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OVERVIEW OF ORGAN DONATION IN BRAZIL- A BIBLIOGRAPHIC REVIEW

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Abstract: Given the importance of transplants for the treatment of various diseases and the unfavorable relationship between demand and supply of organs, it is necessary to understand the details of the donation process. This bibliographic review aims to discuss the current situation of organ donation in Brazil and in the world, focusing on national guidelines for determining brain death and the challenges faced in obtaining family consent for donation. Foreign strategies to reduce transplant waiting lists were also reviewed, in order to raise the reflection on the possibilities of confronting the issue on a national level. The methodology was based on the search for references using the following keywords: Organ Donation; Organ transplantation; guidelines; Brain Death; Consent. The current scenario of organ donation, although far from ideal, has the possibility of improvement, once efforts are implemented to understand and mitigate the reasons for refusing consent to donation.
Keywords: Organ donation, Organ transplantation, Deceased Donor, Brain Death, Circulatory Death, Protocols, guidelines, Ethic, Consent, Family.

INTRODUCTION

Organ transplantation is an effective therapy for the treatment of various diseases. However, currently the number of transplants performed in the world does not supply all the global demand (Citerio et al., 2016), so it is possible to understand how the incentive to organ donation, which depends on the understanding of its entire conjuncture, is extremely important.

GOAL

This bibliographic review aims to clarify the information available so far on organ donation by deceased donors (with emphasis on donation after brain death, due to its greater national relevance). It is hoped that the study can contribute to the dissemination of concepts and processes involved in organ donation after the patient's death, in order to help improve donation and transplant rates in Brazil.

METHODOLOGY

The literature review was based on the selection and collection of literature performed by the authors through the PubMed and Scielo platforms, using the keywords and their synonyms. according to DeCS (Descriptors in Health Sciences). Laws, decrees, documents and official websites (governmental and Federal Council of Medicine) were also consulted.

DISCUSSION

OVERVIEW OF ORGAN DONATION

The donation of organs and tissues can be performed by living or deceased donors, with no age limit (WHO, 2009), (Citerio et al., 2016), as long as there is the consent of the individual or legal guardians. In the category of deceased donors, there are still two possible divisions: donation after circulatory death (CMD) or after brain death (DME) (Citerio et al., 2016). This differentiation is important because there are different processes around each of the situations.

Definitions of circulatory death and brain death

It is essential to differentiate the concepts of brain death (BD) and circulatory death (MC). According to World Health Organization (W.H.O.), BD is defined as the irreversible cessation of brain and brainstem function, being characterized by the absence of electrical activity, absence of blood flow and brain function, measured by clinical evaluation. Although cardiopulmonary functions are

temporarily maintained, the person is, in fact, dead. CM, in turn, is that resulting from the irreversible cessation of cardiorespiratory functions (WHO, 2009). According to the modified Maastricht classification, there are 5 subtypes of circulatory death: I – death on arrival at the health service; II – death after failed resuscitation attempt; III – expected cardiac death; IV – death after cardiac arrest in a patient diagnosed with BD; V – sudden death in a critically ill patient. Types I, II and V are classified as uncontrolled circulatory deaths (MCn) and types III and IV as controlled circulatory deaths (MCc) (Bedenko et al., 2016).

Another important point to be clarified is the definition of consent, which is essential for organ and tissue donation to occur. According to WHO, the consent may be informed, when it is voluntarily offered by the individual upon adequate knowledge and understanding of the relevant information, or presumed, when there is, in the absence of consent or refusal previously offered by the individual, a presumption about his or her permission for there to be a search for cells, tissues and organs for transplantation (W.H.O., 2009).

DMC and DME in the world and in Brazil

Donation after cardiac death, despite being recognized and encouraged by the W.H.O., has not yet reached its maximum potential, since many countries, such as Brazil, do not have regulations and legislation for it to occur (Citerio et al., 2016), (Citerio et al., 2016) (Bedenko et al., 2016). Where cMCD occurs, the approach to obtaining consent is when the potential donor is still alive, after the decision not to maintain life-support therapies has already been made. It is important to emphasize that, under ideal conditions, the decision on life support is addressed by a team different from the one that will carry out the donation approach (Citerio et al., 2016).

Donation after brain death is the one that occurs most of the time, since approximately 70% of the nations have legal provisions for the declaration of ME. However, DME still faces obstacles, as there is great local, regional and global variation in the diagnosis of ME. An example of this is the fact that in the United States, despite the clear guidelines of the American Neurology Association for the diagnosis of brain death, strict adherence to the protocol is established in less than 50% of cases (Citerio et al., 2016).

In Brazil, the scenario is not so different. There is, in the country, the support of the legislation and the Federal Council of Medicine (CFM) for carrying out the diagnosis of BD and carrying out the donation of organs by deceased donors (Gerais, 2017). Despite this, several obstacles make it difficult to confirm the diagnosis and make the donation – from inadequate notification of cases of BD to logistical problems (such as lack of ICU beds or lack of diagnostic equipment) or loss of a potential donor due to cardiac arrest during the process (ABTO, 2009).

Diagnosis of ME in Brazil

Law No. 9,434, of February 4, 1997, determines that the removal of organs and tissues from deceased donors must be preceded by the diagnosis of BD. The authorization for the removal of organs must be from the spouse, partner or blood relative, of greater age and legally capable, in the direct or collateral line up to the second degree and signed in a document signed by two witnesses present at the verification of the death. (Civilian, 1997), (Civilian, 2017).

According to CFM Resolution No. 2,173, the procedures for determining BD must be initiated in patients who are in non-perceptive coma, without supraspinal activity and persistent apnea, with known and irreversible central nervous system damage and without

treatable factors that may confound the diagnosis. In addition, the patient has to be under observation in the hospital for at least 6 hours. In order for the BD condition to be confirmed, two clinical examinations must be performed, by different doctors and separated by a minimum interval of 1 hour and a single apnea test (which, in specific, can be repeated). In addition, in Brazil there is a requirement to perform at least one complementary exam, despite several international recommendations considering that, due to the clinical essence of the diagnosis, this must be optional (Westphal, Veiga and Franke, 2019).

Among the possibilities of complementary exams are cerebral angiography (showing the absence of intracranial flow due to non-opacification of the internal carotids, at least above the ophthalmic and basilar arteries); electroencephalogram (demonstrating absence of brain electrical potential above 2μV); transcranial Doppler (demonstrating the absence of intracranial flow due to the presence of reverberant diastolic flow and small systolic peaks in the initial phase of systole); and brain scintigraphy (SPECT) (showing absence of brain perfusion or metabolism). (General, 2017)

It is worth mentioning that physicians considered qualified to perform the diagnosis of BD are those with at least one year of experience in caring for patients in coma, who have followed up or performed at least ten ME determinations and who have undergone specific training for this purpose. The non-mandatory participation of a neurologist in the process follows the recommendations of international guidelines. In addition, professionals involved in clinical examinations must not belong to the transplant team and only after the diagnosis is confirmed and informed can the family be approached to obtain consent for organ donation (Gerais, 2017), (Westphal, Veiga et al. Franke, 2019).

It is understood as within the legality the interruption of life support when organ donation is not feasible or is not consented, a fact defined by Presidential Decree 9.175/2017, which regulates the Transplant Law of 1997. In these cases, the body is sent for autopsy or delivered to the family (Westphal, Veiga and Franke, 2019), (Civil, 2017).

Donation process - transplantation

The organ donation process is quite complex and dynamic. To start the process, once a patient with clinical criteria for ME, the Intra-Hospital Transplant Commission (CIHDOTT), the Organ Procurement Organization (OPO) or the State Transplant Center (CET) must be communicated. In addition, there is also an obligation to notify one of these bodies after the finding of probable BD, determined after the first clinical examination, and after the diagnosis has been confirmed. In this sense, the Brain Death Declaration Form must be completed, in two copies, by the medical team that participated in the protocol. Thus, the first copy is in the patient's medical record along with the reports of the complementary exams, while the second must be sent to the CET, complementing the notification of Brain Death (Gerais, 2017). Then, before the removal of the organs, the Death Certificate is provided by the team in situations of natural causes, in situations of death from external causes, the body must be sent to the IML for autopsy and completion of the Death Certificate, this step regardless of whether the individual is a donor or not (ABTO, 2009).

Even before organ removal, a detailed analysis of the clinical history and physical examination of the potential donor. In addition, complementary exams have to be done, as well as the surgical inventory during the removal of the organs. The clinical history provides important information such as: the

medical history, life habits and geographical origin, while the physical examination offers clues to clinical conditions that may contraindicate donation or support laboratory investigations and allows the evaluation of anthropometric data to establish compatibility between the dimensions of the organs. of the donor and the recipient. Complementary tests not only guide the prioritization of recipients in the lists through blood typing, but also allow the clinical monitoring of the patient and the investigation of dysfunctions and communicable diseases. The surgical inventory is important to assess the presence of occult tumors or pathological lymphadenopathy (Westphal et al., 2016).

According to the Guidelines for the Evaluation and Validation of the Potential Donor of Organs in Brain Death, it is considered that in certain infectious and neoplastic conditions the organs cannot be transplanted. case, for example, the donor tests positive for rabies virus, West Nile virus, lymphocytic choriomeningitis, cryptococcus, or has encephalitis of unknown cause, transplantation must not be performed.

Regarding the assessment of the presence of contraindications to donation, it is essential to understand the concept of borderline donor, also called a donor with expanded criteria. They are donors who have characteristics that impair graft function or increase the risk of disease transmission, such as neoplasms or infections. The use of these donors with expanded criteria is strongly recommended when the life expectancy of the recipient with the "borderline transplant" is higher than the expectation obtained with conventional clinical therapy and has started to be admitted due to the increase in waiting lists for transplants. Thus, there is a strong recommendation that, for donors with an increased risk of transmission of viral diseases (including HIV), the information and consent of the recipient be given, in addition to being possible to perform NAT (nucleic acid testing). This is due to the shortage of organs for transplants, situation that can decrease the risk/benefit ratio of donation in certain situations (Westphal et al., 2016).

Even so, even when these are not cases of absolute contraindication, there is a strong recommendation not to perform the transplant in certain situations because they reduce the chance of success of the procedure (Porta, 2020). As an example, there are: HIV infection, positive serology for HTLV I and II, acute hepatitis, active tuberculosis, acute viral infections and malaria. Patients with clinically uncontrolled sepsis, positive serology for HIV or HTLV, or malignant tumors (with the exception of carcinoma in situ of the skin, carcinoma in situ of the cervix and some primary tumors of the central nervous system) must also be contraindicated. Organs from patients with invasive fungal infections must not be used, as well as in the presence of a history of breast tumor, hematological neoplasms and sarcomas (although in these cases of tumors there may be exceptions if the urgency for transplantation is maximum) (Westphal et al, 2016).

It is worth mentioning that the donation can also be made if asepsis is active, but the donor is hemodynamically stable or with progressive reduction in the use of vasopressors. Positive serology for Syphilis, Chagas, Toxoplasmosis, CMV HSV or EBV do not constitute a contraindication for transplantation, provided that post-transplant preventive measures are adopted. Age does not constitute a contraindication criterion for transplants. However, it is important to remember that the minimum age for the diagnosis of BD and characterization as a donor is 7 days and that increasing age increases the chances of comorbidities that hinder the process. (Westphal et al., 2016).

At the beginning of the COVID-19 pandemic, there were many contraindications to organ transplantation, such as:

Do not perform the COVID-19 reverse transcription polymerase chain reaction (RT-PCR) test prior to organ removal in some locations; not having the result of the RT-PCR COVID-19 test before the removal of the organs in other places; potential donors with exposure to COVID-19 or respiratory symptoms, regardless of RT-PCR test result for COVID-19, were previously excluded; limitations of air transport leading to a decrease in the exchange of organs between regions, due to prolonged cold ischemia times (Garcia and Pêgo-Fernandes, 2021).

The consequence of such restrictions was the increase in the number of deaths on the waiting list, especially in relation to kidney transplantation. The trend, however, is for this scenario to improve, since the list of contraindications has decreased, as well as in 2020, organ transplantation from donors with COVID-19 is recommended, provided that the clinical symptoms and RT-PCR are resolved. negative (Garcia and Pêgo-Fernandes, 2021).

Finally, there are specific medical contraindications for transplanting certain organs. For kidney donation, for example, there are organ-specific contraindications related to the kidney function of the donor, age of the donor, and the histological condition of the organ (Westphal et al., 2016).

Between the time of death and the time of organ procurement, there is another essential work to be done to optimize the outcome of transplants: patient management. This step is essential, given that functional ischemia occurs when systolic pressure drops to levels below 50mmHg or when oxygen saturation is below 70%. For CMD cases, in the countries where it occurs, efforts are focused on protecting ventilation, blood volume and cardiovascular support, so that the tissues are kept viable. For MSD cases, the management is similar, although it is necessary to pay close attention to the significant metabolic changes that occur after brain death, such as cytokine storm or disseminated intravascular coagulation (DIC) (Citerio et al., 2016). In these patients, continuous cardiovascular monitoring is indicated, as well as O2 saturation, central arterial and venous pressure, hydroelectrolyte and acid-base balance, urinary output and body temperature. Depending on the situation, some interventions can be made to maintain organic viability, such as administration of vasoactive drugs, volume replacement, acid-base correction, temperature maintenance above 35ºC and measures to prevent or treat infections (ABTO, 2009).

RELATIONSHIP OF DEMAND AND SUPPLY OF ORGANS FOR TRANSPLANTATION

Brazil is a world reference in organ donations, but the numbers are still insufficient to meet the needs of those awaiting transplantation. According to the most recent data, from June 2021, published in the Brazilian Transplant Registry (RBT), there are 45,664 active patients on the waiting list. Of this total, 26,230 people are awaiting a kidney transplant, 17,511 a corneal transplant, 1,126 a liver transplant, 274 a heart transplant, 268 a multiple organ transplant, 235 a lung transplant and 20 a pancreas transplant. In view of these data, it is worth mentioning that the rates of transplants, in general, were delayed due to the COVID-19 pandemic. Furthermore, the transplants of some organs were more affected than others; the kidney, for example, showed a decrease in relation to the 2003 numbers (ABTO, 2021).

As for the supply of organs - still according to RBT data - between January and June 2021, the total number of solid organ transplants was 3,195, of which 277 were from living

donors - approximately 8.6% - and 2,918 from dead donors (ME) - which corresponds to approximately 91.4% of the total number of transplants in the period. In the same period of 2021, Brazil notified 5,846 potential donors. Of this total, 2,810 interviews were carried out, of which 40% (1,113) resulted in refusal. Such a denial can be motivated by several factors, among them: "not being a donor in life, time for delivery of the body, the family does not believe in ME, religion/beliefs, others." (Oliveira Bertasi, De et al., 2019).

In addition, the non-accomplishment of the donation was also due to medical contraindication 26% (1,509), 7% (438) for cardiac arrest, 8% (458) for unconfirmed brain death and 14% (844) for other reasons. It is also worth noting that 8% of potential donors (458 in absolute numbers) had unconfirmed brain death and 7% (438) suffered cardiac arrest (ABTO, 2021). These two percentages could be lower with training of the teams of the Intra-Hospital Organ and Tissue Donation Commissions to

Transplantation (CIHDOTTs) regarding brain death diagnostic tests and with an appropriate managed protocol, which promotes the application of essential measures in the care of the potential deceased donor and can reduce the losses of potential donors due to cardiac arrest (Westphal et al., 2012).

Some countries, such as France and the Netherlands, have as a law the registration for potential organ donors for people over 18 years of age, after being consulted and not showing a contrary interest while still alive (Coelho and Bonella, 2019). In Brazil, organ donation is an exclusive decision of the family of the potential donor (dosSantos and Massarollo, 2005) in accordance with Law 10,211, which infers that after the death is confirmed, the family assumes the legal responsibility to authorize donation by the family member (Knhis et al., 2021). However, the rate of family non-authorization is still high when compared to other developed countries. As of 2009, family refusal has become the biggest reason for not donating organs, with the family refusal rate exceeding 50% in 13 states and reaching up to 80% in some other federative units, in 2017 (Oliveira Bertasi, De et al., 2019), (Coelho and Bonella, 2019). In this sense, family refusal remains among the considerable factors that contribute to the non-effectiveness of the donation. (Klug et al., 2020), (dosSantos and Massarollo, 2005). Also, it is worth mentioning that some donations stop happening because the family was not located or did not attend the organ in a timely manner to make the donation (Pereira et al., 2020).

In view of the factors presented, the importance of actions such as those recommended by the Ministry of Health on 09/27/2021 is evident, which encourages individuals to talk to their families about whether or not they are interested in, in a tragic event, being organ donor (Bittencourt, Quintana and Campos Velho, 2011).

THE DIALOGUE WITH THE FAMILY

Decree number: 9,175 of 2017 determines that the health team has the obligation to inform the family, when brain death is confirmed, about the possibility of organ donation. (Knishes et al., 2021). In view of this, the family interview is a meeting with the family of the potential donor, which involves some steps, which are the communication of death along with emotional support and information that the family member may be a possible donor. In view of the family's emotional and grieving situation, this moment is complex and extremely important for the effectiveness of the possible donation process, so it needs to be taken with due seriousness by health professionals (Knhis et al., 2021).), (Klug et al., 2020), (dosSantos and Massarollo, 2005). In this context, donor losses often

occur due to logistical reasons, which shows the lack of preparation of the team in relation to contact with the family and the insufficient information given about the process (Pereira et al., 2020).

The interview with the family must be adapted to their respective emotional state, since each family deals with the situation in a unique way. The vulnerable condition of relatives can end up generating emotional, physical, social and spiritual suffering. For this reason, the communication of death and the approach to decision on donation involves ethical, moral, cultural and religious issues - both from professionals involved, as well as the family itself – and will influence, directly or indirectly, in the authorization or denial of consent (Knhas et al., 2021).

Many families find it difficult to understand the information and guidance necessary for making this decision. In this sense, the interview is increasingly being improved with the development of techniques, skills in how to speak and the use of clear, honest and transparent language (Pompeu et al., 2014). Thus, in order to facilitate organ donation, it is essential that the professionals involved guarantee reception and good quality of communication, with a view to improving assistance to the potential donor and his family, and, thus, being able to increase the acquisition of organs. of organs for transplantation (dosSantos and Massarollo, 2005).

Reasons for family refusal

The main reasons for the family's refusal are: donor against donation in life, disagreement between family members, religion of the donor/family, lack of knowledge of the potential donor's desire in life, assistance provided by the medical team during the donation, family desire for an intact body and, mainly, factors related to the lack of understanding of brain death. (Pereira et al., 2020), (dosSantos and Massarollo, 2005), (Pompeu et al., 2014), (Silva, Da and Frontera, 2015).

The assistance provided to the family member during hospitalization while still alive can become a reason to influence the guarantee of consent, because, when the family believes that there was not adequate attention, it may end up refusing organ donation, based on the revolt with the professionals involved. (dosSantos and Massarollo, 2005).

Another factor that culminates in family refusal is the desire for an intact body. Inadequate information or lack of pertinent information combined with the lack of knowledge of family members can end up leading to a fanciful interpretation of how the body will be returned (Klug et al., 2020). It is not uncommon to be afraid to make the donation because they believe that, with the removal of organs, there will be a mutilation of the body. By way of illustration, we have the negative recurrent of corneal donation due to the belief that the body that would be willing would no longer have an eye (Coelho and Bonella, 2019), (Pompeu et al., 2014).

The disagreement about brain death is another important reason for family refusal. This is due to the fact that the organs remain functioning, even if artificially, inducing the family to doubt the diagnosis of death. (Pereira et al., 2020).

Regarding communication with the family of the possible donor, the professional must explain about the irreversibility of the condition and the conditions that maintain circulatory functions. At this point, it must be taken into account that most hospitalizations occur unexpectedly due to a severe and sudden brain injury, usually in previously healthy patients, so that the family understands BD (dosSantos and Massarollo, 2005).

People who understand and understand

ME have a greater ability to consider organ donation. On the other hand, family members who do not understand this diagnosis tend to believe in the ability to reverse the condition, which culminates in irritation and astonishment when the health professional introduces the subject of organ donation (dosSantos and Massarollo, 2005). In the family interview, it is necessary for the health professional who gave the news of the death to have the ability and competence to understand whether the family really understood the death of their relative (Knhis et al., 2021).

Decision and authorization for the donation

The decision and authorization for organ donation is made by the legal guardian and takes a certain amount of time. Authorization can only be made upon presentation of documents indicating the degree of kinship with the possible donor. In addition, the decision to be taken takes into account several criteria. Most of the time, the legal guardian respects the patient's wishes during life; other times, when this will is not known, the decision is usually taken together with other family members and is favorable due to the desire to help people, making the donation authorization effective (dosSantos and Massarollo, 2005).

In the Brazilian reality, the OPO (Organ Procurement Organization) is notified when the family authorizes the donation and thus the Organ and Tissue Distribution Center (CNCDO) is called to distribute the organs. The OPO acts as a supra-hospital coordination, whose objectives are to coordinate the identification, maintenance and capture of potential donors, as well as to carry out awareness-raising work with the community about the transplant policy (Ministry of Health, 2021).

Thus, it is understood that the entire donation process is quite complex and involves several steps. It is the duty of the health professional, therefore, to assume the commitment to promote the well-being of family members and to use their knowledge and empathy to help and guide them throughout the situation, being ready to solve all doubts. that may emerge (Knhis et al., 2021), (Bittencourt, Quintana and Campos Velho, de, 2011).

Approaches to families in realities beyond Brazil

The diagnosis of brain death has several subsequent medical, ethical and legal repercussions. extremely important in the organ donation process. One of the factors that greatly influence this process is how the family approach is carried out regarding the diagnosis of death and the prospecting of organs for donation. The family reaction is permeated by several factors, one of the main ones being the way in which communication is established by the health professional in his approach (Salim et al., 2011), (Ebadat et al., 2014), (Salim et al, 2007).

To understand the variables that make it difficult to make donations in order to meet the existing demand, studies have already been carried out, testing protocols to optimize donation rates. As an example, we can cite a retrospective study carried out in California, evaluating the effectiveness of implementing a program with in-house coordinators (IHC) in increasing the conversion rates of potential donors into effective donors. This program, implemented in hospitals included in the Southern California Organ Procurement Organization (OPO), consists of the continuous presence of trained staff (IHCs) in the organ procurement approach (generally composed of nurses) at the hospital. The functions of the IHCs include ensuring the daily monitoring of potential donors, organizing updates for

the hospital teams and the entire management of the donation process, as well as providing support to families in the grieving/acquisition process for the donation, the latter being the main point. studied. In the study, two types of analysis were performed: 1. Internal comparison between pre-implementation and post-implementation donation rates of the program; 2. External comparison between rates of hospitals where the program was not implemented and hospitals where it was implemented. Among the results, the lowest rates of family denial and higher rates of conversion of potential donors into effective donors stand out in both of the aforementioned analyzes (Salim et al., 2011), (Salim et al., 2007).

It is well established that the presence of representatives of organ procurement organizations in the family approach generates impacts on donation rates, especially when it comes to family acceptance. To prove this, a retrospective study carried out in Texas, USA, with the objective of identifying variables that influence on family consent rates brought important results, such as the positive impact of the approach being carried out by a representative of an OPO. In addition, it can be noted that the ethnicity and gender of this representative, as well as the duration of the conversation with family members and the time at which the approach was performed were positive predictors for acceptance of the donation. In that study, conversion rates were higher when the OPO representatives were female and of the same ethnicity as the family and the prospective donor. They were also higher when the approaches were longer and at night and in the afternoon (Ebadat et al., 2014).

In addition, another point that can directly impact the effectiveness of donations is precisely the low efficiency in the declaration of brain death. In trauma centers, where studies are mostly carried out, families were approached about the possibility of donation only after the diagnosis was made. The delay in confirming the diagnosis is related to a greater probability of loss of the donor due to cardiac arrest, greater chances of hemodynamic instabilities leading to a decrease in the quality of organs that can be donated, as well as an increase in hospital costs for patient management (Salim et al., 2007). Despite these possible negative outcomes, the increase in time for diagnosis did not seem to effectively impact family acceptance of the donation. In parallel with this, it was observed that the difference in time spent in performing the first and second clinical examination did not generate negative impacts on the decision to donate organs by the family. On the other hand, when the difference between the second clinical exam and the complementary exams was evaluated, there was an increase in family refusal when the time spent was greater than the expected average (Ebadat et al., 2014).

In this sense, clear communication by the physician who monitors the condition of the patient in potential brain death, regarding the probable prognosis, allows a greater probability of family acceptance. Furthermore, when this scenario is followed by a family instruction about organ donation by a professional trained to deal with families in the process of mourning, acceptance rates also increase (Ebadat et al., 2014), (Salim et al., 2007), (Salim et al., 2011).

In view of this situation, it is observed that the primary measure to increase the consent rates for the donation by the family is to invest in improving the approach carried out by professionals and in increasing the family's knowledge about brain death and the process of carrying it out. of transplants. The implementation of HCI programs through OPOs seems to have good results in this context, so it may represent a promising path

to be followed by hospitals to increase the effective rates of organ donation.

FINAL CONSIDERATIONS

This bibliographic review allows us to perceive the various factors involved in the complex system necessary for the realization of transplants in Brazil and in the world. The high level of lack of knowledge and doubts about the concept of brain death, the cultural and religious differences found in the family and, also, the unpreparedness of the health and management teams involved in the process are major factors that lead to an overload of the health system in relation to organ donation, resulting in long waiting lines for transplants. Furthermore, observation of foreign guidelines and policies allows reflection on possible ways to be implemented on national soil to contribute to the improvement of the demand/supply relationship of organs for transplantation. In the meantime, it is worth noting that carrying out studies such as those developed in the United States of America, which test protocols to understand and change the variables involved in low rates of family consent, can help to change the current scenario of organ donation in the United States. Brazil.

REFERENCES

ABTO, A. B. DE T. DE Ó. Diretrizes básicas para captação e retirada de múltiplos órgãos e tecidos da Associação Brasileira de Transplante de Órgãos. **Abto**, p. 144, 2009.

ABTO. Registro Brasileiro de Transplantes, XXVII, nº 2, janeiro/junho – 2021. Disponível em https://site.abto.org.br/publicacao/xxvii-no-2/ Acesso em 09 nov. 2021 às 20:45

BEDENKO, R. C. *et al.* Analysis of knowledge of the general population and health professionals on organ donation after cardiac death. **Revista Brasileira de Terapia Intensiva**, v. 28, n. 3, p. 285–293, 1 jul. 2016.

BITTENCOURT, A. L. P.; QUINTANA, A. M.; CAMPOS VELHO, M. T. A. DE. Loss of a child: Grief and the donation of organs. **A perda do filho: Luto e doacao de orgaos.**, v. 28, n. Alarcao, A. C. J., Carvalho, M. D. B., Pelloso, S. M. (2008). The death of a young son in violent circumstance: understanding the experience of the mother. Revista Latino-Americana de Enfermagem, 163, 341-347. http://dx.doi.org/10.1590/S0104-11692008000, p. 435–442, 2011.

CITERIO, G. *et al.* **Organ donation in adults: a critical care perspectiveIntensive Care Medicine**Springer Verla, 1 mar. 2016. CIVIL, C. **Lei Nº 9.434, de 4 de Fevereiro de 1997Diário Oficial da União**. [s.l: s.n.].

COELHO, G. H. DE F.; BONELLA, A. E. Doação de órgãos e tecidos humanos: a transplantação na Espanha e no Brasil. **Revista Bioética**, v. 27, n. 3, p. 419–429, 2019.

DOSSANTOS, M. J.; MASSAROLLO, M. C. K. B. Processo de doação de órgãos: percepção de familiares de doadores cadáveres. **Revista latino-americana de enfermagem**, v. 13, n. 3, p. 382–387, 2005.

EBADAT, A. *et al.* Improving organ donation rates by modifying the family approach process. **Journal of Trauma and Acute Care Surgery**, v. 76, n. 6, p. 1473–1475, 2014.

GARCIA, V. D.; PÊGO-FERNANDES, P. M. O transplante de órgãos e a COVID-19. **Jul-set 2021**, v. 26, p. 93–96, 2021.

GERAIS, C. M. P. DE M. Resolução CSMP nº 3, de 23 de novembro de 2017. p. 1–11, 2017.

KLUG, D. *et al.* Analysis of factors associated with family decision on corneal donation. **Revista Brasileira de Oftalmologia**, v. 79, n. 5, p. 296–301, 2020.

KNHIS, N. DA S. *et al.* Entrevista familiar para doação de órgãos e tecidos: pressupostos de uma boa prática. **Revista Brasileira de Enfermagem**, v. 74, n. 2, p. e20190206, 2021.

OLIVEIRA BERTASI, R. A. DE *et al.* Profile of potential organ donors and factors related to donation and non-donation of organs in an organ procurement service. **Revista do Colegio Brasileiro de Cirurgioes**, v. 46, n. 3, p. 1–8, 2019.

OMS. Global Glossary of Terms and Definitions on Donation and Transplantation. **World Health Organization**, n. November, p. 1–15, 2009.

ORGANIZAÇÃO de Procura de Órgãos e Tecidos. **Ministério da Saúde**, 2021. Disponível em: https://antigo.saude.gov.br/saude-de-a-z/doacao-de-orgaos/organizacao-de-procura-de-orgaos-e-tecidos. Acesso em: 16 nov. 2021.

PEREIRA, K. G. B. *et al.* Doação de órgãos em serviço hospitalar: principais motivos à negativa na autorização. **Revista de Enfermagem da UFSM**, v. 10, p. e4, 2020.

POMPEU, M. H. *et al.* Fatores envolvidos na negativa da doac¸ão de tecido ósseo. **ACTA Paulista de Enfermagem**, v. 27, n. 4, p. 380–384, 2014.

PORTA, G. Indicações e contra-indicações no transplante hepático pediátrico. p. 319–321, 2020.

SALIM, A. *et al.* Improving consent rates for organ donation: The effect of an inhouse coordinator program. **Journal of Trauma - Injury, Infection and Critical Care**, v. 62, n. 6, p. 1411–1414, 2007.

SALIM, A. *et al.* In-house coordinator programs improve conversion rates for organ donation. **Journal of Trauma - Injury, Infection and Critical Care**, v. 71, n. 3, p. 733–736, 2011.

SILVA, I. R. F. DA; FRONTERA, J. A. Worldwide barriers to organ donation. **JAMA Neurology**, v. 72, n. 1, p. 112–118, 2015.

WESTPHAL, G. A. *et al.* Protocolo gerenciado de tratamento do potencial doador falecido reduz incidência de parada cardíaca antes do explante dos órgãos. **Revista Brasileira de Terapia Intensiva**, v. 24, n. 4, p. 334–340, 2012.

WESTPHAL, G. A. *et al.* Guidelines for the assessment and acceptance of potential brain-dead organ donors. **Revista Brasileira de Terapia Intensiva**, v. 28, n. 3, p. 220–255, 2016.

WESTPHAL, G. A.; VEIGA, V. C.; FRANKE, C. A. Determinação da morte encefálica no Brasil. **Revista Brasileira de terapia intensiva**, v. 31, n. 3, p. 403–409, 2019.