

Organ Transplantation in Vidarbha - Overcoming the challenges

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'Recycle Life, be an Organ Donor'

Organ transplantation is the only alternative to the permanent organ failure be it heart, lungs or liver. For end stage renal disease, kidney transplant provides better outcome than dialysis in selected cases.¹

There is a wide gap between patients who need transplants and the organs that are available in India. It is estimated that around 1,75,000 kidneys and 100,000 livers are needed every year in India and only about 2-3% get it. Similarly about 50000 persons suffer from Heart failures annually but only about 10 to 15 heart transplants are performed every year in India. In case of Cornea, about 25000 transplants are done every year against a requirement of 1 lakh².

By conservative estimates over one lakh Indians die in road accidents every year and 40% of those people are brain dead before death. These victims of head injury from road traffic accidents alone, are in enough numbers to meet the demand of potential donors of organs in the country. The total organ donation shortage of the country can be met with if even 5 to 10% of these persons involved in fatal accidents serve as organ donors³.

Earlier, patients with end stage renal disease in Vidarbha had to travel out for organ transplantation. Organ transplantation in our region has proved to be a boon for such patients as it is not only physically convenient for patients and families but it is also economical.

First kidney transplantation in Vidarbha region was performed on 27th November 1990 when a young engineering student was transplanted at Mure Memorial Hospital, Nagpur. Donor was his mother. Since then 10 kidney transplants were successfully

conducted at Mure Memorial Hospital and later stopped after 1994 when Transplantation of Human Organ Act (THOA) was passed in parliament which needed upgrading the infrastructure of the institute where organ transplantations are performed. There was a lull of about six years and in the year 2000 again, live donor kidney transplantations were restarted.

First deceased donor kidney transplantation in Vidarbha was done in 2005 which met with disaster as both the renal recipients developed complications and did not survive. There was again a gap of about 7 years and cadaver transplant program restarted with the establishment of Zonal Transplant Coordination Centre in 2012. Since then deceased donor transplants are done regularly.

Presently among solid organ transplants, Kidneys, liver, cornea and skin are regularly transplanted amongst different transplant centres in Vidarbha region. Heart and lungs are shared at regional, state or national level through ROTTO*, SOTTO* or NOTTO**.

Few Non-transplant Organ Retrieval Centres (NTORC) have been added in this region which are permitted to carry out organ retrieval for transplantation.

The aim is that not a single organ should go waste in view of organ shortage. The ZTCC also keeps a record of the organs transplanted and their outcome on short and long term basis.

As per data released by ZTCC, Nagpur, 68 kidneys, 23 livers, 8 hearts, 1 heart and lungs were retrieved and transplanted from 38 brain stem death donors, since the year 2013 till date. Out of them twin kidneys of 6 years old girl was transplanted en bloc in a 14 years old boy. First deceased donor liver transplant in Vidarbha was performed in 2018.

ZTCC, Nagpur shared 2 Kidneys with ZTCC-Mumbai, 8 Livers with ZTCC-Mumbai and 5 livers with Pune. In Nagpur 10 liver transplants were done. 4 hearts were shared with ZTCC, Mumbai and 3

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with ROTTO, Chennai. One heart with lungs were shared with ZTCC, Mumbai. 2 Livers were received from ZTCC, Aurangabad.

Till date relatives of 34 deceased donors consented for skin donation.

In order to cater to most patients awaiting organ transplant, we need to increase organ donation by increasing awareness about paired donation or domino transplant⁵ and also about organ donation following brain death which can be achieved by public awareness and removing many of the myths surrounding organ donations following death. There is also a need for awareness among medical professionals about organ donation and the urgency with which decisions have to be taken once brain death is suspected.

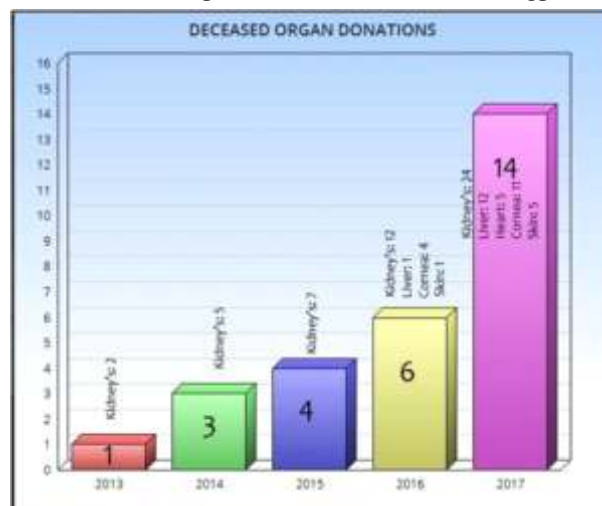
Maintenance of deceased donor is of utmost importance and challenging task for better quality of donated organs. Prevention of hypotension, dehydration, electrolyte imbalance, hypothermia, early identification and aggressive treatment of sepsis, care of respiratory tract, skin and eyes are all important. There is need for holding continuing medical education for physicians, especially intensivists from time to time to update the recent advances in this front.

Once organs are retrieved, these must be harvested and transported properly at earliest to the transplant centre for engraftment to prevent ischemic insult to the organ. Coordination with police officials is very crucial for creating green corridor for transportation of organs.

Many times relatives refuse to donate organs because they want body to be handed over to them at earliest for last rites. This is possible only after post mortem and police clearance. If the authorities can perform autopsy in the operation theatre itself following organ retrieval then the delays can be prevented. Or else, autopsy of organ donors should be done in priority keeping humanity in mind⁴.

We have started our journey, albeit slowly, but slow and steady wins the race! The race is for a healthy life of our patients suffering from end stage organ damage.

Deceased organ donations since inception of Zonal Transplant Coordination Centre, Nagpur



*ROTO Regional Organ and Tissue Transplant Organisation.

** SOTTO State Organ and Tissue Transplant Organisation.

*** NOTTO National Organ and Tissue Transplant Organisation.

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