

ORGAN TRANSPLANTATION AND LAW*By*

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I. Abstract :

This article throws a light on the law which governs the Organ Transplantation and also the illegal trade in human organ. It highlights that health has always been matter of universal concern not only in India but also throughout the world. The legal aspects of medical practice have always been constituted an important component of medical education. Hence the doctors are made well-acquainted with the legal and ethical basis in organ transplant. It has emphasized the need and importance of proper authorization of organ transplant. It discloses the Indian infamous kidney racket headed by Dr. *Amit Kumar*. Further it also describes the causes of poor transplant in Indian and few suggestions on how to overcome the problem and improve the rate of organ transplantation.

II. Introduction :

The transplantation of an organ from one body to another is known as the organ transplant. The person who gives the organ is called the donor while the one who receives is called the recipient. The organ transplant is done to replace the recipient's damaged organ with the working organ of the donor so that the recipient could function normally.

The organ transplantation is a boon to medical industry as it has helped in saving the lives of those who would have died otherwise.

There is a great need for human organs for transplantation. In fact, the need far exceeds the supply of transplantable organs. This disparity has led to the formulation of various legislation, attempting to regulate the scarce resources (transplantable human organs) and to help establish an equitable system to allocate the organs according to the priority where they can do the most good. This has led to many crimes to provide or illegal supply or trade of organs in the society.

Legally organ donation can take place from living, genetically – related individuals, from living, unrelated individuals in special circumstance where no unauthorized payment is made to the donor; or from cadavers.

III. History :

Descriptions of organ transplantation are available in ancient Indian and Chinese Medical Texts. The technical basis for modern organ transplantation was laid by the French Surgeon *Alexis Carrel* in a series of animal experiments conducted from 1902 onwards. The Human Kidney was first successfully transplanted in Boston in 1946. The transplantation of the liver followed in 1963 and that of the heart in 1967. Many other organs including the lung, pancreas and intestines are now transplanted successfully and such operations are reorganized as established therapy by the WHO.

The kidneys are paired organs. One kidney can thus, be removed for transplantation from a living person. Organs like the heart and liver can only be removed from dead individuals. Transplant in the western world were originally performed using organs from individuals in whom all bodily functions had come to a standstill, and often failed as such organs are viable for very short period after cessation of heart beat. In fact live donation of a single kidney was the first done in 1954, but live donation of parts of other organs is a relatively recent innovation in the 1990.

IV. The main sources of organs :

Transplantable organs can be obtained from two main sources. They are live donors and cadaveric donors. The live donors are the one who can donate their organs or part of organs during life and continue to live normally. Cadaveric donors are those immediately after their death the organs can be procured and donated to suitable donors so that the organs can function. Cadaveric donors are of two types, they are heart beating donors (HBD). In this category the patients are the victims of accidents where the patients are healthy otherwise before the accidents. Numbers in this category have changed over the last decade due to improvements in paramedical care, neuro-surgical practice and preventative medicine however due to population explosion, modernization and industrialization the number is in rise. Organs can also be retrieved from patients shortly after death and in subjects who die from certain critical illness in hospital settings. This forms a small subset of donors because of the concomitant illness they have prior to death. These patients are referred to as non-heart beating donors (NBHD).

V. World Health Organization has now approved organ transplantation as a well established therapy

In the past two decades, the concept of "brain death" (a state where the brain is irreversibly damaged but the heart is beating)

has been accepted in the Western World. Whilst the criterion of death of the entire brain is used in the USA, British Law only requires proof of death of the brainstem.

By 1990, 47 countries had accepted "brain death" as a legal concept¹ and 89 countries had enacted specific laws on organ transplantation². The medical criteria for determining "brain death" were first published by the Harvard Medical School in 1968³. In 1976, the Royal Colleges of the U.K. published a corn for the determination of "brain death"⁴. Britain passed the Human Organ Transplant Act in 1989 which forms the basis for the recently notified Act in India, prohibited commercial dealings in human organs, restricted transplants between living persons who were not genetically related and required certain information to be supplied by transplant surgeons to statutory bodies.

In a bid to understand various organ donation policies prevailing in other countries of the world a team of experts headed by R.K. Srivasatava the Director General of Health Services made a visit to all the major countries and noted that most of the countries have adopted the presumed consent method, where the person who is brain dead is considered to have agreed to donate the organs. In other cases, family of the donor holds the right to give the consent.

VI. Opting – in and opt – Out system :

Presently, three major legal frameworks govern the donation of organs worldwide.

1. Pande GK, Patnaik PK, Gupta S, Sabni P : Brain death and organ transplantation in India. National Medical Journal of India, New Delhi – 1990.
2. Vilardell F : Organ transplantation – Some ethical issues. Publication of the Council for International Organizations of Medical Sciences. Geneva 1987. Pages 95-109.
3. Report of the *Adhoc* Committee of Harvard Medical School to examine the definition of Brain Death. Definition of irreversible coma. JAMA 1968, 205:337.
4. Diagnosis of brain death. Statement issued by the Honorary Secretary of the Conference of the Medical Royal Colleges and their Faculties in the U.K. on 11 Oct. 1976. BMJ 1976; 2:1187-8.

The U.K., along with a number of European Countries *e.g.* Germany, Italy, Canada, Australia and New Zealand has opting-in system. This means that the person in lawful possession of the body may authorize the removal of organs and tissues. In practice, donation is usually requested from the next-of-kin of the deceased. Many other countries including *e.g.* Austria, Belgium, and Singapore have introduced opt-out or presumed consent system that assume individuals have granted permission for their organs to be donated, unless they specify otherwise, in advance of their death. It means that if we have not specifically mentioned the fact that you don't want to donate, then it is understood that the organs can be removed an opt-out system. This implies that the consent for organ donation is already present as a duty of citizens and permanent residents who die in an accident unless they have formally registered their objection with health authorities.

VII. Transplantation of Human Organs Act (THOA) 1994

The transplantation of Human Organs Bill was passed by Parliament of India in June 1994 and the Act came into force from February 4, 1995 by a Gazette notification.

The Transplantation of Human Organs Act provides for the regulation of removal, storage and transplantation of human organs for therapeutic purpose and for the prevention of commercial dealings in human organs and for matters concerned there to.

VIII. The silent features of the Act.

1. The donor should give in writing in the presence of two or more witnesses (at least one of whom is a near relative of such person) at the time of his death, for the removal of the organs from his body after death.
2. The age authorization is 18 years and in cases of minor the parents may give such authority.

3. In case of unclaimed bodies lying in the hospital for more than 48 hours, the person in charge of the hospital can authorize the removal of the organs from such bodies.
4. When the body has been sent for post-mortem examination, either for medico-legal or pathological purposes, the competent doctor can authorize for the removal of the organs if he has reason to believe that such human organ will not be required for the purpose for which the body has been sent for post-mortem examination provided he is satisfied that the deceased person has not expressed before his death any objection for the removal.
5. No human organ removed from the body of a donor shall be transplanted into a recipient unless the donor is a near relative of the recipient.
6. The organs removed from the body of a live unrelated donor can be transplanted into the body of any recipient who may be in need of such organ, provided the prior approval of the Authorization Committee⁵ has been obtained.
7. The hospitals engaged in removal, storage or transplantation of human organs are to be registered, if they violate any of the conditions, the registration may be cancelled after a proper inquiry.
8. Any person or hospital associated in the removal of any human organ without authority, shall be punished with imprisonment upto five years and fined upto Rs.10,000/-.

5. In most of the States, the Authorization Committee consists of the Director of Medical Education, Directors of Medical Service and either Dean or a Professor from the Government Teaching Hospitals. In Tamil Nadu, it consists of Directors of Medical Education, Director of Medical Services and the Dean of the Madras Medical College. In most of the States both Appropriate Authority and Authorization Committee is headed by the Health Secretary.

9. If a Registered Medical Practitioner is convicted, his name may be removed from the Medical Register for a period of two years for the first offence and permanently for the subsequent offence.
10. The punishment for commercial dealing in human organs is imprisonment not less than two years but may extend to seven years and liable to fine not less than Rs.10,000/- but may extend to Rs.20,000/-.
- (c) A neurologist or a neurosurgeon to be nominated by the Registered Medical Practitioner in charge of the hospital from the panel of names approved by the Appropriate Authority.
- (d) The Registered Medical Practitioner treating the person whose brain stem death has occurred.

IX. The essence of this legislation was threefold :

- (a) To accept brain death as also a definition of death
- (b) To stop commercial dealing in organs.
- (c) To define the first relative (Father, Mother, Brother, Sister, Son, Daughter and Wife) who could donate organs without permission from the Government.

The live donor has to file an affidavit in the Court of a Magistrate stating that the organ is being donated out of affection. Authorization Committee will approve it after going through the document and approve it. If it is found that the money has been exchanged in the process then both the recipient as well as the donor is considered as prime offenders under the law.

No human organ is to be removed from the body of a person in the event of his brain stem death, unless, such death is certified by a Board of Medical Experts consisting of the following :—

- (a) The Registered Medical Practitioner in charge of the hospital in which brain-stem death has occurred.
- (b) An independent Registered Medical Practitioner, being a specialist to be nominated by the Registered Medical Practitioner in charge of the hospital from the panel of names approved by the appropriate authority.⁶

6. Appropriate Authority is headed by Director of Medical Services.

THOA Limits live transplants to three categories; Relatives by blood, Spouses and those who donated “Out of affection”. State Authorization Committees are meant to scrutinize all applicants for unrelated transplant. Hospitals conducting transplants are supposed to be registered with committees which are also supposed to monitor their functioning. Organ transplant law does not allow exchange of money between the donor and the recipient.

X. Transplantation and Religious beliefs:

All major religions accept organ donation. Hinduism does not have a formal structure of guidelines or edicts with respect to such issues. Hindu and Vedic Scholars accept the concept of brain death. There has been no religious objection to the act of organ donation in India. Social service organizations report hundreds of inquiries from Indians desiring to donate body of organs after death. The Tata Institute of Social Sciences in Bombay found the majority of respondent in a survey in favour of organ transplantation irrespective of religious and economic status. There is, thus, no serious opposition in this country to cadaveric transplants.

Roman Catholics and Protestants support organ donation, believing that God's power to resurrect the body will not be thwarted by prior disposal of its parts⁷. Roman Catholic Church is in favour of organ donation as acts of charity and as a means of

7. Van,der Werff A: Transplantation Policies. Publication of the Council for International Organizations of Medical Sciences. Geneva. 1987 Pages 111-125.

saving a life. Some imposes certain restrictions⁸ for example, Jehovah's witnesses require that organs be drained of any blood due to their interpretation of the disallowance of blood transfusion from the Bible⁹ and Muslims require that the donor, have provided written consent in advance⁹. Orthodox Judaism considers it obligatory if it will save a life, as long as the donor is considered dead as defined by Jewish Law⁹. A few groups disfavour organ transplantation or donation; notably, these include Shinto¹⁰ and those who follow the folk customs of the Gypsies.

XI. Organ Shortfall :

A persistent issue relating to organ donation is the scarcity of organ donors relative to the number of potential recipients on organ donation waiting lists. No matter what laws and systems are in place, the demand for kidney transplants has outstripped supply in every country.

In the United States, the United Network for Organ Sharing (UNOS) states that the waiting list is about 101217 people long,¹¹ but about a third of those patients are inactive and could not receive a donated organ¹². Different organs have different waiting times

and success rates because demand is significantly different for different organs. Three – quarters of patients in need of an organ transplant are waiting for a kidney,¹³ and as such kidneys have much longer waiting times. At the Oregon Health and Sciences University. For example, the median patient who ultimately received an organ waited only three weeks for a heart and three months for a pancreas on liver, but 476 days for a kidney, because demand for kidneys substantially outstrips supply¹⁴.

Even though there have been advances in medical technology and donation, the demand for organs still greatly surpasses the number of donors. On average eighteen people die every day because the organ they required was not available. As of July 7, 2009 there are 1,02,353 men, women and children presently need life-saving organ transplants according to UNOS. Since January to April, 2009, there has been 9,346 transplant and 4,742 living and deceased organ donors. Organ donors can decide which organs they would like to donate such as; Veins, tendons, corneas, bones and much more. The average length a person will wait while on the list for a heart is 230 days. Since a heart can only survive approximately 4-6 hours outside the body UNOS will look at location and urgency to determine who will receive the heart. For a lung transplant the average waiting time is 1,068 days. With lungs transplants patients are separated into two groups. The first group is comprised of people who need one lung; the second group consists of people who need double lung transplants. Since lung transplant list has two groups UNOS looks at several facts when disturbing lungs such as; blood group, age, location from the donors hospital since time is such an important factor. If no one is located

8. ^ <http://www.giveandletlive.co.uk/docs/ppt/RE%20Power-Point.ppt>.

9. ^ abcd "American Red Cross – Statements from Religions (<http://www.redcross.org/donate/tissue/relgstmt.html#Jehovahs>)". American Red Cross.

10. ^BBC – Religion & Ethics – Organ donation (<http://www.bbc.co.uk/religion/religion/shinto/shintoethics/organs.shtml>)

11. ^ "Organ Donation and Transplantation (<http://www.unos.org/>)". United Net-Work for organ shining (<http://www.unos.org/>). United Network for Organ Sharing. <http://www.unos.org/>. Retrieved 2009-03-04.

12. ^ "A third of patients On Transplant List are Not Eligible (http://www.washingtonpost.com/Wp-dyn/content/article/2008/03/21/AR200803202981_pf.html) http://www.washingtonpost.com/wp-dyn/content/article/2008/03/21/AR2008032102981_pf.html Retrieved 2008.04.30.

13. ^ California Transplant Donor Network-Resources

(http://www.ctdn.org/resources_public.php#Statistics)

14. ^OHSU Transplantation program (<http://www.ohsu.edu/transplant/>)

near the donor, then UNOS will go through a sequence of zones either to give both lungs to a single person, or divide the lungs between two people who need single lungs transplants. The normal waiting time for a liver is about 796 days. People who are awaiting a liver transplants are given a MELD/PELD Score (Model for End-Stage Liver Disease/Pediatric End-State Lives Disease), which shows the urgency the patient needs for the transplant. Since a liver can survive outside the body for 12-14 hours, it gives UNOS a longer timeframe to find a perfect match. Kidney transplant have the longest average waiting time. It takes approximately 1,121 days for UNOS to match a recipient to a doctor. UNOS looks at multiple characteristics when such choosing a match such as; tissue match blood type, blood antibody levels (which displays how active the immune system is at the present time if there is too much activity it increases the chance of rejection), duration of time on the waiting list, whether the recipient is a child, whether the body sizes of the donor and recipient are a good match, and geographic location. The amount of time for a pancreas is about 501 days. Though some people on the waiting list have diabetes and need the Islets of Langerhans part of the pancreas, which are cells inside the pancreas that produce insulin. There are also people who have pancreatitis which is inflammation of the pancreas, who need the whole organ because of the damage which occurred from the inflammation. <<http://www.organdonor.gov/>>. In Australia, there are 10.8 transplants per million people,¹⁵ about a third of the Spanish rate. The Lions Eye Institute, in Western Australia, houses the Lions Eye Bank. The Bank was established in 1986 and co-ordinates the collection, processing and distribution of eye tissue for transplantation. The Lions Eye Bank also maintains a waitlist of patients who require corneal graft operations. About 100 Corneas are provided by the Bank for

transplant each year, but there is still a waiting list for corneas¹⁶.

XII. Cause of poor Transplants in India :

The number of fatal road traffic accidents every year in India is constantly rising and averages at about 8,500 per year. At any given time there are 8 to 10 brain dead patients in different ICU's in any major city of the country. There is hence potentially a huge pool of brain death donors available in India.

The diagnosis of brain death is made in ICUS where facilities exist for sustaining the other organ systems of a brain dead patient. Such ICUS are few and are commonly located in big metropolitan hospitals. They are overburdened, understaffed and lack a control command structure. Brain dead patients have traditionally been given low priority in ICUS and treated with benign neglect.

When such patient becomes donors, they require the same attention as that given to any critically ill patient. This demands a major attitudinal change and could be resented by an already overburdened staff. When other, salvageable patients often lack the required medical attention, is it ethical to lavish such care on the dead ?

The act of obtaining consent could run into trouble. The treating doctor (who is not a part of the transplant team) has to be motivated enough to seek such consent. Patient may lack relatives or may not have them in attendance when the diagnosis of brain death is made. Although the bill provides for removal of organs from bodies not claimed over forty eight hours after death, such removal could lead to problems if the relatives are eventually traced and object to the act. Decisions on organ donation often do not rest with a single relative and the entire family may need persuasion with loss of crucial time. Surgeons involved in a transplant program in

15. ^http://WWW.donatewest.health.wa.gov.au/documents/Reflections_winter_2005.pdf.

16. ^ Lions Eye Institute : Lions Eye Bank (<http://www.lei.org.au/go/lions-eye/bank>)

Delhi note that doctors must be willing to spend a lot of time and effort with relatives¹⁷.

XIII. Rackets in Kidney Transplantation:

Over the past few years our newspapers have been flooded with details of what may now be called “the kidney transplant scam” in various major cities.

Indian Infamous kidney racket head Dr. *Amit* was arrested from hotel in Sauraha District Chitwan by Nepalese police in Kathmandu¹⁸.

ABC News also discloses that when police arrested Dr. *Amit* these are conformed reports from eye-witnesses that he offered huge bribe to police to get escaped but Nepali police knew the global ramifications of kidney racket and acted as per law¹⁸.

News from ASIA Express that the arrest of Indian Kidney transplant racketeer *Amit Kumar alias Santosh Raut* has lifted the lid off a huge well-ramified illicit International Organ Trading Ring with operations running into billions of dollars across several countries. *Kumar*, who was tracked down in a resort in neighbouring Nepal. When the police raided his clinic in a Delhi Suburb and arrested his associates. He is thought to have been responsible for some 600 illegal kidney transplants. The global kidney transplant racket is one of the most obnoxious manifestations of North – South inequality and of the repugnant practice of stealing organs from the poorest of the poor in the third world, usually for the patients in rich countries suffering from end-stage organ failure¹⁹.

Kumar has been conducting his ghoulis business, since 1994, from numerous facilities spread across India’s National Capital Region. Earlier, he was based in the Central Indian

City of Nagpur and in the Western Metropolis of Mumbai. According to the police, multimillionaire *Kumar* was not a surgeon or physician trained in mainstream modern medicine. He had a degree in the traditional Ayurvedic system of indigenous medicine.

His operation in and around Delhi was run on a massive scale and involved three hospitals, five diagnostic centre and 10 laboratories. Besides he relied on a network of more than 50 accomplices, including doctors and nurses, “Spotters” and tout who would lure potential donors with the promise of jobs, and thugs who would force them to part with their kidneys. The kidney donors were typically extremely poor, unemployed people from backward States like Uttar Pradesh and Bihar, who have become victims of India’s neo – liberal economic policies and are often in deep dept. The kidney recipients were nationals from several countries including Canada, Greece and Turkey²⁰.

India is infested with organ thieves. These thieves are organized and worked under the protection of the copes, Government bureaucrats and politicians across many political parties.

It is multibillion dollar racket that will surprise many. The ring, which served clients from Britain, the US, Greece, Lebanon, Canada, Saudi Arabia and the United Arab Emirates, was busted on January 24, 2008 in Gurgaon, a booming Suburban Town of Delhi²¹.

XIV. Black Market Organ Scandal in New Jersey, are Organs Being Sold in America:

Yes the organs are being sold in America, though this was not being done with the knowledge of the transplant community, UNOS (The United Network for Organ Sharing), transplant hospitals or doctors. The transplant centres in America were not part of the scam.

17. *Bakshi A. Nandi P. Gulria S* : Cadaveric renal transplants. Our experience with relatives. National Medical Journal of India 1994, 7:252.

18. ABC New – Online Breaking News Kidney racket http://abcnews.in/abclive_global/kidney_racket_amit_Kumar.html

19. News from Asia Illegal Kidney Transplant Racket <http://thebestnewswebsite.com/gpage.html9.html>.

20. News from Asia Illegal Kidney Transplant Racket <http://thebestnewswebsite.com/gpage.html9.html>.

21. India Daily – Kidney racket kingpin Dr. *Amit Kumar* in Indian custody. <http://www.indiadaily.com/editorial/19047.asp>

There was breaking news that 44 people were involved in organized crime that included selling organs, laundering money and more.

How it worked :—A person who was healthy enough and willing to donate part or all of an organ (part of a liver or an entire kidney) was found in Israel. They were paid 50% up front to become a donor. They would present themselves to the transplant centre treating the potential recipient as a friend or relative who wanted to help by donating. In reality they were neither friends nor relatives, they were donating for payment. They would then be medically tested for suitability as a donor, just as any living donor would be. If they were deemed suitable for donation, the surgery then would take place, all in a legitimate facility, with trained surgical staff. After donation, the donor would receive the second half of their money²². The sources say that it is unknown how many donations were brokered in this way.

Although the press has been publishing explicit details on rackets in kidney transplantation in various cities no medical body has thought it fit to even conduct an investigation into them.

State Medical Council has *suo motu* powers of investigation. These have never been invoked. The Councils have also turned a blind eye to complaints lodged with them. Dr. C. Nanjappa, President of the Karnataka Medical Council, admitted that complaints against the accused in the Bangalore scam had been received in 1993. All that the Council had done was to 'note' that the behaviour of the doctors who appeared before them was 'suspicious'²³. With a population that is largely illiterate and gullible, such attitudes by disciplinary agencies have nurtured a fertile ground for racketeering.

XV. In order to prevent the illegal trade of the human organs following amendments have been proposed insofar as the THO Act is concerned :

- (i) To empower Union Territories, especially Government of NCT of Delhi to have their own appropriate authority instead of DGHS and/or Additional DG (Hospitals).
- (ii) To make the punishments under the Act harsh and cognizable for the illegal transplantation activities to deter the offenders from committing this crime.
- (iii) To provide for registration of the centre for removal of organs from the cadavers and brain stem dead patients for harvesting of organs instead of registration of centre for transplantations only.

However, the Chief Justice of India K.G. Balakrishnan, feels that there is no need to amend the Human Organ Transplantation Act, as the present law is "sufficient" to serve the cause and they just need to be implemented properly.

Governments, medical bodies and other professional organizations in the west have responded decisively to ethical and legal problems related to transplants and have regularly issued guidelines. The Council of the Transplantation Society, an International Body of Transplant Specialists has regularly published clear guidelines for its members and warns them about expulsion if these are violated²⁴.

The Apollo Hospitals Group claimed to have followed the global guidelines while performing transplants. In fact, the efforts towards continuous improvement had led Apollo Hospital to adopt stricter guidelines for transplantation, more than required under law²⁵.

22. Surgery News : Black market organ Scandal in New Jersey.

<http://Surgery.about.com/b/2009/07/23/Surgery-news-black-market-organ-scandal-in.new>.

23. Sonora Jha Nambiar : Karnataka Medical Council failed to act. Times of India 4th Feb, 1995.

24. The Council of the Transplantation Society: Commercialization in Transplantation. The problems and some guidelines for practice. Lancet 1985; 327:715-6.

25. Tribune News Service <http://www.tribuneindia.com/2004/20041008/delhi.htm>

XVI. Following measures have been suggested to curb the Illegalities and to improve the rate of organ transplantation

I. In order to facilitate the organ donation and organ transplantation in India the Government has come out with few incentives to the patients and their relatives.

1. Life long free medical check-up and care in the hospital where the organ donation took place.
2. Customized life insurance policy of Rs.2 lakhs for three years with one-time premium to be paid by the recipient in case of mortality.
3. Preferred status in organ transplant waiting list if the next-of-kin of a brain – dead donor requires a transplant in future.
4. To encourage donation, various incentives should be introduced such as a waiver for hospital charges (both for the donor's own treatment before death and for his or her immediate family members over a period of five years), partial coverage of the funeral expenses, and in principle the organ donor's immediate family should be reciprocated by getting priority in need in future.

II. In order to promote Cadaver donation following steps are being taken :—

1. Most importantly, there is a need to spread awareness at every level the ICU nurses, doctor and health care providers should be aware of the act and the same is being taught.
2. Procedures in law to make it compulsory for the ICU staff to suggest for organ donation and request their permission for the same.
3. In medico – legal cases it should be made possible to undertake 'post-mortem' at the same time as the "organ retrieval" surgery.
4. The current situation can be improved by creating awareness in the health care

professionals good insurance to the donors, minimizing the documentary hurdles to the donor relatives, total transparency on the part of the medical profession, open public, debate on this and related issues. Medical professional must set ethical guidelines and take action against violators; Representatives of the common people must be included on the Committees that will handle these issues and creating a transplant coordinator to facilitate between the recipient donor and health care provider.

In many hospitals organ network representatives routinely screen patient records to identify potential donors in advance of their deaths²⁶. In some cases, organ – procurement representatives will request screening test or organ – preserving drugs (such as anti-hypertension drugs) to keep potential donor's organs viable until their suitability for transplants can be determined and family consent (if needed) can be obtained²⁶. This practice increases transplant efficiency, as potential donors who are unsuitable due to infection or other causes are removed from consideration before their deaths, and decreases the avoidable loss of organs²⁶. It may also benefit families indirectly, as the families of unsuitable donors are not approached to discuss organ donation²⁶.

III. Inclusion in Study Curriculum :—

Education as a tool provides a multifaceted set of materials along with television provides print, video, CD-ROM and Web-based, that teachers throughout the country can use in variety of subject areas to educate students and encourage them to consider organ and tissue donation.

26. ^ a b c d Rob stein (2007-09-13). "New Zeal in Organ Procurement Raises Fears.

(<http://www.washingtonpost.com/wp-dyn/content/article/2007/09/12/AR2007091202681.html>)". The Washington post. The Washington post company. <http://www.wash.Washingtonpost.com/wp-dyn/content/article/2007/09/12/AR2007091202681.html>.Retrieved 2008-05.02.

Participate in an educational program on donation provided by an organ procurement organization. If younger generation is aware of organ transplantation and organ donation then, we will be almost certain that, some day, some where they will or attempt to save a life. Establishment of specialized transplantation medicine units in every medical institution allotting certain number of beds for their smooth functioning.

IV. Proper Authorization Needed :—

The Chairman of the DMA, Dr. *Prem Aggarwal*, has said that kidney donation as well as transplantation service for patients of renal failure was governed by the Transplantation of Human Organ Act, 1994. Under the Act, the Central Government and the State Government should appoint an appropriate authority for enforcing the standards and governing and monitoring the Authorization Committee.

He further stated that under authorization the doctor has to furnish his photograph, identification number, and driving licence and

pass port. The photo has to be attested by Superintendent of Police or by the Deputy Commissioner of Police. The donor also has to submit an authorization from the guardian or his wife. The donor has to present an agreement with the patient on an affidavit attested by a sub-divisional Magistrate and Psychiatrist. The evaluation of the donor is also necessary. In fact, without the active participation of the donor and the donee, the Authorization Committee procedure can never be successfully completed²⁷.

V. Conclusion

The transplantation of an organ from one body to another is known as the organ transplant. This has been a boon to human race; however the supply of organs to its demand far more exceeds thereby leading to illicit trade of organs. Hence various laws to curb the illegal trade of organs have been introduced at various levels to encourage organ transplantation and enhance the utility of the same. Inclusion of topics in core curriculum of medical subject, social awareness will improve the deficit in the organs.

THE SUPREME COURT OF INDIA - HARBINGER OF THE ENVIRONMENTAL PROTECTION IN INDIA

By

—Dr. JETLING YELLOSA¹

In the entire universe among all creatures homosapiens (human beings) are considered as the most intelligent and also the most selfish gene. The human beings in his survival the innovated many new things and for it even ventured into spoiling his God blessed

and given pristine nature. In the words of Dasman, "Human race is likely an ape with hand granite. Nobody can say when he will pull the pin"². The world has awakened lately to save the almighty gift the nature for the first time in 1972 when the under aegis of

27. Tribune News Service

<http://www.tribuneindia.com/2004/20041008/delhi.htm>

1. B.Com., LL.M., Ph.D., Assistant Professor of Law, Chairman, Board of Studies, Department of Law

and Legal Section In charge, Telangana University, Nizamabad, A.P.

2. *Dasman R.F.* Environmental Conservation (New York, 1976) (See also Park C.C. Ecology and Environmental Management) (Butterworths, London, 1980, p.19)