes including: a) "Anatomical examination"- this term describes the teaching of the structure and function of the human body to students or healthcare professionals. b) "Research"- this term describes scientific studies which improve the understanding of the human body. c) "Education and training" - these terms describe the training of healthcare professionals, usually those learning surgical techniques,

as opposed to anatomical examination [3]. The objective of this paper are two folds, namely to analyse the significance of human body donation and evaluate the procedures applicable including challenges faced in promoting it.

Donating the Human Body and its Importance: Using real samples of human bodies to develop any new medication or theory for human use is the best option available. Animals such as guinea pigs and mice are commonly used in medical studies; resorting to actual human bodies and cadavers will provide results which are exact, more accurate and convincing. The use of human bodies for research would seek to reduce, upgrade and replace animal experimentation. This is in line with the Directive of European Union on the Protection of Animals Used for Scientific Purposes, which holds that member states must develop “alternative” approaches which could provide the same or higher levels of information as those obtained in procedures using animals [4]. Moreover, with the constantly changing and mutilating profile of diseases and conditions that affect the emphasis of medical attention, continuous research must be carried out to find the best cure and prevent them from becoming worst. In other words, the increased demand for human samples in research is due to the rapid development of technology. For example, by identifying specific DNA mutations, we could predict how a particular patient will respond to a specific drug treatment and further understand the molecular basis of each disease [1].

From these human bodies, bodily materials like blood, blood products, tissue, bones, skin arteries, corneas, reproductive material including embryos, fetal, embryonic stem cells are all essential for research purposes. In other words, the whole body itself is beneficial for education, training and experiments. The person providing the bodily material can be either a living person or a deceased party and these materials can be used almost immediately or it can also be stored for long periods of time. The material can be used raw or heavily processed, for the direct treatment of others or for research purposes.

Procedures to Donate Human Bodies for Research: Due to the importance of human body donation, countries are recommended to adopt a clear legal framework which regulates the acceptance of donations for medical education and research, which clearly addresses any other related legal issues [5]. In the United Kingdom, whole bodies are donated to medical schools particularly

for the purpose of education, training or research. This practice is covered by the Human Tissue Act 2004 and regulated by the Human Tissues Authority (HTA). By virtue of these provisions, donated bodies are still used for teaching purposes in medical schools, also for anatomical and surgical training. However, under the Human Tissue Act 2004, written and witnessed consent must be obtained from the potential body donor prior to his death, as the executor of an estate may no longer act based on his knowledge of the deceased’s wish to donate his body.

The consent form can be obtained from the nearest medical school and a copy should be kept with the donor’s will. Family, close friends and the General Practitioner should be informed and made aware of any decision to donate the body. It is entirely a matter for the Medical School whether or not to accept a body. In certain circumstances, bodies will definitely not be accepted, for example when a post mortem examination has been performed. The body accepted for donation will be examined and preserved and this may extend over up to a period of three years. Once complete, arrangements will be made to bury or cremate the remains, in accordance with the wishes expressed by the deceased or any surviving spouse or relative. However, in cases where certain tissues or body parts are of special interest for educational, medical and scientific research reasons, the medical school may ask potential donors if they would allow the school to keep such tissue for a longer duration, since this might be of great value in medical student education and research projects.

In Malaysia, Section 2(1) of the Human Tissues Act 1974 focuses on cadaver donors and requires any person willing to become an organ donor to specifically make known his wishes either in writing or if the request is made orally, in the presence of two or more witnesses present during his illness. The donor must also specify his body or any specified part of his body, which is to be used after his death and must decide whether it should be used for therapeutic purposes, medical education or research. The Act further states that the person lawfully in possession of the body, may after death, authorize removal of the specified body parts according to the request made, after ensuring that the deceased had not expressed any retractions soon after the request was made.

Subsequently, Section 2(2) of the Human Tissues Act 1974 provides that, this person may permit the donation to take place, after making reasonable enquiries and

believes that the deceased and the surviving spouse or next of kin had not objected. However, the 'person lawfully in possession of the body' is nowhere specifically interpreted in the Act as to who does this person actually refer to. Previously, under Section 7 of the Anatomy Act 1832 in the UK, authority goes to the next of kin or the executors of the deceased to claim the body; if there is none, the hospital authority would be lawfully in possession of it.

Challenges in Promoting Human Body Donation:

There is a continual need to ensure that people are willing to step forward, to donate their bodies. Therefore, adequate supply of these dead bodies must be maintained, to avoid difficulties in accessing bodily material that could jeopardize the progress of any research conducted. According to the Royal College of Surgeons, shortage of bodies donated to medical science is threatening the teaching of anatomy, where in the UK alone, at least 1,000 bodies are needed each year for future doctors and surgeons to learn on the structure and composition of a real human body [6]. Therefore, individuals must be encouraged to donate their bodies and bodily material through advertising campaigns done, while ensuring that elements of trust, consent and confidentiality are strictly adhered to, besides offering financial incentives in the form of providing for the whole cost of funeral of that donor [1].

Adequacy of consent by the donor is another issue that definitely needs to be addressed well. It must be ensured that any decisions about the deceased donation must be made on the known wishes of the donor during his lifetime. Normally, these donation are made due to the spirit of altruism, as a means to avoid funeral ceremonies, to avoid waste of the bodies and in some rare cases, to evade the expense of a funeral [7]. Duty of care and respect of his confidentiality must also be preserved under a good and responsible governance system. The concept of trust must really be uphold, to ensure that none of the donated bodies or bodily parts are misused and traded illegally in black markets.

Interestingly, a study conducted in Turkey, on the attitude of anatomists towards the idea of donating their own body discovered that the majority of the anatomist respondents were themselves not in favour of body donation. This was particularly caused by the feeling of unwillingness to be dissected by their own fellow colleagues, family rejection, psychological reasons, anxiety of disrespectful behaviour to cadavers and

lastly, religious belief [19]. This shows that serious campaigns must be done, to convince the public, especially these anatomists first, so that they can further promote the public to follow their footsteps.

This is not surprising as in a study conducted upon South Asians in the UK regarding their attitude towards body donation, a huge majority of the respondents totally rejected the notion either by claiming they were unsure of it or clearly unwilling to become one [8]. Thus the public understands and trust towards this type of donation is crucial to be increased, to ensure that more are willing to register as potential body donors and supply is sufficient.

The Islamic Perspective on Human Body Donation:

Religious and cultural values of every population have a significant impact on health, education and social policies [9]. Therefore, the impact of religious belief is powerful enough to influence the attitude and response of the public at large towards motivating people to accept and consent to organ donation activities [10]. Religious belief can pattern their followers' perceptions and have always been a top priority consideration in accepting any forms of new technologies introduced. Muslims are sensitive to issues touching on their religion, especially when it involves decisions related to matters related to their everyday lives. There is always a feeling of responsibility to protect and guard their religion and to be within the confines set by Islam. Generally, in organ donation matters, though it is not mentioned directly in the Quran and Sunnah, Muslim jurists have reached a consensus and have decided on its permissibility. As Islam is not only a religion, but also a complete code of life which aims to fulfil the interest of the people, it aims to secure them the necessities of life and to provide an easier and more comfortable life [10, 11].

In anticipating the issue whether donation of human bodies should also be made permissible for Muslims, a few matters must be considered first. To say that it should be made permissible, we could rely on the fact that Islam does promote the preservation of life in all situations. Conversely, the saving of one life is regarded as the saving of all humanity. This is based on the following Quranic verse:

"...whoever kills a human being for other than killing or corruption in the earth, it shall be as if he had killed all mankind and whoever saves the life of one, it shall be as if he had saved the life of mankind" [12]

This verse clearly signifies how human life is valuable and must be protected and preserved. The maintenance of human life is one of the ultimate goals of Islamic legislation, thus all possible means should be used to treat and save human life, as long as it remains within the realms of Syariah. Thus, to apply this verse to our issue, it is also clear that all research conducted upon the donated human body is also aimed to produce new findings and technologies that will later improve our knowledge for the maintenance of human lives as well. These new findings will help treat new diseases and ensure the continuity and perseverance of human lives.

Additionally, although human beings do not own their bodies, as they actually belong to Allah, comparing it with organ donation, as long as it is done with the intention of saving lives and curing serious diseases, therefore it should be permitted [13]. Saving the life of a living person is more important than the sacredness of the deceased person because the end justifies the means [10].

Nevertheless, some may also argue that this might violate the cadaver, as the body will then be subjected to snips and cuts, dissections and experiments, which will cause pain to the deceased body. However, if the argument that one is permitted to commit a lesser evil in order to combat a greater evil is used, it could be proved that, the general gain obtained shall outweigh the negative aspect of this action. Therefore, permitting human bodies to be donated for research should be weighed as a lesser evil than giving up and just leaving all the humans to die, due to inability to carry out researches to discover its cure and further prevent outbreaks of new mutating diseases.

It is undeniable that Islam forbids any act of aggression against the human life as well as the body after death, but perhaps reliance on the doctrine of *Maslahah Mursalah*, which makes the public interest and benefit outweigh the negative aspects of it could be applicable. This means that, while the deceased body needs to be respected, the life of a living human is considered to be more valuable and should be given priority to be saved, when the two are in conflict. It is indeed equally important to honour the sacredness of the body and it is an important interest that must be respected; however, maintaining the health of the members of the nation as much as possible and protecting them from suffering and death is even more essential. As Allah says:

“He had explained to you in detail what is forbidden to you, except under compulsion or necessity” [14]

Islam emphasizes that it is crucial and significant to save and maintain human life. That is why in certain situations of *“dharurah”* (necessity), an exception can be made to allow and make permissible things that are forbidden in normal circumstances. Muslims are allowed to do what is forbidden if they are exposed to danger and imminent death [10].

Another argument that can be considered is Islam does enjoin its believers to seek redress. In a renowned saying, the Prophet Muhammad is reported to have said,

“There is a cure for every illness, though we may not know it yet” [15]

In another Sunnah, the Prophet also said,

“O servants of Allah! Seek remedies! He who causes ailments also brought cures and redemption. There is a cure for every illness” [16]

Seeking treatment is specifically urged by Islam for hereditary as well as acquired diseases and ailments. This in no way, conflicts with the Islamic teachings of perseverance and acceptance of God’s will as Islam enjoins its people to protect the security, health and safety of Muslims and considers lawful every effort to treat and cure diseases [11]. Surely, only by having research done, particularly on human bodies, we should be able to obtain maximum benefit to help restore the health of patients in need and the society at large. Moreover, it could also be argued that human bodies donated for research could be classified as a charitable contribution which is highly recommended in Islam. As it may be seen as *“Sadaqat ul Jariyya”*, it can enhance the spirit of helping each other on the basis of brotherhood.

Nevertheless donation of human bodies for research should also be seen from the other side of the coin. The human body is indeed the sole property of Allah. Since we do not own our body, therefore, we cannot decide to give away parts or our whole body to another person. No man or authority has the right to decide the fate or end of a human’s life. The human body is sacred and regarded as an *amanah* (divine trusteeship) given

by Allah for us to guard and upon death, the body needs to be buried according to the principles of Islam [17]. The holy Quran states;

“Make not your hands contribute to your own destruction” [18]. This can be extended to forbidding any act of aggression to the body, even after death, which is considered not permissible. The Prophet Muhammad also said,

“Breaking the bones of the dead person is similar in sinfulness and aggression to breaking it while the person is alive.”[19]. This Sunnah stresses the importance of body wholeness at death [20] and is against any form of bodily aggression which could lead to mutilation of the body [17]. Moreover, by permitting the deceased body to be used for research purposes, this will definitely delay the process of burying it and violate the integrity of the deceased body [21].

Islamic Rulings on Body Donation in Selected Islamic Countries: There is no *fatwa* specifically on donation of human cadaver bodies for research purposes as yet in most of the Islamic countries. Nevertheless in Malaysia, the 25th *Muzakarah* of the National Fatwa Committee in 1989, had decided that post mortem procedure is permissible if it is considered as a necessity, particularly in identifying the cause of death in criminal cases. Later, in the 61st *Muzakarah* in 2004, the same committee decided that though the general rule does not permit operating on cadavers, unless in *dharurah* situations and if there is an urgent need to make research on diseases, identifying the cause of death and education especially in medicine, then only it is considered as permissible.

It is recommended that, should a specific *fatwa* be made on this matter, it must lay down details on which type of cadavers that would be permitted to be used. Perhaps, if there is a choice between a Muslim body and a non-Muslim one, the latter should be given priority. We should also list guidelines on how to handle the particular body as well. Whenever possible, the *aurah* and dignity of the deceased body must be protected. Handling it should also be done with care and caution. Issues on embalment of the body must be made known to the donor. Additionally, a specific contractual time limit to which the body intends to be used must also be specified, for example in three years' time and afterwards, the body must be buried accordingly. Most important of

all, expressed consent must be obtained from the deceased party during his life time, consenting it to be used for research. In the UK, witnesses are required to be present during this process of obtaining consent.

Though human bodies seem needful for research, now we have the technology of virtual autopsies being introduced. This procedure allows a body to be scanned thoroughly, with 3D images being produced, in less than 30 minutes. The virtual autopsy can provide almost 80% accurate data which involves the whole body including cutting through ligaments, tendons and tissues, without even a slightest scratch inflicted upon the dead body.

The National Fatwa Committee in its 73rd *Muzakarah* sitting convened in 2006 had ruled that virtual autopsy should be given priority to the traditional post mortem procedures. Giving a thought on this, one cannot stop from wondering perhaps this remarkable development in technology will affect our existing rulings. For example, as the virtual autopsy is capable of producing 80% accuracy of data, feasibly this could negate the argument of acting in *dharurah* or necessity upon dead bodies. Are we still able to argue and justify that our act of purposely inflicting injury and cuts to the dead body, though for the purpose of research still amounts to a necessity when there is already a reliable alternative method available? Therefore, Islamic scholars in particular need to draw a line as to distinct between what is still considered as *dharurah* and what is not.

This development will also draw an impact upon original rulings that prohibit any particular act and are initially *haram* but is later considered permissible due to elements of *dharurah* found in existence. For example, anatomization of the human body is generally forbidden, regardless of whether it is the body of a Muslim or a non-Muslim. However, if there is a considerable advantage in dissecting the corpse, then that is greater than the sanctity of the corpse itself. But if the dissection is necessary, it should be done preferably to the corpse of a non-Muslim and if there is any other way that could be used to get the required knowledge, then it becomes unlawful to make an autopsy on the dead body. The Supreme Council of Eminent scholars in Saudi Arabia and the committee of Fatwa Al-Azhar on 29th February 1971 also concur with this view [22]. In al-Ifta', The Permanent Committee for Legal Rulings (Fataawa) in Saudi Arabia concluded that dissection on dead bodies to discover whether there is any criminal act causing the death or to see if there is any contagious

disease and to then conclude how to stop its spread is sanctioned. Any act of dissection for educational and training purposes is considered acceptable [23].

CONCLUSION

Effort to invite more people in registering as body donors must continue though vast emergence in high technology is starting to replace certain manual procedures previously done upon the human body. Thus, there is a need to weigh whether it is still relevant to carry out researches on humans, especially on Muslim bodies. If at all this is still deemed necessary, a comprehensive guideline must be developed to ensure maximum use of these donated bodies can be carried out, while still remaining within the realms of Shariah and human codes and ethics. Full respect to a human body either while one is still alive or already dead must be guaranteed and ensured, until we no longer need to depend on them for the development of our medicine and medicinal procedures.

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