

An Autopsy based Study of Profile of Organ Donors and type of Organs Retrieved in Cases Attended by Faculties of Department of Forensic Medicine and Toxicology, Sabvmcri, Bengaluru- A Cross-Sectional Study.

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ABSTRACT

Organ donation is remarkable achievement in modern medicine which helps those suffering from chronic incurable end organ diseases. However, the process of organ donation and transplantation is not devoid of ground level difficulties like timely diagnosis of brain death, harvesting of organs during the supravital period, transporting the retrieved organ to a facility where transplantation is to be conducted and in Medicolegal cases the Forensic Pathologist has to examine the patient and allow/disallow the retrieval of organ based on their necessity in determining cause of death. The Forensic Pathologists can do their bit in expediting the above mentioned process by conducting the autopsy in operation theatre where organs were retrieved. This practice is being followed in Telangana, Tamil Nadu and now in Karnataka. This paper aims to study the profile of organ donors, analyze the types of organs retrieved and to highlight the role of Forensic Pathologists in expediting the process of organ donation and transplantation.

Keywords: Organ donation, Forensic Pathologist, Medicolegal case, operation theatre.

INTRODUCTION

Organ donation and transplantation is a life saving procedure. Organ donation rate in India is only 0.65 per Million population and is far behind the leading countries like Spain and USA¹. Governments both at central

and state level have taken many steps in this direction like legal framework under Transplantation Of Human Organs and Tissues Act (TOHOTA) 1994, National organ transplant programme 2014, National Organ Donation Day on November 27 of every year to

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spread awareness, National Organ and Tissue Transplantation Registry (NOTTO), State Organ and Tissue Transplantation Registry (SOTTO) etc². This study was conducted to analyze the profile of organ donors, types of organs retrieved in Medicolegal cases, where the autopsy was carried out by faculties of Department of Forensic Medicine and Toxicology, SABVMCRI, Bengaluru and to highlight the role of Forensic Pathologists in expediting the process of organ donation and transplantation.

AIMS AND OBJECTIVES

1. To analyze the profile of organ donors.
2. To analyze the types of organs retrieved in the Medicolegal cases, where the autopsy was carried out by the faculties of Department of Forensic Medicine and Toxicology, SABVMCRI, Bengaluru.

MATERIAL AND METHODS

Study Type: Cross-sectional study.

Duration of Study: 1st January 2022 to 31st December 2022.

Inclusion Criteria: Medicolegal cases in which organs were retrieved and attended by faculties of Department of Forensic Medicine and Toxicology, SABVMCRI, Bengaluru.

Exclusion Criteria: None.

The details were collected from Medicolegal cases (MLC) Register of Mortuary, Department of Forensic Medicine and Toxicology, Bengaluru.

RESULTS

A total of 37 cases were studied in the duration of 1 year (2022) and following observations were made.

As far as the profile of donors is concerned, majority of the donors were males (Fig. 1).

The peak activity of organ donation was shown in deceased aged 26years and 38years. (Fig. 2)

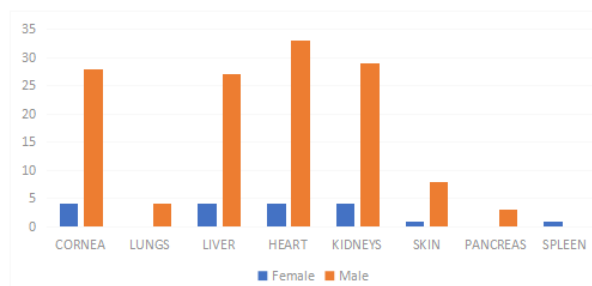


Fig. 1: Graph showing organ donation by Gender

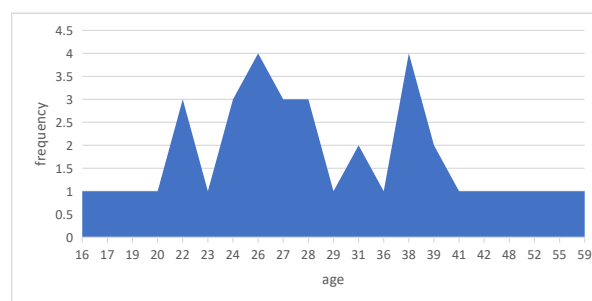


Fig. 2: Graph showing Frequency of organ donation by age.

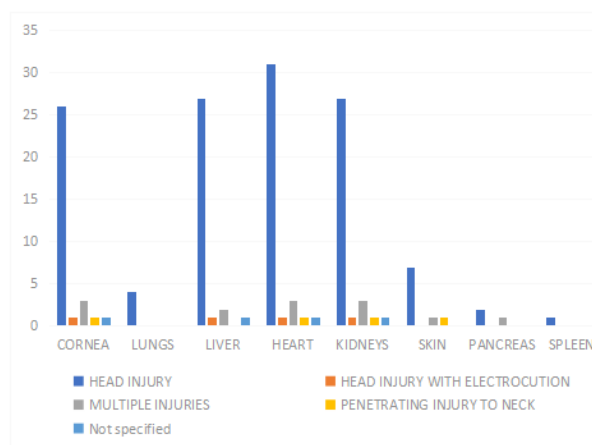


Fig. 3: Graph showing cause of death among organ donors.

On analyzing the cause of death in organ donors, majority of them had sustained Head injury. Most commonly retrieved organs are Heart, Liver, Kidneys, Cornea and Skin in that order. Spleen was retrieved only in one case; it is placed in recipients to reduce the chance of graft versus host disease⁴ (Fig. 3).

Manner of death among most of the cases was Accidental in nature, where the majority of deceased met with Road Traffic Accidents. One case had Homicidal injury (Fig. 4).

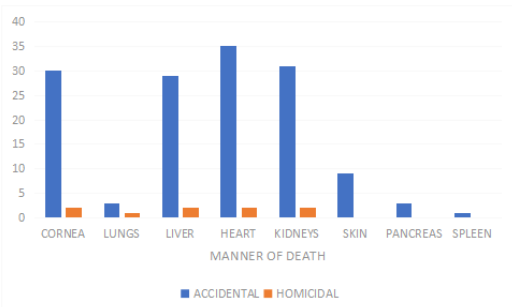


Fig. 4: Graph showing manner of death among organ donors.

DISCUSSION

The demand for organs is 2.5 Lakh Kidneys, 80,000 for Liver, 50,000 for Heart and 1 Lakh for Cornea². Moreover, the organ retrieval should be done precisely in the narrow time period as following 4-6hrs for Heart, 4-8hrs for Lungs, 24-48hrs for Kidneys and 12-15hrs for Liver². The main reasons for delay in organ donation are time consuming confirmatory tests of brain death which need to be repeated after an interval of 6hrs, once the consent is taken the process of co-ordination for organ retrieval takes time and in Medicolegal cases the police conduct inquest and the Forensic Pathologist has to examine the patient to allow/ disallow particular organ to be retrieved based on its requirement for further investigation into cause of death. To prevent such delay the faculties of Department of Forensic Medicine and Toxicology, SABVMCRI attend the hospital where Brain death is declared and conduct postmortem examination⁵. This practice is being followed in Telangana and Tamil Nadu even before its commencement in Karnataka⁶. This Protocol for PM examination is notified by union Health Ministry in order dated 21 November 2021⁷.

CONCLUSION

By doing Postmortem examination in Operation Theatre where Organ retrieval is done, the process of organ donation and other Medicolegal procedures to be done

in Medicolegal cases is hastened. As it is highlighted in this paper that the availability of organs is still less than demand. Therefore, in more and more states legal framework should be brought into force by consulting all the stakeholders to ensure that such practice is followed and the delay in availability of organs for transplantation is reduced.

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Conflict of Interest: None declared.

Ethical Clearance: Taken from the institutional ethics committee.

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