ABSTRACT

Objective: to understand the management of Nursing care to patients in brain death from the perspective of nurses working in the process of organ donation and transplants. Method: this is a qualitative study, based on the Data Based Theory, with 25 nurses. The data were obtained through individual semi-structured interviews and the open, axial and selective coding was used for data analysis. Results: two categories emerged from the analysis of the data: “Observing the difficulties related to the management of nursing care to the brain dead patient” and “Understanding the actions performed by the nursing team in the management of the brain dead patient’s care. The limitations of physical structure and human and material resources were highlighted as difficulties. Monitoring and hemodynamic support, glycemic control and diuresis as necessary actions for the management of patient care in brain death were emphasized by the nurses. Conclusion: it is understood that the management of patient care in brain death requires understanding beyond the technical spheres, and it is necessary to demystify the meaning of organ donation for the maintenance of a new life in another person. Descriptors: Tissue and Organ Procurement; Organ Transplantation; Nursing Care; Critical Care; Brain Death: Nurse’s Role.

RESUMO

Objetivo: compreender a gerência do cuidado de enfermagem aos pacientes em morte encefálica na perspectiva de enfermeiros atuantes no processo de doação e transplantes de órgãos. Método: trata-se de estudo qualitativo, fundamentado na Teoria Fundamentada nos Dados, com 25 enfermeiras. Obtiveram-se os dados por meio de entrevistas semiestruturadas individuais e se empregou a codificação aberta, axial e seletiva para análise dos dados. Resultados: emergiram-se duas categorias a partir da análise dos dados: << Observando as dificuldades relacionadas a gerência do cuidado de enfermagem ao paciente em morte encefálica >> e << Comprendendo as ações realizadas pela equipe de enfermagem na gerência do cuidado ao paciente em morte encefálica >>. Destacaram-se como dificuldades a limitação da estrutura física, recursos humanos e materiais. Enfatizaram-se pelos enfermeiros a monitorização e o suporte hemodinâmico, controle glicêmico e de diurese como ações necessárias para a gerência do cuidado ao paciente em morte encefálica.

Conclusão: compreende-se que a gerência do cuidado ao paciente em morte encefálica requer entendimento para além das esferas técnicas sendo necessária a desmistificação do significado da doação de órgãos para manutenção de uma nova vida em outro alguém. Descriptors: Obtenção de Tecidos e Órgãos; Transplante de Órgãos; Cuidados de Enfermagem; Cuidados Críticos; Morte Encefálica; Papel do Profissional de Enfermagem.
INTRODUCTION

It is understood that the donation of organs for transplants involves a complex process whose objective may be to improve the quality of life of those in need of such organs, as in the case of transplants of kidneys, pancreas, cornneas, heart valve and bones, as well as to save or improve the prognosis of people in need of liver, lung, heart, bone marrow, bowel and skin transplants.\(^1\)

It also involves a set of procedures inserted in a network of care and care, managed by the Unified Health System (UHS), through the legislation in force in the country, which supports the responsibilities of the National Transplantation System (NTS), contributing to the effectiveness of the actions and services collected.\(^2\,3\)

The number of surgeries increases every year since the first transplant in Brazil in 1964, ranking second among the countries that most perform kidney transplants.\(^4\) It is, however, according to the Register Brasileiro de Transplante, the number of procedures still below the need, reinforcing the importance of the Ministry of Health, along with the other entities, in the search for greater achievements and awareness of all those involved in the process of organ donation and transplantation.

It is known that the number of donations and the number of people in the queue for an organ deserve attention and efforts, in order to increase the qualification of health professionals involved in the donation process, in order to increase the number of donations in the search for actions that reduce losses of potential donors.\(^1\,4\)

Organ transplants are accessed through a single waiting list, the registration and authorization of transplantation hospitals and specialized teams, as well as the financing criteria, guaranteeing the individual access to treatment.\(^2\,3\) This process is regulated by the State Transplant Centers (STC).\(^1\)

It should be noted that the State of Santa Catarina continues, for ten years, among the regions of outstanding organ donation and leader in this activity in the South of the country. It is emphasized that the State counts on the aid of 45 Hospital Transplant Commissions (HTCs) for the capture process, and six of them are located in Florianópolis in the following hospital units: Infantile Hospital Joana de Gusmão; Nereu Ramos Hospital; Hospital Baia Sul; Universitary hospital; Charity Hospital and Governador Celso Ramos Hospital; two commissions are in the city of São José, in the Regional Hospital of São José and in the Institute of Cardiology of Santa Catarina, and the other ones are located in cities of the interior of the State.\(^5\)

The HTCSs are created with the objective of supporting and increasing the process of capture and transplantation of intrahospital organs. It is considered mandatory in all public, private and philanthropic hospitals, as is determined in the legislation.\(^2\,3\) It is noted that these committees contribute to increasing the identification and active pursuit of potential donors; the articulation between professionals of different categories; aid in clarifying care for the maintenance of potential donors; the articulation with the STC or the Federal District, notifying the situations of possible donations of organs and tissues; the organization of care routines in order to ensure adequate maintenance of the potential donor and the family interview for the donation request. Thus, through these actions, HTC is optimizing the process of donation, capture and transplantation of organs and tissues.\(^2\,3\,6\)

Nursing care is provided for the maintenance of patients who are in the process of organ donation and collection, mainly by HTC professionals and critical care units, such as the Intensive Care Units (ICUs) and the emergency room. It is highlighted that the best place to take care of this care should be in the ICU.\(^7\) These units are considered more appropriate environments to develop care and contribution to the potential donor, since it offers patients a highly technical and objective care environment, with continuous medical and nursing care and monitoring.\(^6\,8\)

Care management is related to the articulation between management and care, assuming that such activities must act in an integrated and articulated manner.\(^9\) Nursing care management is performed in care settings when the nurse performs interventions and glimpses the care needs necessary to the integral care of the patient. It is added that, in the managerial scope, the work and administrative tools necessary for the proper functioning and management of the unit, such as materials, equipment and facilities, as well as the technical instruments of management, are organized. Thus, it is observed that managing care means managing the Nursing service in its multiple dimensions.\(^10\,11\)

The following research guiding questions were elaborated: how does the management of Nursing care to the brain dead patient(BD)? What is the Nursing care performed to patients in this condition?
OBJECTIVE

- Understanding the management of nursing care to patients in brain death from the perspective of nurses working in the process of donation and organ transplants.

METHOD

This is a qualitative study based on the Data Based Theory (DBT). It is understood, through this referential, the reality from the perception or meaning that a certain context or object has for the person, generating knowledge, increasing understanding and providing a meaningful guide to action. We seek to understand phenomena discovered, developed conceptually and established by a process of collecting and analyzing the data systematically conducted.12

This research was based on a macroproject database entitled "Managing nursing care in the process of donation and transplantation of organs and tissues in the perspective of lean thinking".11

The original research was composed by 35 participants divided into three sample groups. The data of 25 nurses were re-read, 15 nurses working in Hospital Transplant Commissions (HTCs) of hospitals in Santa Catarina and members of the second sample group; six nurses from the emergency services; four, of intensive therapy units and members of the third sample group.

The data was collected from July 2014 to October 2015 through the individual interview, semi-structured and with digital voice recording, scheduled and performed at the participants' workplaces, in rooms designed for this purpose and guided by the following question: Tell me how you manage care in the process of donating and organ transplants? They will address, in this article, the difficulties of the management of the care and the actions of the management of the care to the patient in BD.

The process of analyzing this with a careful reading of the interviews began, looking for the incidents related to the difficulties experienced by nurses in the management of patient care in brain death, as well as the care given to patients in this condition.

Data was analyzed by two interdependent and concomitant steps: open coding and axial coding. By means of coding, the purpose of data reduction is to arrive at an understanding of the phenomenon of the study. The open-coded process11 was started in a free way, including the definition of preliminary codes from the careful reading of the interview and identification of each incident. Then, the axial coding was performed12, which seeks to establish the relationship between the categories and the subcategories to support precise explanations about the phenomena found.

The constant comparison between the data was sought during the whole process, providing reflections and questions that guided the researchers in the grouping of preliminary codes, considering, in addition to the similarity of content, the different properties and dimensions of the categories and subcategories developed in the results.

This research was initially sent to the approval of the research project by the Research Ethics Committee (REC) of the Federal University of Santa Catarina. Data collection was started after obtaining the consolidated opinion number: 783.265 and CAAE: 32929714.4.0000.0121. They met the ethical criteria and the norms established by Resolution No. 466/2012 of the National Health Council. Participants were clarified about the objectives and methodology of the study and were asked to sign the Free and Informed Consent Term, in two ways, assuring them the right to access the data and to leave the study when they wanted.

RESULTS

It should be noted that 25 nurses working in different adult ICUs and HTCs participated in the study, being the majority female, with an average age of 35 years and an average time of 11 years of practice in the nursing profession; as to the highest degree, 13 of them had the title of specialist; nine, master and three others were graduates.

From the analysis method, according to the information obtained through the interviews with the nurses, two categories were elaborated: 1. Observing the difficulties related to the management of the patient care in BD. 2. Understanding the actions performed by the Nursing team in the management of the patient care in BD.

Observing the difficulties related to the management of patient care in BD.

The main obstacles faced in the organ donation process are discussed in this category. These issues are mainly related to the limitation of infrastructure, human resources and material resources for better management of Nursing care. According to the participants, the low availability of equipment necessary for the diagnosis of BD, the reduction of the professional staff, as well as a precarious physical structure that, in
addition to hindering the care, generate stress load in the team for not being able to meet the entire demand.

We have arteriography here in the hospital, but it's broken. So sometimes the imaging test has to be done outside the hospital, I think it's wasting time. (E18)

The structure complicates the diagnostic process for BD because, in order to close the imaging exam, we need arteriography, but sometimes it has and does not work, or it can not finish the arteriography test, and it needs scintigraphy. The scintigraphy you have to take the patient from the hospital. And sometimes, to get out, we need SAMU. And this one is very tumultuado, has much transport and attendance in the street, then, all this makes it difficult. (E19)

The infrastructure is not the most appropriate. As you see the emergency is overcrowded, we work in one or two nurses and we can not give a support to the one on the respirator. (E22)

It is highlighted by the participants that the intensive care unit is the ideal place to perform the management of patient care in BD, since the other units do not have the physical structure, material resources and adequate number of staff, which repercussions on the quality of the care provided, generating anguish in the professionals who provide such care.

In the ICU it is always easier to do care management. In the emergency we always have more difficulty managing this process. Well here in the ICU, the doctors are already well accustomed to this process of brain death, so we work in partnership with them. (...) even in the emergency we are still acquiring this culture (...). Ideally, he is in a critical unit, which is a ICU. This is the correct place for a potential donor patient to initiate the protocol and stay hospitalized because in the emergency it is bad for everyone on the team, but we do what we can when we have protocol there. (E16)

In fact, here in the ICU, we have a lot of this type of patient with a diagnosis of brain death. Then things are happening very naturally, if I may say so. Every professional knows his role very well, from the doctor, the nurse, to the nursing technician, everything is developing in a very natural way. Everyone is already accustomed to the care of this potential donor or the very question of diagnosing brain death. So, everyone is already very used to the issue of clinical tests and the tests that have to be done, with this everything has been quite right the question of routine care, even the medical part, prescription. (E19)

It is observed, in addition to these factors, the lack of clarity, understanding and qualification of all professionals involved in the organ donation process has repercussions on poorly managed processes. From the interviews, it is possible to perceive the importance of training the different professional teams, whether it is active in direct care or indirect to the patient, so that everyone acts in an integrated manner.

Integration begins from the patient's entry into the institution until the evolution to BD and communication with the team and family members. It is thus considered, that poorly informed professionals about all steps involved in the donation and transplant process may undermine the management of care to the potential donor and his or her family members.

(...I told the concierge to let the patient's family in so we could talk to them and give the BD diagnosis. Soon I'll call the doorman to ask about the patient's family and he says he had already told the relatives that the patient was dead. But how do you tell me something like that? I said we were going to talk to the family. Then the thing has already been run over. It was terrible! What repercussions is this, when the thing starts crooked back there, it will hardly work. (E15)

It's a little complicated, not all ICU professionals are aware of the importance of calling HTC people. (E13)

So it starts like this, there you have to welcome the family, you have to plan how the clinical test will be, the first, the second and the graphic test. If you start right at the end it will work, it will end well. Sometimes it may even close with a familiar refusal, but you will analyze whether this refusal was inevitable, if we did everything correctly. (E17)

When I arrived, I did not receive any information or education on how the process happened (...) I have this view that patient in Glasgow 3, without sedation, is mydriasis, has an indication of initiating the protocol for encephalic death. It basically ends up being what the nurse here in the emergency does. (E24)

It is perceived that this lack of understanding of the whole process and the absence of a culture of organ donation reflect in the way in which the Nursing professionals see the patients in BD, often seen as mere dead patients, without their real importance and contribution to the life and survival of other patients dependent on such organs.

The pros think that the patient is dead and does not have to eat. So, the professionals do not understand. This is a culture that professionals have to have that the patient who is in BD and is a potential donor has to
take the same care as with another patient. And, this often does not happen. (E15)

Many times they say they will not take care of a dead patient if they have five alive here in the front needing to be intubated, punctured. It is very difficult to open a protocol in the emergency, it is very bad for them both for people, for patients, and for family. It's bad for everyone. (E16)

(…)we always stand out in regards to diet, because it was a very important point. "But he's dead, he needs to eat?" (E19)

They say "why is there so much nurse on top, if that patient is already dead" only they do not understand the context sometimes. (E25)

Sometimes it is difficult for you [the Nursing technician] to understand that it is important to keep that patient's care. They ask why we are spending time caring for this patient while having the other patients who need such care. If it is a brain-dead patient, you have to do more stringent control in a shorter time, you can not wait twelve hours. Why do I have to change my position in a patient who is already in death? Why do I have to be observing the saturation of this individual? Why do I have to change the monitor?; because it may be that that monitor is not scoring properly, so sometimes it is very difficult to get this support from the nursing technician. (E26)

It is noted that the incomprehension about brain death and the necessary care for the maintenance of the patient interferes in the management of the care offered to the patient in this condition and, consequently, has an effect on the quality of the organs and tissues to be transplanted.

Understanding the actions performed by the nursing team in the management of patient care in BD

It is understood that the management of care to patients in brain death is articulated with several sectors and professionals. The care related to the monitoring and hemodynamic support of the patient, the maintenance of body temperature, control of the hydroelectrolyte balance, glycemic control, nutrition control, the need for transfusions, maintenance and control of diuresis and other recommendations are also related for the donation of organ-specific care assistance carried out to the brain dead patient.

All patients require intensive care, except that the patient in BD must be hemodynamically stable to progress to an organ harvest. Good blood pressure, controlled diuresis, controlled electrolytes, controlled HGT, can not do hypothermia. Everyone already knows this, so if we do all this part and this intensive care, which is the control of the patient's hemodynamics, in a way, we are contributing to this success. (E20)

(…)the professional needs to understand that the patient in BD has to be well cared for, he is not a single body, it will save many lives. And then you have the question of vital signs, which is a shorter time interval, sometimes 15-15 minutes, depending on whether you have any vasoactive drug. It takes a very long time. What we usually do is control diuresis, change of position, temperature, (…) because you can not do either a hypothermia or a hyperthermia. (E23)

This patient usually has a tendency to have hypothermia, and we watch for temperature, vital signs in general. If you are in hypotension, the doctor tells you about the need to increase the vasoactive drug. That's basically it. I particularly care for the patient in BD more in keeping even the vital signs, and focus a lot on it, blood pressure, body temperature, and moist corneas. (E24)

We have identified a patient who is without a trunk reflex, Glasgow 3, severe brain injury, we talked to the doctor who evaluates the patient. It is a patient who is really without reflex, is no longer under sedative effect, is stable, is not hypothermic, all that evaluation. The first thing we do is call the family to talk and we talk to the family about the opening of the protocol, what protocol is, how it's going to be done, we make all this explanation for the family, we ask them to wait. (E29)

It should be noted that teamwork and caring for family members are highlighted in interviews with nurses. It is emphasized that family members will be the main responsible in the decision process of donor organs donation, however, it is noted that brain death and organ donation are still a process unknown to most of the population. It is considered, therefore, that all care and forms of reception and clarification to these relatives can facilitate the decision and demystify fears that permeate them. It is observed, in the interviews, the need for a team of professionals working in an integrated way, taking care of both the patient and his family, from the arrival to the evolution to BD.

The integrated team makes the process flow. From the reception, know that that family member needs to be welcomed. So when you have an integrated team it's actually much better. (E24)

An integrated team here; first, everyone would be speaking the same language, including the arrival of this patient. (E26)
What is more important here, not that the other steps are not, are the companions. When the patient arrives in the ICU, the family has to be very well supported, because if the family is not well supported, whatever it is, it will not have a good interview in the end, it will not be favorable to donation, nor will have donation, everything will accumulate. The ICU was not designed to have so many family members present. But I think with the family of this patient in BD we have to be talking, we have to be explaining, we have to be very close, so that this donation is positive. If not the family will have doubts. (E27)

**DISCUSSION**

It is recognized that organ and tissue donation and transplantation generate an impact and represent a new possibility for many lives; however, for this process to occur properly, it depends on several related factors, such as: team multiprofessional team qualified for the recognition of brain death and physical and technological resources to meet the verifying examinations of the BD. Among the difficulties highlighted by the participants are the limited infrastructure, human resources, material resources and high demand for assistance. It has been observed, in this and other studies, deficiencies related to logistics and support to the potential donor, in addition to the fragility in the early opening of the notifications of the encephalic death. 6.13-4

As another aspect raised in this study, the comparison between the care provided in hospitalization units such as the emergency room and the ICU is added. It is pointed out, in this research, the difficulties in the active search and capture of potential donors outside the ICU environment, since it becomes the place with the best infrastructure for patient care in BD. This study confirms another study that shows that the care given to potential donors in emergency units does not take into account the care a BD patient requires, since it aims to preserve vital functions for the success of the transplant. It is considered, therefore, that the way in which care is given to the potential donor will directly affect the quality of the organ to be taken and the life expectancy of patients who require such therapies. 15-16

It is observed that, similar to this research, other studies show that, in Brazil, the hospital emergency has been configured as a growing sector in the receipt of patients in BD, mainly due to the lack of ICU beds, however, due to the changes in the characteristics of diseases affecting the population, hospital emergencies are becoming the places with the greatest demands, overcrowded in patients who stay in hospital days. 17

It was identified in a study carried out in the Brazilian Northeast, that the patient in BD requires serious patient care, becoming a complex care, especially if it is a potential donor. 18

In addition to this, professional exhaustion, lack of training and professional understanding of the whole process and lack of a culture of organ donation lead to a loss of potential donors in hospital emergencies. It is praised that the way Nursing professionals view patients in BD, often seen as an additional demand to be performed on “dead” patients, demonstrates the emerging need to empower them.

It is evidenced, in studies, that the permanent education has been highlighted since it reinforces the importance of the approach and the care to the patient in BD as an individual that requires the specialized and individualized assistance. 15,18 It is emphasized that nursing care, focused on stabilizing the multiple deleterious effects that brain death causes on the organism in a short time, generating hemodynamic instability, requires a team prepared technically-scientifically, agile and aware of the importance of all the stages that involve this process of donation and transplantation. 10,15

It should be pointed out that the late recognition of brain death may lead to infection, hemodynamic instability or even cardiorespiratory arrest of the potential donor, thus making it impossible to donate and transplant organs and tissues. 1,13,18

The main actions developed by the Nursing team and other teams in the care of the patient in BD, such as the care related to the monitoring and the hemodynamic support of the patient, the maintenance of the body temperature, the control of the hydroelectrolytic balance, glycemic control, control of nutrition, need for transfusions, maintenance and diuresis control, and other recommendations for organ-specific donation. In spite of this, it is noted in this study that not all nursing teams receive specific training on care for patients in BD, as well as the use of protocols or guidelines.

It is known that many of the problems related to the donation process and organ and tissue transplants are associated with failures in those stages that involve the recognition of brain death, family approach and clinical maintenance of the deceased donor. 19
It is evidenced, through the recommendations of the guidelines for the maintenance of multiple organs in the potential adult donor potential, that the main actions for the maintenance of the deceased donor are: maintenance of the organic functions; correction of dysfunctions; agility in the removal of organs for transplantation within 12 to 24 hours from the diagnosis of BD; hemodynamic stabilization; correction of oxygenation deficit; treatment of infections; reversal of hypothermia; monitoring and correction of metabolic disorders (especially hypernatremia); treatment of endocrine, renal and hepatic disorders; correction of clotting disorders and correction of any other reversible organic change.18

Finally, in this research, the importance of teamwork and caring for clarification and welcoming of family members is emphasized. It is confirmed in studies that, in addition to ignorance among family members, other factors influence the process of raising and donating, namely: insufficient time for decision making; the time limit of the team to capture; the ignorance of the will of the loved one on the donation of the organs and the inadequate place to approach the family.19-20 In addition to this, the health team's weaknesses regarding identification, validation, belief in the process and decision making in being a donor of organs and tissues.21

It has been verified in studies that many family members who receive the news from BD believe that the patient diagnosed with BD is dead, and the others believed that the patient could be alive, pointing to the lack of clarity on the subject and consequently, affecting the whole process.19,22

CONCLUSION

It was understood the management of professional nursing practice care focused on the processes involved in organ donation and capture. It can be seen that the pillars contained in the donation and transplantation process, in addition to mainly covering the active tripod and recognition of brain death, family approach and the clinical maintenance of the deceased donor, comprise numerous professionals who act directly and indirectly for the process success.

It was evidenced, through this study, that the main difficulties of the management of the patient care in BD were related to the limitation of the infrastructure and the human and material resources. It is observed, besides these, that there is still a lack of understanding of the process and the absence of a culture of organ donation, which compromises the professionals' view of the patient in brain death, impairing the management of care to this patient.

It should be pointed out that patient care related to brain death involves those related to hemodynamic monitoring and support of the patient, maintenance of body temperature, control of the electrolyte balance, glycemic control, nutrition control, transfusion requirements, maintenance and control of diuresis and other recommendations for organ-specific donation.

It is pointed out that encephalic death requires understanding beyond the technical spheres. It is still human principles and citizenship of all involved for the real demystification of the meaning of organ donation for the maintenance of a new life in another someone.

REFERENCES


5. Central Estadual de Transplantes de Santa Catarina, Secretaria Estadual de Saúde do


20. Bedenko RC, Nishihara R, Yokoi DS, Candido VM, Galina I, Moriguchi RM et al. Analysis of knowledge of the general...