Review Article

Organ Transplantation: Legal, Ethical and Islamic Perspective in Nigeria

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Abstract

Organ transplantation dates back to the ancient times and since then it has become one of the important developments in modern medicine; saving the lives, as well as improving the quality of life of many patients. As the demand for organ transplantation far exceeds the organ availability, the transplant program is often saddled with complex legal and ethical issues. This review article highlights the legal and ethical issues that might arise regarding organ transplantation and appraises the existing legal frame work governing organ transplantation in Nigeria. Information on legal, cultural, religious and medical ethical issues regarding organ transplantation in Nigeria was obtained by searching the PubMed and Google Scholar, conference proceedings, seminar paper presentations, law library and other related publications were collated and analyzed. In decision making for organ transplantation, the bioethical principles like autonomy, beneficence and justice must be employed. It was believed by Catholic theologians that to mutilate one living person to benefit another violates the principle of Totality. Among Muslim scholars and researchers, there are those who throw legal support as to its permissibility while the other group sees it as illegal. Organ/tissues transplantation is considered a medical intervention that touches on the fundamental rights of the donor or the recipient. Where there is an unlawful infringement of the right of such persons in any way may be regarded as against Section 34 of the 1999 Nigerian Constitution dealing with right to dignity of the human person. Worldwide, the researchers and government bodies have agreed on informed consent for organ/tissue donation and for recipient should be obtained without coercion before embarking on such medical treatment Worldwide organ transplantation has become the best medical treatment for patients with end stage organ failure. However, there is no law/legislation backing organ/tissues transplantation in Nigeria. The government should take measures to combat transplantation tourism and the problem of national and international trafficking in human tissues and organs, ethics commission and National Transplant registry should be established in order to monitor and regulate the programme in the country.

Keywords: Ethical, Islamic perspective, legal, Nigeria, organ transplantation

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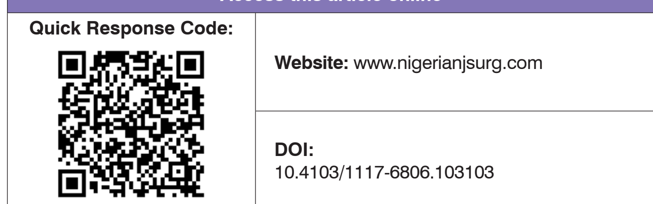

Introduction

Generally organ transplantation has become a formidable respite for patients with end stage organ failure. Kidney transplantation currently is the best treatment for a patient with end stage renal disease (ESRD). Patients with ESRD estimated to be more than 2 million worldwide. Treatment for ESRD patients in Nigeria is largely hemodialysis[1] but recently transplant programme has become popular, as a result, it increased the awareness of the benefits of the procedure. For the successful kidney transplant recipient, the cost effective advantage of the transplant procedure over maintenance dialysis is obvious considering that the cost of hemodialysis for one year in Nigeria ranges between US$ 10,000 and US$ 20,000 whereas the cost of kidney transplantation is US$ 20,000 to US$ 30,000. [2] Besides, a successful transplantation affords the kidney failure patient a better quality of life than a maintenance dialysis does.

Using the kidney allograft recipient as a surrogate for the other organ recipients it is obvious that many people can benefit greatly in terms of length and quality of life from organ and tissue transplants. Whereas, the matter of inadequacy of suitable organs for a teeming population of potential recipients is a worldwide problem, the case in Nigeria is further aggravated by the absence of an enabling legislation for cadaveric donation leaving the live organ donor as the only source of allograft. A proposal that has been put forward to ease the pressure of organ demand, involves sourcing donors from genetically modified animal organs are saddled with a number of legal, ethical and religious concerns.

No religion forbids the practice of organ transplantation as a form of treatment; however certain groups within the major religions of the world discourage cadaveric organ procurement.[3–5] Certain Native American tribes, Roma Gypsies, Confucians, Shintoists and some orthodox Jewish rabbis discourage cadaveric donation while some South Asian Muslim scholars would rather advocate for the use of xenografts rather than allografts.[6]

General Historical Background

Over centuries ago many successive generation had attempted tissue or organ transplantation and various fantastic descriptions of such transplantation were recorded.[7] In the 300 BC the Christian Arabs saints, Cosmas and Damian were said to have successfully transplanted the leg of a deceased person several days earlier to replace a disease leg of another person.[1] In the early 1900s clinical organ transplantation was made more feasible to the surgeons after the development of safer and more effective immunosuppressive agents and Carrel description of a more reliable technique for vascular anastomoses. In 1962, Roy Calne developed Azathioprine and in 1978 he introduced cyclosporine immunosuppressant in to clinical practice. In 1966, anti - lymphocyte globulin was used by Tom Starzl and colleagues, and in 1981 Ben Cosimi and colleagues reported the first use of a therapeutic monoclonal antibody (OKT3) in transplantation. Organ transplantation has become a rapidly expanding and important surgical specialty in the last 4 decades. It is a specialty that requires the close cooperation of several disciplines - Surgeons, anesthetists, immunologists and physicians. Transplantation of solid organs has become the treatment of choice for end stage renal, hepatic, cardiac and pulmonary disease.[8]

Organ Transplantation

Organ is a fully differentiated structural and functional unit in a human being or animal that is specialized for some particular function. Transplantation is an act of transferring an organ, tissue or cells from one person (donor) to another (recipient). Organ transplantation is broadly classified based on the similarity between the site of transplantation and also between the donor and the recipient:[9] *Autotransplants* involve the transfer of tissue or organs from one part of an individual to another part of the same individual. *Allotransplants* involve transfer from one individual to a different individual of the same species - the most common scenario for most solid organ transplants performed today. *Xenotransplants* involve transfer across species barriers. Currently, xenotransplants are largely relegated to the laboratory, given the complex, potent immunologic barriers to success. In allotransplant, both the donor and the recipient are subjected to screening to establish compatibility between them. This is done based on three categories. In order of importance they are; ABO blood group antigens, human leucocyte antigens (HLA) (MHC) and minor histocompatibility antigens (mHC). It is vitally important for all types of organ allografts to ensure that the recipient is ABO blood group compatible with the donor. There is no need to take account of Rhesus antigens compatibility in organ transplantation. Allograft rejection in blood group compatible graft is directed predominantly against a group of highly polymorphic cell - surface molecules called HLA. HLA play a great role in the immune recognition process. It is rare for two unrelated individuals to have a completely identical set of HLA molecules. Most of the organs used for transplantation are obtained from brainstem - dead, heart - beating cadaveric donors. [7,8] Multiple organs are procured. The general suitability of the potential organ donor must be carefully assessed. Particular care must be taken to assess the donor from the point of view of transmissible infectious agents and malignancy. Organs are retrieved while the heart continues to beat and the donor receives ventilatory and other support.

The number of organs required to satisfy the needs of transplantation far exceeds the number of cadaveric organs available. Consequently, there has been a progressive relaxation in the organ - specific selection criteria.[7,8] Therefore, the chronological age of the donor becomes less important than the physiological function of the organs under consideration for transplantation. There is also increased trend towards increased living - donor transplantation.

From Deceased Donor

Most transplanted organs are taken from 'brain - dead' individuals. Brain death occurs when severe brain injury causes irreversible loss of the capacity for consciousness combined with the irreversible loss of the capacity for breathing.

In most countries, it is accepted that the condition of brain death equates in Medical, Legal and Religious terms with death of the patient. The patient must have suffered major brain damage of known aetiology, be deeply unconscious and require artificial ventilation. Particular care must be taken to ensure that muscle relaxants and drugs with known CNS depressant effects are not contributing to the clinical picture. Hypothermia, profound hypotension and metabolic or hormonal conditions that may contribute to CNS depression and confound the diagnosis of brain death must also be excluded. Clinical testing for brainstem death includes absence of cranial reflexes, motor response and spontaneous respiration.

Management of the donor is aimed at preserving the functional integrity of the organs to be procured.[8] Careful monitoring and management of fluid balance is essential. Inotropic support is given and there may be a role of tri-iodothyronine and argipressin. Retrieval of organs after cardiac arrest can be usable provided rapid organ perfusion with cold preservation solution can be done immediately. Retrieval of multiple organs from a cadaveric donor requires cooperation between the thoracic and abdominal surgical teams. A midline abdominal incision and median sternotomy is used to obtain access. After dissection of the organs to be retrieved, they are perfused *in situ*. This produces rapid cooling of the organs,

reduces their metabolic activity and preserves their viability. After removal, the organs may undergo a further flush with chilled preservation solution and then placed in two plastic bags and stored at 0-4°C. Samples of donor spleen and mesenteric lymph nodes are obtained for determination of tissue type and are used in the cross-match test. Various organ preservation solutions are available for flushing organs before simple cold storage. These solutions contain impermeants to limit cell swelling, buffers to counter acidosis and electrolytes. E.g. University of Wisconsin (UW) Solution, Euro-Collins Solution. The length of time for which an organ can be stored before transplantation varies with the type of organ.

From Living Persons

The use of living donors has become unique and important in the field of transplantation today.[7] Living transplantation is unique in the sense that surgeons operate on a healthy individual who has no medical disorders. Most living - donor renal transplants are between genetically related individuals. Living - donor transplantation between genetically unrelated individual give better results than well - matched cadaveric allografts. In all cases of living - organ donation, it essential to ensure that the prospective donor is fully informed and is free from coercion to donate and has no risk to the donor.

Renal organ recipient

Careful patient selection is important. Transplant surgeon and nephrologist should formally assess all patients.

The nature of the primary renal disease does not generally affect the decision to proceed to transplantation. There is no absolute upper age limit to renal transplantation. Careful assessment of comorbid disease that might affect successful outcome after transplantation is essential.

Liver transplantation

Careful patient selection, improved immunosuppression and chemoprophylaxis, better organ preservation, refinements in surgical techniques and advances in perioperative care, liver transplantation is now a routine procedure. Operation: Ultra - major procedure because the diseased liver may be quite difficult to remove and there are a number of vascular anastomoses to be made during which venous return to the heart must be maintained by bypass.

Pancreas transplantation

Restores the normal control of glucose metabolism and obviates the need for insulin therapy in diabetic patients. Thus, reduces the risk of secondary complication from diabetes mellitus. Careful patient selection is essential to avoid excessive mortality and morbidity. It is usually reserved for patients with Type 1 diabetes who are relatively young(less than 50 years). Operation: The whole pancreas and duodenum or a segment of the pancreas is transplanted. The pancreas graft is placed intra - peritoneally in the pelvis usually on the right. The graft vessels are anastomosed to the recipient iliac vessels. The graft duodenum is anastomosed either to the urinary bladder or to the small intestine to deal with the exocrine secretions.

Small intestine transplantation

Presents particular difficulties because, the graft contains a large volume of lymphoid tissue, MHC class 11 antigens are constitutively expressed by the bowel epithelium and also the graft is colonized with micro - organism. Operation: Proximal anastomosis of the graft is to the recipient's jejunum and the new gut is brought out distally as an end ileostomy.

Heart transplantation

It is considered as an effective treatment for selected patients with end-stage cardiac failure. Suitable candidates are those New York Heart Association (NYHA) Class 1(symptoms on mild exertion) or Class1 V (unable to perform any physical activity without discomfort, which may occur at rest).[1] It is limited to patient under the age of 65 years without irreversible damage to other organ systems.

The pre-operative assessment is rigorous and pre-operative measurement of pulmonary vascular resistance is necessary. Operation: Median sternotomy is performed. The patient is given systemic heparin and is placed on cardiopulmonary bypass and cooled to 26°C. The recipient heart is excised at the mid-atrial level after cross-clamping the aorta. The donor heart left atrium is opened by making incisions in the posterior wall between the orifices of the pulmonary veins to create an atrial cuff. The left and then right atrial anastomoses are performed and the aortic and pulmonary anastomoses completed. Total orthotopic cardiac transplantation is an alternative but rarely done.

Organ transplantation in children requires highly specialized personnel especially the anesthetist who would be able to manage the hemodynamic challenges associated with clamping of greater vessels which is worst in smaller child. Transplant procedures in older children with weight more than 20 kg are the same as in the adult.[8]

General Bioethical and Legal Principles

In decision making for organ transplantation, the bioethical principles like autonomy, beneficence and justice must be employed.[10] It means that the well-being of each individual must be the primary goal of healthcare policies and interventions, hence, the risk-benefit ratio must be assessed and the fairness, equality of human beings and integrity of the donor and recipient also be respected. Therefore, there is a need for informed consent without coercion, expressed on the basis of precise and understandable information.[11] The explanatory report of council of Europe at Convention on Human Rights and Biomedicine on transplantation of organs and tissues of human origin, stresses the importance

of adequately defining allocation criteria, and acknowledging that organs and tissues shall have to be allocated following medical criteria. The uniform determination act, which has been adopted in most states of United State of America, provides that an individual is dead if there is irreversible cessation of circulatory and respiratory function, or if there is irreversible cessation of all brain functions of the entire brain stem [Uniform Definition of Death Act$1, 12 U.L.A. 386(1980)].[12] However, this form of donor transplantation is affected by religious beliefs, cultural traditions, social norms and ethical beliefs. In Islam majority of scholars have decreed that deceased organ donation is permitted.

Organ transplant between living persons has been controversial because of the basic "do no harm" principle in medicine.[13] It was believed by Catholic theologians that to mutilate one living person to benefit another violates the principle of Totality. However, Gerald Kelly and other ethicists made a closer study when such transplants began in the early 1950's. They argued that such donations are done for the purpose of helping others could be justified by the principle of Fraternal Love or Charity provided that there was only limited complication to the donor. Such living donation can be distinguished between parts of the body such as the regenerating part like blood and bone marrow and those parts that do not regenerate such as, the paired like kidneys, corneas and lungs, and unpaired like the heart.[14] Procurement of organs or tissues from human fetuses or Anencephalic infants raised a lot of ethical and legal questions. When the fetus has died or will die as a result of procured abortion will also raise an issue whether it is justifiable to carry out the abortion. Is it ethical to transplant brain or other tissues from human fetuses to benefit others like those suffering from Parkinson's disease? Anencephalic infants are born with major portion of their brain is absent and usually survive only from few days to few weeks. According to the criteria of death they are also living beings, hence, to increase the chance of procuring viable organs from them, some would like to redefine death in terms of partial brain death so that they could be included as dead or for them to be exempted from the total brain death criteria, or to consider them non persons. Some argue that partial brain death criteria are not acceptable in light of our present knowledge and it could endanger other classes of human beings. Studies have showed that most donors feel happy for having donated an organ and assess their donation to be a high point of their lives. With regard to the recipient of organ or tissue transplantation, an adequate informed consent regarding the expected benefits, risks, burdens and costs of the transplant and after care and other possible alternatives should be made available to the potential recipient.[14] If the recipient is a legally incompetent person but can understand the reason for the transplant and is capable of taking a decision, should be informed in an appropriate way otherwise a Guardian has to stand on their behalf for taking such decision. However, courts sometimes over ride the decision of natural guardians including parents when this is judged clearly against the best interest of incompetent persons. Recipient should avoid any unethical cooperation in any abuses in procuring the organ or tissues immorally or illegally.

The demand for organ or tissue transplantation far exceed the supply, hence there is significant practical and ethical question as how best these organ can be embossed with efficiency and fairness.[14] A widely used and approved criterion of selection is to give priority to those who have great need and who are expected to benefit greatly.[13] Medical criteria such as blood and tissue typing and absence of other life-threatening diseases are used to select those who would greatly benefit. Other factors used include potential recipient's will to live, motivation and ability to follow post-operative directions e.g., taking immunosuppressant, his or her family support or social worth e.g., lawyer or doctor over unemployed, or mother with children over single person. Social worth is too difficult and subjective to apply efficiently and reasonably.

As a result of shortages of organ/tissues for transplant purposes, researchers have embarked on animal to human transplant. The use of some animal parts such as insulin extracted from animal pancreases, catgut as absorbable sutures are already accepted as medical treatments but using organs such as baboon's heart and pig liver for transplant raised considerable controversy. Research has been going to find ways of accommodating animal organs in to human beings who are greatly in need of them.

Artificial substitutes for tissues and organs have also been developed by the researchers such as artificial limbs and joints. Implantable artificial hearts are still experimental. In order to procure organs/tissues from all brain dead patients the United State of America under federal law mandated all hospitals wishing to retain eligibility for Medicare and Medicaid reimbursement must adopt written procedures to 'assure that families of potential organ donors are made aware of the option of organ or tissue donation and their option to decline.[12] Unfortunately, this has not been successful when the families are approached. Therefore, an alternative approach was developed whereby the consent of the donation by the deceased donor is presumed unless there is written objection advance by the deceased donor or by the family. Under mandated choice system the individual is asked to declare his approval for or against deceased donor donation at a point where he renews his driving license or other central registries. In order to meet up with the demand, some favor allowing human organ/tissues to be bought and sold to increase the supply and respect people's freedom but others argued against that.[13] Concerning this issue paying for an organ can constitute unjust moral pressure on the donor and if become widespread altruism donation may become difficult. Human organ trafficking can lead to the organ going to the highest bidder. Hence, the organ would be allocated in terms of ability to pay rather than medical need to determine the distribution of the organs.

Because of the controversy and ethical problems surrounding the buying and selling of human parts, World Health Organization made a resolution in 1989, which was supported by more than 151 members to take appropriate action against purchase and sale of human organs for transplantation.[15]

Organ Transplantation in Arab and Islamic Countries

In the year 2003, Syria began to address the issue of cadaveric donation of organs by enacting the Law number 30, which clearly for the first time recognized the concept of brain death. That law enabled transplant unit to begin the use of cadaveric organs with the aim of reducing the dependency on live related and live organ unrelated donors.[16] Prior to the enactment of Law number 30, the top Islamic authorities in 2001 had accented to the call for use of cadaveric donors on the proviso that consent had been obtained from relatives of the potential dead donor.

Saudi Arabia, which is the cradle of Islam has set a good example for other Arab and Islamic countries in the area cadaveric organ donation. The Saudi Centre for Organ Transplantation; the agency which is tasked with organ procurement has made a success of its mandate.[17] The need for an unambiguous legislation on organ transplantation is highlighted by the persistence of dearth of cadaveric donation necessitating the commercial procurement of organs from India and China among Malaysian citizens. The inadequacies in the Malaysian Tissues Act of 1974 have been blamed for the poor development of cadaveric organ donation.[18] Clarity or the lack of it in the definitions of what constitutes a "tissue or an organ" and "the person lawfully in possession of the body" can either make or mar organ procurement legislation has been the Malaysian experience.[3]

Historical Background of Organ Transplantation in Nigeria

The concept of organ transplantation was first conceived in Nigeria in 1980 but due to gradual deterioration in the public health care system, the concept did not actualize until in 2000 when first renal transplant was done.[2] Since then other centers begun to emerge in the country. In Nigeria, though no documented study was done, but it was estimated that end stage renal disease to be about 200-300 per million populations. ESRD patients in Nigeria have been managed largely on hemodialysis, which has not been good quality of life to the patient and more so, very few patients who would afford to be on regular prescribed hemodialysis because of the high cost of hemodialysis which is much higher than that of kidney transplant, which is only $ 20000.00 to $ 30000.00. The transplantation program for other solid organs is yet to take off on a sustainable basis in Nigeria.

In 2008, there were four centers and more than 100 patients had successful renal transplant to date. Recently, University of Maiduguri Teaching Hospital in collaboration with other sister centers in the country for the first time successfully transplanted a kidney. Various collaborations with international transplant centers, especially in renal transplantation were made to train and improve the skills of the indigenous transplant team for sustainability of organ transplantation in Nigeria.

Legal and Ethical Perspective in Nigeria

Organ/tissues transplantation is considered as a medical intervention that touches on the fundamental rights of the donor or the recipient. Where there is an unlawful infringement of the right of such persons in any way may be regarded as against section 34 of the 1999 Nigerian Constitution dealing with right to dignity of the human person.[19] Worldwide, the researchers and government bodies have agreed on informed consent for organ/tissues donation and for recipient should obtained without coercion before embarking on such medical treatment. A legally and ethically valid informed-consent process should consist of a balanced discussion of the available options and counseling to help patients or their families reach the choice that is best for them.

The nature, purpose and the risk of organ donation or receiving an organ must be explained to the subject by the surgeon and who must carry it out in a licensed hospital.[19] However, due to the fact that medicine is not an exact science, the results of the operation may not to some extend be predictable.

The Nigerian laws also respect the use of organs after death for transplantation provided that the death was established by two or more physicians who are not concerned or immediately concerned with the organ transplantation. The physicians establishing death must state in a dated and signed report the method used to establish death. A person has a legal right to object organ donation before his death and the decision may not be overridden by the relatives. Where a person has not attained the age of eighteen years, may not have legal capacity to give valid consent with respect to organs donation after death. It is advisable to inform close relatives of the intention to remove the organs of the deceased. It should also pertinent to point out that organ or tissues may also be removed from the deceased for clinical research or experiment. It should also be noted even in experimental cases, every medical experiment is a therapy or a potential therapy.[19]

Islamic Perspectives on Organ Transplant

Organ transplant is one of those current medical issues that are new to the Muslim life. Muslim scholars and researchers strived to conduct researches on the issue in order to arrive at a legal position in the light of Shari'ah; either at the individual or at the institutional levels. This was done through the applications of sound Islamic objectives that guarantee and maintain the interest of the individual, as well as the community. Due to the fact, that organ transplant is subjected to *ijtihad* (exertion of mental energy in the search for legal opinion), we find no clear-cut text to fall back onto. This made it an issue of difference in opinion among Muslim scholars and researchers, who, in turn, were divided into two groups of opinions: those who throw legal support as to its permissibility while the other group sees it as illegal.

The first opinion: Legality

Proponents of this school of thought see the legality of transplanting the organ of a person to another. This is according to the decision made by all of the following: Islamic Fiqh Academy, which is a branch of the Muslim League Organization in its third session in 1405 AH, Islamic Fiqh Academy, which is a branch of the Organization of Islamic Conference (OIC) in its fourth session in 1408 AH and Committee of Grand Ulama of the Kingdom of Saudi Arabia. The Fatwa Committees in each of: The Hashimite Kingdom of Jordan, Arab Republic of Egypt, The Republic of Algeria, and the General Fatwa Committee of Kuwait. It was also sanctioned by the International Islamic Conference held in Malaysia in 1969 CE. [20]

Many modern researchers in Islamic Jurisprudence have also upheld this legality.

The proponents of organ transplant based their argument on many religious justifications and juristic evidences among others:

Verses that permit one to eat carcasses when in need; verses such as the saying of Allah (SWT)

(He hath only forbidden you dead meat, and blood, and the flesh of swine, and that on which any other name hath been invoked besides that of Allah. But if one is forced by necessity, without willful disobedience, nor transgressing due limits,- then is he guiltless. for Allah is Oft-forgiving Most Merciful).[21] And many other verses.[22] These verses which allowed for a Muslim to consume carcass when in need agreed on the exception of "when in need" from the general prohibition in it. So a sick person who is in need of a transfer of any organ of his body will be like the person in need because his life is under the threat of death just as is the case in kidney failure.[23]

1. Verses that indicate the purpose of God as making things easier for human beings not the opposite. Such verses as: (Allah intends for ease, and He does not want to make things difficult for you).[24] And many similar verses. In legalizing transplant there is the seeking of ease for human beings, pity for the sick and sharing of pain. All these are in accordance with the purpose of the Shari'ah.[22]
2. That organ transplant is a type of cure for an ailment which the Shari'ah encouraged. It has saved the lives of many. But for those who say the use of human organ in cure is prohibited in Shari'a, kidney transplant will be permissible under the law of necessity. It is known that seeking cure in a prohibited thing is allowed in cases of utmost need.[20]
3. The fact that human nature are regulated by the Sharia hence whenever welfare (of a man) is obtained, it is legal and permissible in Islamic law. It is held that the Islamic law is established particularly for welfare of humanity. It is on this note comes the belief that any action, which brings about human welfare is permissible in Sharia.[25]
4. Other arguments adduce for supporting organ transplant includes the general principle of Islamic law which implies: "the more harmful detriment is removable by the less harmful one", "when facing two evils, choose the less harmful one", "when comparing between two ill deeds, consider which is the greater in harm and do the other".[25]

The second opinion: Prohibition

Minority scholars and researchers who represent this school of thought are: Sheikh Muhammad Mutwalli al-Sha'arawi, Sheikh Hassan al-Saqqaf and Dr. Hassan Ali al-Shadhili. [21] They based the prohibition on a number of evidences from the Glorious Qur'an, Noble Hadith and Logical evidences, such as:

Where Allah reports the saying of Satan that

"I will mislead them, and I will create in them false desires; I will order them to slit the ears of cattle, and to deface the (fair) nature created by Allah").[26]

This verse proved that defacing the "fair nature" created by Allah is prohibited and kidney transplant is a form of this. It is therefore, not permissible.[22]

1. The saying of the Prophet (pbuh) on the authority of Buraidah b al-Hasib: "and do not maim".[27] This Hadith proved the prohibition of maiming the body and its relevance to a living body is as strong as it is in the dead. It does not specify the injunction to only making changes to the build of the human deliberately but it encompasses the cutting of any part of the human being. It, therefore, included the transplanting of the organ from a living being to another, therefore, is considered prohibited.[20]
2. That the organ which is planted is impure because it was removed from a living being. It is therefore not permissible for it to be used in medication because of its impurity.[20]

Having displayed the two schools of thought as regards the legality or otherwise of organ transplant and after a careful study of the evidences it appears that the position we will prefer to take is one that permits the transplant from a person to another living being, but subject to the following conditions:

1. The recipient should be in need of the transplant in such a way that it becomes the only possible medical means for treating the patient in need.
2. The removal of the kidney from the donor should not endanger his normal/usual life. However, when it is established that one of his two kidneys is not healthy then the healthy one should not be taken away from him. This is because the legal injunction in Shari'a states that a disease should not be cured through a means that will cause similar or more harm than the disease itself. Donating a kidney in such a case will be tantamount to throwing of oneself into danger and that is a forbidden act by Shari'ah.[20]
3. The donation must be out of the free-will of the donor without any form of duress after he is confirmed to be eligible to donate.
4. Principles of human dignity as provided by Islam must be

maintained during the period of the whole process.
5. The opinion of the doctor should tilt towards the belief that the process of removing and implanting will be successful.
6. It should be a donation and not a sale of the kidney because, in Islam, it is not permissible, under any condition, to sell any human organ.
7. The recipient must be a Muslim, in the case where the donor is Muslim.[20,28]

This preference is reached because of many reasons some of which are enumerated in the following:
1. The strength of the evidences of the first group who allow it, in contrast to the evidences advanced by the second group who prohibit it. This is because they are in conformity to the general principles of Shari'ah regarding the consideration of what is necessary and the removal of obstacles and making things easy for the people.
2. With the fulfillment of the stipulated conditions, the transplant will not negate human feelings and dignity in relation to the person from whom the organ is taken.
3. That the operation is undertaken by expert doctors and sophisticated gadgets which is more assuring in its safety and contains no risk.
4. As long as the conditionalities are met there will be no risk on the life of those involved.[20]

As regards Nigerian situation, though no legal opinion of scholars to the best of our knowledge was documented or published in any way, the position of Nigerians scholars would certainly not be different from the two given legal opinions, i.e. Legality or prohibition as were held by the various scholars and researchers in the contemporary Muslim world.

Challenges of organ transplantation in Nigeria

Worldwide, organ/tissues transplantation has been identified as the best option of treatment for patients with end stage organ failures. For example renal transplantation is the best option for patients with end stage renal disease because it gives better quality and quantity of life and less cost compared to hemodialysis. Organ/Tissues transplantation requires huge investment in terms of hospital setup and equipments, staff training and continuing financial support. The recipient organ transplant would require immunosuppressive treatment and control of post-transplant infections and malignancies which also require funds. There is need for government-community partnership fund and sustain such programme. In Nigeria, there are abundant willing living donors in an extended family setup without coercion. However, because of poor socio – economic statue of the populace, the rich may use the poor as their source of organ for their transplantation and the poor may not have access for such treatment. Recently, a doctor in a private clinic removed both kidneys of patient who came for a treatment typhoid fever.[29] Hence, organ trafficking and tourism may become a problem in Nigeria. Organ donation from a deceased has a lot of cultural and religious implication in Nigeria. Many families do not allow autopsy what more of organ removal of deceased beloved ones, moreover, due to under developed economy and lack of adequate intensive care and organ support facilities for deceased donor, deceased organ donation may not be feasible. The government should endeavor to include Organ transplantation funding in the National Health Insurance Scheme (NHIS) and enact a law/legislation on transplantation and endeavor to encourage research in the field of transplantation in conformity with Helsinki declaration of 19641.[19] The government should take measures to protect the poor and vulnerable groups from transplantation tourism and the sale of tissues and organs including attention to wider problem of international trafficking in human tissues and organs. The government should also setup ethics commission to ensure the ethics of cells, tissues and organ transplantation. National Transplant registry should be established in order to monitor and regulate the programme in the country.

Conclusion

Worldwide organ transplantation has become the best medical treatment for patients with end stage organ failure. A number of legal, ethical, social and religious perspectives concerning organ and tissue transplants worldwide and Nigeria in particular have been discussed, with abuses and controversies pointed out, we concluded that there is no law/legislation backing organ/tissues transplantation in Nigeria. The government should take measures to protect the poor and vulnerable groups from transplantation tourism and the sale of tissues and organs including attention to wider problem of international trafficking in human tissues and organs, ethics commission should be setup to ensure the ethics of cells, tissues and organ transplantation. National transplant registry should be established in order to monitor and regulate the program in the country.

References

1. Bakari AA, Nwankwo EA, Yahaya SJ, Mubi BM, Tahir BM. Initial five years of arterio-venous fistula creation for haemodialysis vascular access in Maiduguri, Nigeria. The Internet Journal of Cardiovascular Research 2007; Vol.4; No.2.
2. Shonibare A. The transplantation experience in the Sub – Saharan region SNH series. Conference paper presentation. Primier Conference Africane sur la Transplantation des Organs, Bamako meeting 2008.
3. Rady MY, Verheijde JL, Ali MS. Islam and end of life practices in organ donation for transplantation: New questions and serious socio – cultural consequences. HEC Forum 2009;21:175-205.
4. Nazni N, Zaherawati Z, Adnan A, Mahazril AY, Mohd ZH. Organ donation among Malaysian: The Malay dilemma towards social development. Asia Social Science. Published by Canadian Center of Science and Education. www.ccsenet,org/ass 2012;8; 10:1 – 15.
5. Robson NZ, Razack AH, Dublin N. Review paper: Organ transplants: Ethical, social and religious issues in a multi cultural society. Asia Pac J Public Health 2010;22:271-8.
6. Bruzzone P. Religious aspects of organ transplant. Transplant proc 2008;40:1064-7.

7. Bradly JA. Transplantation. Bailey and Love's Short practice of Surgery. Arnold Publishers, London. 24th ed. 2004. p. 183-206.
8. Kashi H. Organ transplantation. Clinical Surgery. Micheal M. Henry and Jeremy N. Thompson, editors. W.B. Saunders;an imprint of Harcourt Publishers Ltd, London. 1st ed. 2001. p. 193-204.
9. Sollinger HW, D'Alessandro AM, Deierhoi MH, Kalayoglu M, Kirk AD, Knechtle SJ, *et al*. Transplantation. Schwartz Principles of Surgery. 7th ed 1999.Publisher; McGraw – Hill companies and printed in USA. p. 361-439.
10. Petrini C. Preemptive Kidney transplantation: Ethical issues. Ann 1st Super Sanita 2009;45:173-7.
11. Truog RD. Consent for organ donation – Balancing conflicting ethical obligations. New Eng J of Med 2008;358;1209-11.
12. Shapiro SS. Ethical and legal issues surrounding Kidney transplantation. Hand book of Kidney Transplantation. Gabriel M. Danovitch, editor. 4th Ed. 2005. Publisher; Lippincott Williams and Wilkins, Philadelphia, PA19106 USA: p. 467-73.
13. Taher LS. Moral and ethical issues in liver and kidney transplantation. Saudi J Kidney Dis Transpl 2005;16:375-82.
14. Flaman P. Organ and tissue transplants: Some ethical issues. Canada: St. Joseph's college, University of Alberta, Edmonton; 1994. p. 1-18.
15. 8th planary meeting of the World Health Assembly. 22nd May, 2004, A57/VR/8.
16. Saeed B, Derani R, Hajibrahim M, Roumani J, Al-Shaer MB, Saeed R. Volume of organ failure in Syria and obstacles to initiate a national cadaver donation program. Iran J Kidney Dis 2008:2; 65-71.
17. Shaheen FA, Souqqiyyeh MZ, Atta MZ, al-Swaleim AR. The Saudi center for organ transplantation: An ideal model for Arabic countries to improve treatment for end stage organ failure. Transplant Proc 1996;28:247-9.
18. Kassim PN. Organ transplantation in Malaysia: A need for a comprehensive legal regime. Med Law 2005;24:173-89.
19. Ademola JY. Removal and transplantation of organs. Medical Law in Nigeria, Published by Demyaxs press Ltd, Ibadan, Nigeria 2002:54-7.
20. Al Natsha M. Al Mas'ail al Tibbiyya. London: Published by Majallat al Hikma; 2001. p. 93.
21. Holy Qur'an: Chapter 2: Verse 173.
22. Al Shinqity M. Ahkam al jirah al tibbiyya. Maktabat al Sahaba, Jedda 1994:100-373.
23. Holy Qur'an: Chapter 5: Verse 3 and Chapter 6: Verses 118 and 145.
24. Holy Qur'an: Chapter 2:Verse 185.
25. Sirajudeen AA. Organ transplant in Islamic perspectives. Germany: lamber academic publishing; 2011. p. 26.
26. Holy Qur'an: Chapter 3: Verse 119.
27. Sahih Al - Muslim, Hadith number 1713.
28. al Faky H. A. ahkam al adwiya Dar al Minhaj. Riyad: 2005. p. 413-5.
29. Ahmed Mohammed, Bauchi. How doctor removed patient's kidneys in Bauchi. Weekly Trust; Printed and published by Media Trust Nigeria Ltd, Abuja; August 11, 2012. p. 6.

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