

A Study of Organ Donation and Transplantation With Respect to Indian Laws

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Abstract: There are many who believe that transplantation represents one of the most unimaginable achievements of modern healthcare. Historical evidence of transplantation is seen in Indian Mythology where lord shiva transplanted an Elephant face to Lord Vinayaka. Though it appears to be a myth the present situation proves the same.

Organ Transplantations are either from a dead or a living person with the acceptance of donor and the receiver. Every country is having their own laws with respect to organ donations, retrieval and storing of organs from dead or living persons. In Organ Donation and Transplantation presently the activities are mainly on Kidney (from living or dead) heart, lungs, tissues and skin. Since human beings are having two kidneys a donor can donate one kidney to the needy and at the same time can live with one kidney as before.

In India transplantation of human organs and tissues act 1994, and subsequent amendments brought into force till 2014 to curb the illegal organ trade. A mention is made regarding the Judgments delivered by the Apex Court and other state High Courts in this regard.

However, the donor concept of organ is not getting popularity because it involves ethical, social, cultural, moral and psychological issues. All these things are subject to different beliefs of different religions. The need of hour is to educate the people regard organ donation and clear the myth and religious beliefs by healthcare professionals and social workers and government agencies.

Keywords —Organ Donation, Indian Laws, Judgments, Acts

I. INTRODUCTION

History: There are many who believe that transplantation represents one of the most unimaginable achievements of modern healthcare.

Though mythology is not healthcare history many religious texts are filled with stories and figures where human organs are replaced by animal organs and the miracle of Saint Cosmos and Saint Damien from Christian Mythology as described in the “*lives of the saints*” needs mention at least for the bizarre similarity which has to modern transplantation in one way or other. Saint Cosmos and Damien were called upon to treat a priest afflicted by Cancer of his leg and the two saints went to the nearest grave yard where an Ethiopian had been buried, took of his leg and used it to replace the priest leg (¹).

Regeneration: At this point it is quite interesting to have to look about regeneration. Regeneration means the growth of a damaged missing part from the remaining tissues. As adults humans can regenerate some organs, such as the liver. If the part of the liver lost by diseased or injury, the liver grows back to its original size, though not its original

shape. And our skin is constantly renewed and repaired. However, many other human tissues do not regenerate. But Salamanders, Planarians and number of other species re-grow damaged or missing body parts. Regeneration can happen in many different ways using pluripotent or tissue specific stem cells. For example: Zebra Fish and such other fishes regenerate their damaged heart.

The British Surgeon John Hunter in the late 18th Century, successfully transplanted a human tooth on to a hens comb and thus made some of the first known scientific attempts in animal transplantation. Only in 20th century that transplantation caught the eye of the healthcare fertility and thus became reality. The first attempt of human solid organ transplantation was made by a Russian surgeon Voronoy, who unsuccessfully transplanted a Kidney from a cadaver into the thigh of a patient suffering from renal failure. In 1946, Boston Surgeons first successfully transplanted the human kidney between two identical twins. This was followed by a liver transplantation in 1963 and heart transplantation in 1967. Offlate now organs including Lung, Pancreas, Intestines, Bone Marrow, Tissues are also transplanted with a good success rate. W.H.O. recognized

now transplantation of organs like Liver, Kidney and Heart as an established procedure. It is estimated that around 50,000 transplantations were performed annually. Except Kidney no other organ like heart, lung and liver cannot be transferred from a living except kidney no other organ is having two.

French Physician first made out the concept of brain death 1959 which has become a tool in the hands of organ transplantation therapy. Till recently 47 countries in the world had accepted brain death as a legal concept and 39 countries enacted laws on organ transplantation including India, though the removal of organs from a dead (brain dead) and the consent varies.

Swamy Lokeswarananda of the Rama Krishna Mission is reporting to have said in a seminar 1988 that Hindu and Vedic Scholars accept the concept of brain death. The concept of 'giving' or 'daan' is ingrained in Hindu thought and therefore there seems to be no major religious objection to the act of organ donation. In this context a mythological story of King Sibi, who donated flesh from his thigh equal to weight of a dow which shows that human parts are donated for a good cause. Hindu mythology envisages,

And Lord shiva was enraged and beheaded Ganesha; and parvathi was pained beyond grief, "Ganesha! Oh! my son be it that it for me" she wailed, and lord shiva was moved and transplanted an elephant's head on to ganesha and Ganesha became the deity of learning and wisdom.

The first successful corneal allograft transplant was performed in 1837 in a gazelle model; the first successful human corneal transplant, a keratoplastic operation, was performed by Eduard Zim at Olomouc Eye Clinic, now Czech republic in 1905. The first transplant in the modern sense - the implementation of organ tissue in order to replace an organ function - was a thyroid transplant in 1883. It was performed by Swiss Surgeon and later Nobel laureate Theodor Kocher. In the preceding decades Kocher had perfected the removal of excess thyroid tissues in cases of goiter to an extent that he was able to remove the whole organ without the person dying from the operation. Kocher carried out the total removal of the organ in some cases as a measure to prevent recurrent goiter. By 1900 thyroid transplantation became the model a whole new therapeutic strategy of organ transplantation. Thus the idea that one can successfully treat internal diseases by replacing a failed organ through transplantation had been generally accepted. In 1954 the first ever successful transplant of any organ was done at the Brigham and Women's Hospital in Boston the surgery was done by Dr. Joseph Murray who received the Nobel Prize for his work⁽³⁾.

Major steps in Skin Transplantation occurred during first world war notably the work of Harold Gillies at Alder shot. In 1962, the first successful replantation surgery was

performed was reattaching a severed limb and restoring function and feeling to certain extent.

Transplant of a single gonad (testis) from a living donor was carried out in early 1926 in Serbia by a Russian Surgeon Dr. Peter Vasilovic. The first attempted human diseased donor transplant was performed by a Ukrainian surgeon in 1930's but failed due to ischemia. There is a successful diseased donor lung transplant into an emphysema and Lung Cancer sufferer in June, 1963 by James Hardy at the University of Mississippi. The patient survived for 18 days before dying due to Kidney failure. There was an attempt to transplant liver but it is not successful.

The first partial success of heart transplantation was achieved on 3rd December, 1967 by Christiaan Barnard of Capetown South Africa performed the first human to human heart transplant and the patient survived for 18 days only. Only with the advent of cyclosporine that altered transplants from research surgery to life saving treatments. The only problems that crops in during transplantation is rejection of foreign part by the native body⁽²⁾.

India's first organ transplant was conducted in 1970's (it was kidney transplant). India has made few strides forward but lot more needs to be done. The number of transplants presently done annually are,

1. 5000 Kidneys
2. 1000 livers
3. Around 15 heart transplants

The rate of organ donation in India is 0.26% per million compared to better performing countries such as America 26%, Spain 35.3% and Croatia 36.5% per million respectively⁽²⁾.

Organ transplantation falls under the Ministry of Health and Family Planning, Government of India, however health is a state subject hence all the State Government have their own departments and undertakings and policy formulations with respect to organ transplantation⁽²⁾.

Timeline of transplants⁽³⁾

- 1869: First skin autograft-transplantation by Carl Bunger, who documented the first modern successful skin graft on a person. Bunger repaired a person's nose destroyed by syphilis by grafting flesh from the inner thigh to the nose, in a method reminiscent of the Sushruta.
- 1905: First successful cornea transplant by Eduard Zirm (Czech Republic)
- 1908: First skin allograft-transplantation of skin from a donor to a recipient (Switzerland)
- 1950: First successful kidney transplant by Dr. Richard H. Lawler (Chicago, U.S.A.) [126]

- 1954: First living related kidney transplant (identical twins) (U.S.A.)[127]
- 1954: Brazil's first successful corneal transplant, the first liver (Brazil)
- 1955: First heart valve allograft into descending aorta (Canada)
- 1963: First successful lung transplant by James D. Hardy with patient living 18 days (U.S.A.)
- 1964: James D. Hardy attempts heart transplant using chimpanzee heart (U.S.A)
- 1964: Human patient lived nine months with chimpanzee kidneys, twelve other human patients only lived one to two months, Keith Reemtsma and team (New Orleans, U.S.A.)
- 1965: Australia's first successful (living) kidney transplant (Queen Elizabeth Hospital, SA, Australia)
- 1966: First successful pancreas transplant by Richard Lillehei and William Kelly (Minnesota, U.S.A.)
- 1967: First successful liver transplant by Thomas Starzl (Denver, U.S.A.)
- 1967: First successful heart transplant by Christian Barnard (Cape Town, South Africa)
- 1981: First successful heart/lung transplant by Bruce Reitz (Stanford, U.S.A.)
- 1983: First successful lung lobe transplant by Joel Cooper at the Toronto General Hospital (Toronto, Canada)
- 1984: First successful double organ transplant by Thomas Starzl and Henry T. Bahnson (Pittsburgh, U.S.A.)
- 1986: First successful double-lung transplant (Ann Harrison) by Joel Cooper at the Toronto General Hospital (Toronto, Canada)
- 1990: First successful adult segmental living-related liver transplant by Mehmet Haberal[128] (Ankara, Turkey)
- 1992: First successful combined liver-kidney transplantation from a living-related donor by Mehmet Haberal[128] (Ankara, Turkey)
- 1995: First successful laparoscopic live-donor nephrectomy by Lloyd Ratner and Louis Kavoussi (Baltimore, U.S.A.)
- 1997: First successful allogeneic vascularized transplantation of a fresh and perfused human knee joint by Gunther O. Hofmann
- 1997: Illinois' first living donor kidney-pancreas transplant and first robotic living donor pancreatotomy in the U.S.A. University of Illinois Medical Center
- 1998: First successful live-donor partial pancreas transplant by David Sutherland (Minnesota, U.S.A.)
- 1998: First successful hand transplant by Dr. Jean-Michel Dubernard (Lyon, France)
- 1998: United States' first adult-to-adult living donor liver transplant University of Illinois Medical Center
- 1999: First successful tissue engineered bladder transplanted by Anthony Atala (Boston Children's Hospital, U.S.A.)
- 2000: First robotic donor nephrectomy for a living-donor kidney transplant in the world University of Illinois Medical Center
- 2004: First liver and small bowel transplants from same living donor into same recipient in the world University of Illinois Medical Center
- 2005: First successful ovarian transplant by Dr. P. N. Mhatre (Wadia Hospital, Mumbai, India)
- 2005: First successful partial face transplant (France)
- 2005: First robotic hepatectomy in the United States University of Illinois Medical Center
- 2006: Illinois' first paired donation for ABO incompatible kidney transplant University of Illinois Medical Center
- 2006: First jaw transplant to combine donor jaw with bone marrow from the patient, by Eric M. Genden (Mount Sinai Hospital, New York City, U.S.A.)
- 2006: First successful human penis transplant (later reversed after 15 days due to 44-year-old recipient's wife's psychological rejection) (Guangzhou, China)[129][130]
- 2008: First successful complete full double arm transplant by Edgar Biemer, Christoph Höhnke and Manfred Stangl (Technical University of Munich, Germany)
- 2008: First baby born from transplanted ovary. The transplant was carried out by Dr Sherman Silber at the Infertility Centre of St Louis in Missouri. The donor is her twin sister.[131]
- 2008: First transplant of a human windpipe using a patient's own stem cells, by Paolo Macchiarini (Barcelona, Spain)
- 2008: First successful transplantation of near total area (80%) of face, (including palate, nose, cheeks, and eyelid) by Maria Siemionow (Cleveland Clinic, U.S.A.)
- 2009: Worlds' first robotic kidney transplant in an obese patient University of Illinois Medical Center
- 2010: First full facial transplant by Dr. Joan Pere Barret and team (Hospital Universitari Vall d'Hebron on 26 July 2010, in Barcelona, Spain)
- 2011: First double leg transplant by Dr. Cavadas and team (Valencia's Hospital, La Fe, Spain)

- 2012: First Robotic Alloparathyroid transplant. University of Illinois Chicago
- 2013: First successful entire face transplantation as an urgent life-saving surgery at Maria Skłodowska-Curie Institute of Oncology branch in Gliwice, Poland.[132]
- 2014: First successful uterine transplant resulting in live birth (Sweden)
- 2014: First successful penis transplant. (South Africa) [133]
- 2014: First neonatal organ transplant. (U.K.) [134]
- 2018: Skin gun invented, which takes a small amount of healthy skin to be grown in a lab, then is sprayed onto burnt skin. This way skin will heal in days instead months, and will not leave a scar.

II. ORGAN TRANSPLANTATION ETHICAL ISSUES IN INDIA:

Transplantation and Religious Belief:

Organ Transplantation has thrown up a peculiar situation connected with religious beliefs and moral questions. If a heart is removed from a Cadaver. It means it is now devoid of a soul according to some religion. Thus removal of any organ in any way effect the process of rebirth? Both Roman Catholics and Protestants tend to support organ donation believing that God's power to resurrect (rebirth) the body will not be thwarted by prior disposal of its parts. Jewish Law prohibits deriving benefit from mutilating or delaying the burial of a corpse but this prohibition can be overridden to save a life. The Islamic Organization of Medical Sciences passed a resolution many years back recognizing brain death and many Islamic countries are now performing cadaver transplants. The only big religious group which till recently opposed idea of brain death is Shintos of Japan. A survey by the Tata Institute of Social Sciences in Bombay revealed that the majority of respondents irrespective of religious and economic status were in favour of organ donation.

Indian legal Perspective:

In India there are many health legislations such as,

- a. Drugs and Cosmetics Act, 1940
- b. The Prevention of food Adulteration Act, 1954
- c. The Medical Termination of Pregnancy Act, 1971
- d. Maternity Benefit Act 1961
- e. Insecticides act 1968
- f. Narcotic Drugs and Psychotropic substances Acts and Rules 1985
- g. The Prenatal Diagnostic Techniques act 1994
- h. Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011

- i. Food Safety and Standards (Prohibition and Restriction on sales) Regulations, 2011

are all related to human health.

Since human organ transplantation curative medical technique for the patients who are suffering with terminal end diseases. The Government of India to safeguard the organ failure patients and the interests of the organ donors enacted an act in parliament. *Thus Transplantation of Human Organs and Tissue Act*, was passed in 1994. The act further regulates and facilitates the transplantation between the donor and the recipient.

The Indian Scenario: In India majority of the patients with end stage diseases which otherwise can be saved and prolonged to the transplantation of the organs are dying of disease. Prior to the passage of THOTA, majority of the patients in India with renal failure who are on long procedure of dialysis are dying due to no transplantation act. In 1991 the Central Government constituted a Committee for the purpose of legislation on Human Organs. The Transplantation of Human Transplantation Act, was thus passed by Parliament in 1994. The act legalizes brain death making removal of organs permissible after proper consent. The act also lays down criteria for determining the brain death.

The Bottle Necks in the implementation THOTA⁽⁴⁾:

The scarcity of compatible donor organ is a major bottle neck. The donor and the recipient must be closely related according to the act. The act does not allow unrelated donor and recipient. The act also bans organ trade which is a Criminal Act because the act does not permit buying and selling of human organs.

III. CONSENT AND ORGAN DONATION:

In organ donation the consent of the diseased before his / her death is prerequisite for removal of his/her organ upon death. There are three ways of giving consent viz., 1. Opt-in consent, 2. Opt-out consent, 3. Mandated Choice. Normally in India, it is based on the opting in form of consent for retrieval of organ from a diseased person. It is based on the principle of authorization, an expression which is intended to convey that people have the right to express during their lifetime their wish about organ donation from their body after death.

Diseased organ donation role of relatives:

Under this act the near relatives of diseased person can donate the organ of a diseased person after his /her death voluntarily. Here the free will of the relatives is important.

Obtaining consent from relatives - emotional, ethical and religious constraints:

As per Section 3(2) the person in lawful possession of the dead body of the donor during his lifetime given consent as required by law for removal of his / her organs after death, such person has to give approval for removal of organs,

unless he / she as a reason to believe that diseased had revoked consent afterwards. The relatives / persons in lawful possession of the deadbody, who are authorized to give consent for organ removal, are not prepared for such authorization and thus no removal of diseased organ is possible. The act of obtaining consent of the relatives is a stumbling block in successful running of the cadaver donation program. Another point being the patient may not have near relatives or may not have them in attendants when the diagnosis of brain death is made. Generally the grieving relatives are reluctant to even think of donating organs of their beloved ones.

In India where the culture, ethics and religious beliefs are stronger than other countries, generating awareness is need of the hour for effective implementation of organ transplantation programs. Cultural Perception of charity and donation is different in religions. In India, religious belief generally discourage such donations and it is very difficult for a brief stricken family to understand the concept of organ donation when his/her beloved one has been declared dead to take a decision of permitting the Doctor to harvest the organs for which the dead body is mutilated. Myths and Fears dominate their minds. The very thought of dismembering the dead body of beloved ones make them disinclined for organ donation. In addition the preconceived notion of rebirth is another point for their nod.

Distrust against the healthcare professionals:

It is very difficult for an healthcare professional to approach a family which is in grief, asking them for donation of organs of their beloved ones when his/her heart is beating (brain death) creates a wrong impression in their mind that there is some intention on the part of the healthcare professionals because it is a ticklish problem to declare a patient brain dead and to convince the near and dear ones. The relatives of the brain dead person always think that there seems to be a mal intention of the healthcare professional to declare the patient brain dead, to derive benefits from the organs. The strong belief of the relatives of the brain dead is they could be saved even after sometime. Also the relatives put an objection stating that the consent given by the dead during his / her lifetime is not a genuine one may be concocted by somebody else. There is living example of a lady in Iraq who was declared brain dead, retrieved conscious after 27 years.

ASCERTAINING CONSENT – NEAR RELATIVES VS. NEAREST RELATIVE BY HIERARCHY:

Section 3 (iii) of the Act deals with cases of deceased adults who have not expressed any formal wish prior to death. In all these cases the nearest relatives who are in possession of the dead body can authorize the removal / donation of the deceased organs. However, the meaning of term near relative is quite ambiguous compared to Section 3(iii)

THOTA when compared to definition as given in Section 2(i) and read with Section 9(i) and Section 3(i)(a)(i)(ii). This happens when the dead person is staying away from the near relatives for a long time but himself associate with friends for a considerable time then the friends have a right to give consent. Hence in this context the suggestion being that the Government of India should clearly mention the definition of Near Relative used in different section in different situations so that there is a potential of organs that can be derived from the dead bodies once a clear understanding of the meaning of Near Relatives is given. This ambiguity arises when the person was admitted in a serious condition who was put into ICU by somebody and the nearest relative/associate are not present at that time and when the person was declared brain dead the question arises who has to give consent. It is my personal considered opinion that the Government should take steps and remove the ambiguity regarding consent in all situations that arises when a person is dead or about to die⁽²⁾.

OPT – IN – CONSENT A MISPLACED STRATEGY:

According to organ donation under THOTA, 1994 Act the Opt-in-consent is the say. The incorporation of brain dead concept to increase the availability of deceased donor organs with opt-in-consent is miserably failed to achieve the desired objectives of (i) a functional cadaver donation system and (ii) put an end to the illegal organ trade from Indian black marketing of organ trade.

RESPECT FOR THE AUTONOMY OF THE DECEASED:

All born human beings are having equal dignity rights. It is the duty of every person to act at all times in the best interests of human kind and dignity that means, every person will have the right, choice regarding their body health treatment and their exclusive opinion of death that means everyone is having right of wish on the basis of informed choices, thoughts and decisions free and independently. The THTOA 1994 act provides that even though a person makes a decision prior to his death that after his death his/her, organs/tissues or and also registered his/her objection for which donation after his/her demise. However, this question has some ambiguity and raises many questions. The law says even if a dead person has given willingness prior to his death of donation of organ/tissues after his/her demise the near relatives can object to it because of sentiments in such cases the organs cannot be removed / stored which amounts to the autonomy of the deceased is not respected, because the wish of the nearest relatives were so close to him/her are to be respected according to law. On the other hand, if the deceased person prior to his demise has registered his wish the law will enforce the same irrespective of the objections raised by near relatives.

IV. SECTION 9 THOTA 1994 VIS-À-VIS RIGHT TO LIFE OF A SPECIFIC CLASS OF END-STAGE ORGAN FAILURE (ESOF) PATIENTS

Since Section 9 of the act stipulates that organ donor should be closely related to the recipient, the problem arises, because of the present system of nuclear families and when the family met with an accident and the survivor is a ESOF (End Stage Organ Failure) Patient to get an organ transplant is very difficult. This class of patient's are solely dependent on the cadaver donation and in the absence of an efficient and functional organ the patient who belongs to this class though having every right to life under constitution will die due to non availability of organ. As per the Section 9 of the Act, a ESOF patient cannot get a donor who can donate his organ in the present scenario. Hence, the real directive effect of Section 9 of the Act, down power the right to life of a particular class of patients who do not have near relatives / willing relatives who can donate their organ hence it is my earnest desire that the Government should rethink about this clause Section 9 and facilitate a reasonable degree of provision so that the ESOF class patients can also derive the benefit. In fact the implementation of THOTA 1994 is in the interest of public interest and to curb human organ trafficking and regulation and transplants of organs. In spite of all these regulations there are imports of organ trade in the country which is getting unnoticed nor ignored. It is my earnest desire the authorities should give some more teeth to the Section 9 of the act to curb with the illegal organ trade to the extent possible if not totally eliminated and also some relief to the ESOF Patients.

TRANSPLANT COORDINATORS AND ORGAN DONATION / RETRIEVAL:

Sec. 14 (iv) of THOTA Act envisages that those hospitals who are not registered and engaged in transplants, retrieval and such other related activities are required to register themselves if not and maintain a register of organ donors recipients and all such other details. The amendments made to the act made mandatory to appoint transplant coordinators in the Hospitals having ICU facility and also they should take care of the relatives to be present and the patients who are admitted in the ICU and at the time when are declared brain dead. The amendments made in the act, to appoint transplant coordinators as mandatory for organ retrieval from brain-stem dead patients as the improved the situations much.

POSTMORTEM AND ORGAN DONATION / RETRIEVAL:

Normally the postmortem are conducted only at the request of police and they have to be carried out only in the Government Hospitals. Since there are restrictions in timing and the doctors in the Government Hospitals every time the postmortem is delayed in such cases the retrieval of

organs is of no use. On the other hand if the delays are curtailed and the postmortem is completed within the stipulated time of retrieval of organs then we can improve organ donors and to mitigate atleast some of the patients who are ESOF patients⁽⁴⁾.

Infrastructure facilities ⁽⁴⁾:

Organ transplants and retrieval requires specialized persons and specialized infrastructure system which is cost prohibitive and the hospitals need high technology facilities, equipments, operative theatres, laboratories to conduct cross matching system and availability of trained personal at short notice round the clock for urgent transplants. Time is essential for transplant and retrieval otherwise the organs will become useless if not retrieved in time.

V. SOME OF THE DECIDED CASES ON ILLEGAL ORGAN TRADE⁽⁵⁾:

1. Santosh Hospitals Private ... vs State Human Rights Commission, ... on 13 March, 2003

Transplantation of Human Organs Act, 1994 (Central Act 42 of 1994) (hereinafter referred to as "the Act"), the petitioner hospitals ... regulate the removal and **transplantation of human organs** and prevents commercial dealings in **human organs** by providing severe punishments

Madras High Court

2. Dr. Rajinder Singh vs The State on 24 December, 2009

Human Organ Act, 1994 (herein after shall refer to as the Act) stands attracted in the alleged act of signing ... **Human Organ Act**, 1994 (herein after shall refer to as the Act) stands attracted in the alleged act of signing

Delhi District Court

3. 5 Whether It Is To Be Circulated To ... vs By This Writ-Application In The ... on 11 August, 2014

Government of India has enacted the **Transplantation of Human Organs Act**, 1994, which provides for regulation of removal, storage ... **Act**, 1994; (b) "cadaver(s)", "**organ(s)**" and "tissue(s)" means **human** cadaver(s), **human organ(s)** and **human** tissue

Gujarat High Court

4. Parveen Kumar Sareen vs The State (Govt Of N.C.T Of Delhi) on 19 January, 2012

alleged date of surgery in January 2006, **Transplantation of Human Organs Act**, 1994 did not apply to the State ... such the **Transplantation of Human Organs Act** 1994 was made applicable to the State of Jharkhand on or after

Delhi District Court

5. Nagendra Mohan Patnaik And Ors. vs The Government Of A.P. Rep. By Its ... on 12 November, 1996

Human Organs Act, 1995 (Act No. 24 of 1995). The Act was preceded by Ordinance called Andhra Pradesh **Transplantation ... transplantation of human organs** for therapeutic purpose; (2) for the prevention of commercial dealings on **human organs**. **Human organ**

Andhra High Court

6. Santhosh Hospitals vs State **Human Rights** on 8 July, 2005

Appellant Vs. 1. The Appropriate Authority **Human Organ Transplantation Act**, 1994, Office of the Director of Medical and Rural Health ... which the respondents were 1).The Appropriate Authority, **Human Organ Transplantation Act**, 1994 and 2).The Chairman, Authorisation Committee

Madras High Court

7. Shri Hitesh Kishorechand ... vs The State Of Maharashtra on 13 August, 2008

offence punishable under section 18 of the **Transplantation of Human Organs Act**, 1994 and under section 328 read with section ... Code and section 18 of the **Transplantation of Human Organs Act**, 1994. 5. There is no dispute about the fact

Bombay High Court

8. Dr. Shyam Sundar Prasad vs State Of Bihar (Now Jharkhand) on 14 September, 2006

Sections 18, 19 and 20 of the **Transplantation of the Human Organs Act** is pending, convicted the appellant under Sections ... Sections 18, 19 and 20 of the **Transplantation of the Human Organs Act**, 1994 against Deepak Kumar Jaiswal, Lalia (Shyam

Jharkhand High Court

9. Kiranlal vs State Of Kerala on 16 August, 2011

TRUE COPY OF THE **TRANSPLANTATION OF HUMAN ORGANS ACT** 1994

AND **TRANSPLANTATION OF HUMAN ORGANS RULES** 1995 (EXCEPTING SPECIMEN FORMS ... **Transplantation** under

the **Transplantation of Human Organs Act**, 1994 ('Act' in short) and **Transplantation of Human Organs Rules**, 1995 ('Rules

Kerala High Court

10. Mrs. N. Ratnakumari vs Unknown on 24 July, 2014

Transplantation of Human Organs Act, 1994;

_____ Mrs. N. Ratnakumari Petitioner Versus State of Odisha & others Opp. Parties For Appellant ... carried out in accordance with Andhra Pradesh **Transplantation of Human Organs Act**, 1995 (hereinafter "1995 A.P. TOHO Act") without

Orissa High Court

VI. SOME OF THE INTERESTING COMMENTS FROM THE DOCTORS REGARDING ORGAN TRANSPLANTATION⁽²⁾:

➤ "Health is a state subject in India. The problem with this model is that some→ states implement processes vigorously, while others do not. In the field of deceased organ donation Tamil Nadu has the most evolved program with excellent results. There is some state driven activity in Kerala, Karnataka and Maharashtra while in other states it is NGO/individual driven or there is no organ donation at all. The key to organ donation is increasing awareness at all levels. Organs are a national resource and allotment has to be a fair and transparent process"

- **Dr. Avnish Seth, Gastroenterologist (Transplant Head), Fortis Memorial Research Institute, Gurgaon**

- **Director, Fortis Organ Retrieval & Transplantation (FORT)**

➤ "Relatives of potential brain-dead donors are reluctant to donate because they→ do not believe that the patient is dead. This is due to ignorance and lack of trust in doctors"

Dr. Prakash Khanduri, Professor at St. Stephens Hospital, Delhi

➤ "Firstly, the concept of organ donation largely is cultural. It has a distinct→ connection with the cultural perceptions of charity and donation. For example, to people in the Jain community, donating blood or organs or a body is highly acceptable and is not at odds with their religious beliefs. Secondly, it is difficult to declare brain death in India and then talk about organ donation, as the common perception would be that the brain death was declared by the hospital to acquire the organ and make money. Thirdly, it is difficult to communicate and discuss the issue about donation to the family of the deceased because there is a fear of how they might respond to it"

- **Dr. Tanmay Pandya, Consultant, DM Nephrology, Primus Super Specialty Hospital**

➤ "More work on the awareness front is required. Incentives should be given for→ organ donation, such as preference to be given to people with an organ donation pledge when requiring an organ"

- **Dr. Aman Gupta, Consultant Urology and Kidney Transplant, Fortis VasantKunj, Delhi**

➤ "Posters which say "Donate Organs and Save Lives" should be put up at burial→places, cremation grounds. The Social and Health Ministries should be involved and appropriate action plan should be prepared for the

message to be disseminated through Television and other media”

- Dr. S.C. Tiwari, Fortis, VasantKunj, Delhi

- “There must be a centrally organized program. India should be divided among → different zones with each zone having a Central/Zonal office that could coordinate with the hospitals falling under its ambit”

- Dr. P. B. Singh, Director, Institute of Urological Science, Max Super Specialty Hospital, Delhi.

- “There is poor infrastructure with regards to deceased organ transplantation in → our country, without any centralized system. Poor transportation facilities for accident patients in the extremely congested cities, lack of awareness amongst the people and lack of trust in the fairness of medical system for deceased organ donation are major obstacles to development of deceased donor transplant in our country”

- Dr. Vijay Kher, Chairman, Division of Nephrology and Renal Transplant Medicine, Medanta - The Medicity, Gurgaon

- “Going by past experience in some pockets of India, it takes 8-10 years of → concentrated efforts by a dedicated team (NGO or Govt.) for organ donation, before we can expect a change in the society”

- Dr. Ravi Mohanka, Senior Consultant Hepato-biliary and Transplant Surgeon, Medanta - The Medicity, Gurgaon

Key take-away notes from the discussions with the doctors:

1. Infrastructure needs to be stepped-up. Government hospitals must have the right facilities to conduct organ transplants in a smooth manner.
2. Awareness about the process is the key. Government must come up and take nation-wide initiatives in partnership with NGOs and other national groups. People are willing to donate if they are convinced and made aware
3. Declaration of brain deaths must be made a simple and straight-forward process without too many bureaucratic hassles for the doctors.
4. Donor cards need to be centralized (using driving license or govt. ration cards)

Other inputs from the primary research (This section is an anecdotal account, containing insights shared during the fieldwork)

VII. THE KEY PROBLEMS WITH RESPECT TO DECEASED ORGAN DONATION (2):

Public response to deceased organ donation is quite poor in India as suggested by most respondents. In the case brain

deaths especially, the first set of problem arises in convincing the patient’s relatives before the organ of the deceased can actually be retrieved.

Points to note:

- a. The relatives feel that adequate treatment has not been done, which is probably due to the general perceptions of health care in India.
- b. Due to an over-burden of patients in government hospitals, and infrastructural limitations, the hospital in most cases does not make additional efforts to pursue the matter.
- c. In the case of private hospitals, treatment is so expensive that as soon as the doctors approach the patient’s relatives with the proposal of donating the organ, there is unpleasantness. The situation can intensify to the point of vandalism in the hospital, as shared by a consultant at a specialty hospital.
- d. A very senior transplant coordinator from a certain hospital which conducts over 200 transplants in a year said, that unlike what happens in England, where he worked previously, the counseling team (if the hospital has one) here only starts approaching the patients family once the patient is deceased. This is unlike the UK, where the team of counselors builds an informal rapport with the patient/relatives once he/she gets admitted to the hospital. The counselors’ work is to enquire about the patient’s health progress, and in critical cases, prepare the patient’s relatives about the impossibility of the patient’s survival (if at all).

With a personal involvement and association early on, the hospital builds up a rapport to be able to approach the patients’ family for donation after the patient passes away.

DECISIONS ON WHO CANNOT RECEIVE ORGANS:

Based on the primary research here are some of the insights as to what guides the concerned medical practitioners to take a call on who would not get a preference in receiving the organ. These declarations are strictly opinion-based and were shared by some medical practitioners during the interview.

- Patients with terminal cancer
- Patients with HIV
- Patients with active systematic infection.
- Psychiatric illness.
- The life expectancy of the person is also taken into consideration.
- Elderly who are more than 65 years of age because the chances of them responding positively to organ donation or transplant is low. Although a certain hospital made us aware that this is not really a strict clause as they have performed transplants on people aged above 70 years.

PRE-TRANSPLANT EVALUATION FOR LIVE DONATIONS:

There are certain pre-transplant evaluations, which are done before the transplant happens to get a clearer idea on the individual’s health profile. These are:

- a. Tests done to understand if the patient has any urological problem.
- b. Test if blood transfusion is required.
- c. Test for chronic infections.
- d. Psychiatric evaluations are done to understand the patients’ mental health.

This also involves laboratory investigations which simplistically saying are the following:

Stage 1: Blood group of the patient –

- a. HBsAG antigen test, HCV and HIV test
- b. Urine research and monitoring
- c. CMV (Cytomegalovirus) serology
- d. X-ray and Bladder checks.

Stage 2: Tissue type and PRA (Panel Reactive Antibody)

To decide on who can donate, the following types of donations are allowed (according to the Human Organ Transplantation Act):

- a. Blood Relative, called ‘near relative’
- b. Altruistic Donation which is ‘non-near relative’
- c. Deceased organ donation

Stage 3: Donor Investigation

- a. Determining compatibility in terms of blood group:

Recipient	Donor
O	O
A	A/O
B	B/O
AB	AB/O/A/B

In case of kidney transplants HLA matching is also done. Now, even blood group incompatible, swapping methods can be used in the case of transplants, wherein the donor and recipient need not be compatible according to the above scheme.

FORMS REQUIRED IN THE DONATION TRANSPLANT PROCESS:

We were told that the following are the type of forms that must be filled out as a legal necessity. Both the parties, i.e. the hospital and patient/patient party need to fill up the following forms in order to go ahead with the process of donation:

- a. Donor authorization form
- b. Donor statements of health, giving evidence that he/she is in a condition to donate

- c. In case the donor is a near relative then HLA clearance has to be given by the Genetics lab.
- d. Form required in case of spousal donation.
- e. Forms must be filled out for deceased donors.

We were also informed that according to the legal guideline, every hospital is required to have Government registration to declare brain death. Moreover, the Directorate General of Health Service gives authorization separately for each organ. Without having separate registration for each organ, it is illegal to carry out any transplantation within the hospital.

PITFALLS OF THE CENTRALIZED REGISTRY SYSTEM IN THE CONTEXT OF THE DELHI-NCR

In case the central government registry system becomes functional there are a few factors which we need to be carefully looked at. Delhi for instance will fall under the central as well as the state domain. Noida and Gurgaon which are part of UP and Haryana respectively will be registered under their respective states. This is likely to generate another level of complication since health is a state subject. Therefore in this case an organ in Medanta will not go to someone in Delhi, but will be routed through Chandigarh to go to somewhere in Haryana. This according to a very senior doctor who was associated in transplantation says that something of this sort will make the process complicated which doesn’t make sense. According to him there will have to be intense political negotiations with Haryana and UP governments as to which hospitals fall in which area. At the moment there are no zonal divisions, but only in terms of states.

IN THE CASE OF NON-TRANSPLANT HOSPITALS AND NURSING HOMES

These medical centers are crucial because a lot of accident victims are taken here for treatment. However these centers aren’t equipped adequately as there are no transplant coordinators, no battery-operated ventilators, no ambulances, no way to declare a brain-death or even identify a brain-death. Also, they have no incentive to cooperate right now with the Organ Donation programme. So the pertinent questions are:

- What incentives can the government give to them so as to equally involve them in the organ donation process?
- What facilities can they sanction for these centers? (Note: They should also have a transplant coordinator at least on call).

So the government will have to provide all these facilities (or monetary incentives) to these places and work out a system for them to be actively involved.

Poor regulation, Little Data, and Few Criminal Cases; a New Report Looks at How the Organ Transplantation Act Failed

Though the Organ Transplant Act has been in place for 23 years, with amendments brought into force in 2014, there remains a critical shortage of organs and lack of access to those legitimately available, because of inefficient or absent infrastructure and high costs

VIII. ORGAN TRANSPLANT LAW

Assessing Compatibility with Right to Health by the Vidhi Centre for Legal Policy, an independent legal advisory group, examined the Transplantation of Human Organs and Tissue Act, 1994, to find serious lapses in how organ donation is carried out in India.

Though the Act has been in place for 23 years, with amendments brought into force in 2014, there remains a critical shortage of organs and lack of access to those legitimately available, because of inefficient or absent infrastructure and high costs. The authors of the report encountered many cases of commercial organ trading, which is a criminal offence. However, only 16 people were on trial in various high courts and the Supreme Court, in 2016, for offences under the Act.

The report, called the first such to examine the law, is damning, when it examines how the Act has been enforced. From RTIs, Vidhi found out that neither states nor the Centre maintain centralised data on the complaints heard and adjudicated by the Appropriate Authorities". They examined, instead, cases in high courts and the Supreme Court from 1994 to May, 2017. They found "56 percent of cases litigated under the Act are by donors and their families seeking permission for organ transplants. In comparison, only 20 percent of cases litigated under the Act are with respect to the criminal offences under the Act."

Thus, most cases are brought to court by those trying to get access to organ transplants, and appealing against decisions taken by their state Appropriate Authority.

An Appropriate Authority is a state appointed figure, assisted by Advisory Committees, to regulate service providers -- hospitals and doctors -- and grant, renew, suspend or cancel their registration. No hospital or tissue bank can remove, store or transplant human organ or tissue without this registration. This system, often exists only on paper. The report says, these committees don't exist in most states, and where they do, they do not act in a uniform manner across states.

Thus, despite much anecdotal evidence of wrongdoing, very few doctors or hospitals or related health professionals get penalised. Replies by the Maharashtra Medical Council and Delhi Medical Council to requests under the RTI Act revealed that neither State Councils have suspended any medical practitioners under this provision so far, said the report.

Data collection, too, is abysmal. The Act says, the National Registry on Organ Transplants must include demographic data about the patient, donor, hospitals, recipient and donor follow up details, transplant waiting. However, registries for organ and tissue donation have only been set up in Tamil Nadu, Kerala and Rajasthan. In most states, data on organ and tissue transplantation is not maintained uniformly. States and union ministries don't maintain yearly reports on the operations of these registries.

India has one of the worryingly low rates of organ donations. Data from the National Organ and tissue Transplantation Authority (NOTTO) says that 500,000 people in India need organ transplantation annually, with most dying by the end of the year. Of those, 200,000 need a kidney, 100,000 need a liver. Only .01 percent of Indians pledge to donate organs.

The problem is compounded by lack of skilled surgeons and a lack of facilities in rural areas, says the report.

An online system through website is being developed for establishing network for Removal and Storage of Organs and Tissues from deceased donors and their allocation and distribution in a transparent manner. A computerized system of State/Regional and National Registry of donors and recipients is also going to be put in place.

TRAINING

There is provision of training of various cadres related to Transplant including Transplant Coordinators. Post-Doctoral Certificate in Dialysis Medicine course has been launched since 2012 academic session in collaboration with IGNOU, New Delhi to augment the availability of trained manpower for undertaking dialysis in the country.

Financial Support for immune-suppressants, maintenance of deceased donor:

There is provision for financial assistance to 100 needy and poor, BPL transplant recipients every year to provide financial support at the rate of Rs.6000/- per month for immunosuppressant therapy. The programme provides financial support for maintenance of deceased donor at the rate of Rs. 50000/ per donor when maintenance is done in a private hospital and organ is allocated to a Govt. Institution.

Coordination with Govt. Medical Colleges, Good Performing Private institutions and trauma Centers.

There is provision of providing transplant coordinators at identified Government Medical Colleges, Trauma Centers and good performing private Institutions.

Information, Education and Communication (IEC) activities:

The programme has main component of Information, Education and Communication (IEC) activities to promote organ donation from deceased donors.

Bibliographic Information on Transplantation of Human Organs⁽⁷⁾

National Human Rights Commission Library, New Delhi has compiled and consolidated information from various sources on Transplantation of Human Organs to help the users in literature survey of printed and electronic material available in the Library of the Commission and many important Libraries of Delhi.

This Bibliography is available in the following form:-

1. Eye Donation and Transplantation of Cornea: Legal issues and Implications. See Annual Report 1999-2000. p 81
2. NHRC Annual Reports Containing information on Transplantation of Human Organs

Organ Donation and Health Insurance in India

Most health insurers offer an organ donation cover for hospitalisation costs. Some of the expenses include organ screening, hospitalisation charges, pre-hospitalisation expenses, organ transplantation surgery, post-surgery monitoring, etc.

As humanity has advanced through the ages, medical science has kept pace – extending our lifespan and keeping us protected from deadly viruses. The number of deaths that were attributed to organ failure have reduced thanks to the incredible advancements in medical science that enable us to replace organs that no longer function.

Advancements in medical sciences today have resulted in humans being able to replace malfunctioning internal organs with fully-functional ones, but at a price.

The price is a result of the complications involved, the risks and liabilities that everyone involved in the process (especially on the part of the medical professionals) exposes themselves to. Though it's a seemingly miraculous procedure, it's still highly complicated, risky, and expensive.

Cornea transplants can cost around Rs.1,00,000, heart transplants are in the range of Rs.10,00,000 and the more expensive liver transplants can burn a Rs.25,00,000 hole in your pocket.

In order to protect your pocket and savings from taking such a huge hit, should it become necessary, many are stepping up and offering insurance products which have in-built organ donation clauses. But are these clauses all they're cracked up to be?

As we all know, insurance companies like to protect their own interests with extremely detailed and intricate policy documents that you need a calculator to decipher. Here are some of the areas of fine print in your policy document you'll need to analyse with a fine toothed comb, in order to

ensure that you're making the most of the organ donation part your insurance policy.

Expenses in Organ Transplantation:

Most insurers with organ donation cover will only cover the cost of hospitalization, which would work out to about 10% (if you're lucky) of the total expenditure involved in an organ transplant.

Here are some of the broad headings under which you'll be spending:

1. Organ screening. Before a person can be hospitalized for the purpose of an organ transplant, the right organ must be found. There are many factors involved in finding the right organ to replace the malfunctioning one, and finding the right donor is expensive.
2. Pre-hospitalization expenses. After finding the right organ to transplant from the right donor, the person undergoing the surgery will need to be brought to the right medical condition with drugs and pre-surgery preparation.
3. Hospitalization charges. These include the room charges, nurse and doctor's fees, etc.
4. Organ transplant surgery. The complicated and risky process of actually transplanting an organ between the donor and recipient.
5. Post-surgery hospitalization, monitoring. After the surgery, it's not like the recipient can just pick up his bag and leave the hospital. He or she will be monitored under various situations and the stability of the organ will be judged, in order for the patient to live a normal life.
6. Rectification of complications arising out of surgery. There have been, sadly, many cases reported wherein the surgery had been performed successfully, but the patient had developed many new symptoms, or the organ was being rejected by the body. Rectifying these problems is an arduous and complicated process, and may double or even triple the entire bill.

Apart from these expenses, there will be many more expenses on the ground level that won't necessarily make it into your insurance provider's coverage. Expenses like pharmaceuticals, ambulance charges, expensive medicines and drugs, extra care facilities in hospitals, etc. all add up to a tidy sum.

Many hospitals today offer organ transplant surgeries as package deals for a predetermined set amount (which is usually sky high), instead of breaking down and categorizing the expenses under clear headings. This makes it more difficult for the insurer to find out how much it is liable to pay you.

There are a few companies that cover more than one of the above expenses. Star Health and Max Bupa cover the actual cost of the surgery in addition to hospitalization, but ICICI Lombard, HDFC Ergo and Apollo Munich have avoided the coverage of this huge expense.

While purchasing your health insurance policy, look for the different types of expenses and find out whether there is comprehensive coverage for all the expenses you'll incur. An insurance provider can simply cover your hospitalization expenses and get away with marketing their policies as "Organ donor coverage" policies.

In any case, coverage for organ transplantation and donation is relatively new, and until the kinks are worked out in the policy wordings, we can only expect minimal / surface level coverage for expenses arising out of this manner of hospitalization.

More and more insurance providers – Religare, Apollo Munich, Max Bupa, Bharti AXA, HDFC Ergo and Star Health – are slowly waking to the reality that donor and transplantation insurance is a product whose demand is rising fast. We could see a large number of highly comprehensive insurance policies flooding the market in the near future, as long as the insurance companies read the signs and fill this incredibly important niche requirement in insurance.

GST rate of 18% applicable for all financial services effective July 1, 2017.

Disclaimer: Premiums may vary depending upon factors like age, location and prevailing taxes/GST.

'India Is A Leading Market In Organ Transplantation'

Strong hold of the country in organ transplantation and ayurvedic treatment has helped India to attract patients across the border, says Swadeep Srivastava

The head of the Apollo Liver Transplant, Indraprastha Apollo Hospital, Dr Neerav Goyal said that India is a leading market in terms of organ transplantation in the world while speaking at 4th BW Businessworld Healthcare Summit & Awards at Hyatt Regency, New Delhi.

Being part of the panel discussion on Medical Tourism, Goyal threw light on the existing challenges India is facing with respect to attracting patients from all over the globe. He emphasized that we need to focus on non-medical infrastructure if we intend to become a global destination for patients coming from developing as well as developed nations.

The market size of the medical travel industry in India is expected to reach \$3 billion by 2023. Currently, it is booming at a Compound Annual Growth Rate (CAGR) of 25 per cent. The cities which attract global patients the most are Chennai, Delhi, Bangalore, Ahmedabad etc.

According to Swadeep Srivastava, Managing Partner at India Virtual Hospital and moderator of the panel, the

biggest factor why India has remained a global platform for patients coming from abroad is the fact that we provide them with the treatment at 1/10th of the cost in comparison to other countries such as the US and the UK.

"Other than this, quality and quantity of hospitals we provide them with, is yet another rationale answering why we have enabled to make this industry bloom," he added.

Srivastava also added that the strong hold of the country in organ transplantation and ayurvedic treatment has helped India to attract patients across the border.

India draws around 2 to 3 lakh patients per annum as compared to Bangkok which attracts 10 lakh patients per year.

Digambar Naik, Head of Cardiology at Razagiri Victor Hospital, pointed out the various problems existing in the industry from having a need to develop standards to the importance of 'word of mouth'.

Naik said, "All great hospitals need not be good." There are myriad of factors which need to be considered such as coordination, cooperation and knowledge sharing among others.

Tarun Sahni, Sr. Consultant & President at Hyperbaric Society of India, explained that India facilitates patients with compassion. Easy accessibility, excellent value for money and a friendly environment are the reasons for the growth of this industry.

Concluding the panel discussion, Amaresh Tiwari, Treasurer at The Indian Association of Tour Operators (IATO), spoke about the problems with VISAs, Insurance policies and the requirement of Indian medical and wellness to go hand in hand.

IX. TYPES OF TRANSPLANTS

1. **Auto graft:** Auto graft means transplant of issues from one person to oneself. For example Skin graft, vein extraction for coronary artery bypass graft. A transplanted organ or tissue from a genetically non identical member of the same species as organ or tissues are transplanted from one to genetically identical other person. Xenotransplant is performed between different species Example: Animal to human.

2. **Liver Transplant:** Liver is the body's largest organ located on the upper right side of the abdomen, under diaphragm and to the right of the stomach, and is dark reddish brown organ and normally weighs around 1.4 Kgs., It normally holds 13% of the body's blood supply at any given movement. The important functions of liver are (i) making bile, a substance needed to digest food; (ii) producing certain proteins for blood plasma which aids in clotting, oxygen transport and also functioning of immune system; (iii) helps the body to store glucose in the form of glycogen.

Makes cholesterol by breaking saturated fat; detoxifying the blood of drugs and other harmful substances. Liver transplant is a surgical procedure confirmed and replace diseased liver with the healthy liver from another person. Normally a section of the liver is transplanted and that section grows slowly to become a full liver. Liver is the only organ in the body to regenerate the transplanted the portion of liver and rebuilt with normal capacity within weeks. In India there are certain rules that donor has to follow while donating full or part of liver to the recipient. Normally the donor has to be a blood relative of the recipient and is required to present the legal documents as per the transplantation act. A liver transplant is usually recommended when the liver has been damaged to the point that it cannot perform its normal functions or end stage liver disease (ESLD) which is life threatening. As with any surgical procedures the liver transplantation is also having risk of bleedings, blood clots, infection, brokeage of the blood vessels to the new liver, leakage of bile or blockage of bile ducts, lack of function of new liver, memory and thinking problems and finally rejection of new liver.

3. Bone marrow transplant: Bone Marrow is the soft, spongy tissue found inside the bones. It contains specialist stem cells, that produce the body's blood cells. Stem Cells in Bone Marrow produces three important types of blood cells viz., (i) Red Blood Cells, that carry oxygen around the body, (ii) White blood cells, that help fight infection and finally (iii) Platelets, that help stop bleeding / aid clotting. Stem Cell Transplant in the special therapy for patients in certain types of cancer and other diseases. The procedure involves transfusing healthy stem cells into the patient's body to replace damaged or diseased bone marrow. This procedure is necessary when the bone marrow stops working and does not produce enough healthy stem cells.

The different types of auto logos BEMT is done using cells from patient's own body or using cells from donor who shares the same genetic type of the patient (brother/sister) and umbilical cord blood transplant done using stem cells taken from an umbilical cord immediately after delivery of an infant. The advantage in this procedure is these stem cells reproduce into mature, functioning blood cells faster and more effectively than stem cells taken from the bone marrow of the donor.

4. Kidney Transplant: The main function of the Kidney is when the body converts the food into energy and in that procedure and the food that is not used for conversion is a waste product left behind the vowel and in the blood is to be filtered. The function of Kidney comes

at this stage. Kidneys are normally two in number and looks like bean shaped organs. Each about the size of a fist and vacated below the ribs towards the middle of the back. The main functions of kidney are (i) to remove liquid waste from the blood in the form of Urine (ii) to maintain the stable salts and other substances in the blood, (iii) produce erythropoietin, a hormone which aids the formation of Red Blood cells and finally regulate blood pressure.

The damage of the nephrons in the kidney's make them diminish their filtering capabilities. This condition of non filtering capabilities is termed as Kidney Disease or Mal Functioning of Kidney. Due to this the harmful substances remains in circulation in the blood causing life threatening over a period. When this kidney disease is left unattended can cause multiple organ failures and finally leads to death. A Kidney transplant is considered to be the best procedure for recovery of Kidney ailments. It is a surgical procedure performed replacing a diseased Kidney with the healthy Kidney from the Donor. Normally Kidney transplantation are done between living related donor and recipient (Parents, sibling or child) or a living unrelated donor such as friend or spouse and a person who died recently and willing to donate his/her healthy kidney. Healthy Kidney is normally transported in two saline water that preserves the organ upto 48 hours. The Donor and the recipients strictly follow the legal formalities that are embedded in organ transplantation Act.

X. CONCLUSION

Organ Donation is one of the nobles ways of donating once own healthy organ to a recipient who is badly in need of organ and suffering with an end stage disease by donating an organ from a healthy body of a donor, the donor is giving life to another person who is otherwise cannot survive for long. The development of medico science has opened a new chapter to give fresh lease of life to a person otherwise declared that will be short lived. Off late the development of technology and techniques coupled with robo tech made this organ transplantation more easier more specific more accurate than before. However, the donor concept of organs is not getting popularity because it involves ethical, social, cultural, moral and psychological issues. Some religions believe that removal of an organ from a dead person will prohibit the body for rebirth. In addition, the loop holes in the laws and which are not effective has become a lucrative business normally called organ trade. Many hospitals and middle men are influencing the down trodden and uneducated village laborers who are being persuaded to donate their organs for a lucrative amount is one of the black spot in organ transplantation. There are many hospitals involved in this organ racket including foreign healthcare providers. The need of the hour is to

educate the people regarding organ donations and also to clear the myth and also religious beliefs by healthcare professional and also social workers. Mohan Foundation is one such organization doing yeomen service in educating the public regarding organ donation. There are other organizations doing the same.

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