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Importance of intensive care professionals for organ donation and transplantation

Importancia de los cuidados intensivos en la donación y el trasplante de órganos

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Organ transplantation is the best therapy, if not the only possible treatment, for an increasing number of patients with terminal organ failure, particularly end-stage renal failure. Moreover, despite the great efforts that have been made in recent decades to meet the demand for organs (from deceased donors as well as from living donors), a significant gap continues to persist between the clinical demand and the number of available organs for transplantation.

During the past two decades, significant attempts have been made to address the growing need for organs for transplantation in both developed and developing countries. The purpose has been to meet this health care requirement of citizens, through their nation's own efforts and with the cooperation and exchange of knowledge between countries, with the aim of achieving worldwide self-sufficiency in transplantation.[1]

For the past 23 years, the Spanish model of donation and transplantation has demonstrated the best results in achieving donations of organs for transplantation in an efficient manner, based on the international standards of quality and safety and strictly following the highest ethical standards. Consequently, the Spanish model has been adopted in many European and Latin American countries, as well as the rest of the world.[2]

The Benchmarking project for organ donation, which was published by *Organización Nacional de Trasplantes* (ONT) in mid-2011[3] to identify, disseminate and implement best practices for the process of donation after brain death, provides several recommendations for improving the donation process. These guidelines, which focus primarily on the performance of intensive care unit (ICU) professionals, range from identifying potential donors prior to their entry into the ICU to obtaining consent from the families.

Undoubtedly, these recommendations have been central to maintaining growth in donations and transplantation activities in Spain despite the worldwide economic crisis and the decrease in health care budgets over the last two years.[4] The recommendations indicate that the donation process is part of the of ICU protocol once brain death has been diagnosed and necessitate the standardization of procedures so that the organs remain viable for transplantation by proper maintenance of the donor and by shortening (as much as possible) the time between the diagnosis of brain death and organ removal.

As published in the previous issue of this journal, Teixeira et al.[5] determined the public's understanding of brain death and its influence on organ donation and highlighted the lack of knowledge about death brain and, worse, the lack of confidence in the diagnosis, which joins two key points in the chain of donation and transplantation. Considering brain death to be the death of the

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individual is a relatively recent development in the history of humankind; sometimes, even healthcare professionals are opposed to the withdrawal of support measures once brain death is diagnosed, if the deceased individual had not agreed to donate their organs.[6] It is essential to standardize and unify the criteria and prerequisites for the clinical diagnosis of brain death so that confidence can be generated in the certainty of this phenomenon. This factor is critical for the general population as well as for healthcare professionals, especially the intensivists who daily face the possibility of organ donation or the necessity of withdrawing futile treatment when the individual has died.

In the current issue of this journal, Westphal et al.[7] present an interesting study that illustrates the importance of standardizing care in critical care units, even after the diagnosis of brain death, to maintain the viability of organs for transplantation. Despite the limitations acknowledged by the authors regarding the small sample and the retrospective, pre-intervention study, the results certainly highlight the fact that the best maintenance, following the protocols aimed at excellence in the care of organs, enable the best results in transplantation. Using the managed protocol for treating deceased potential donors, Westphal et al. obtained a dramatic reduction in episodes of cardiac arrest during maintenance, thereby achieving a dramatic improvement in the number of actual donors. Certainly, careful maintenance of the thoracic organs (heart and lungs) is essential for improved hemodynamic stability that would permit optimal functioning of kidney and liver transplants and would facilitate the donation and transplantation of hearts and lungs with the best guarantees. This fact is evidenced by the implementation of the "*Protocolo de manejo del donante torácico: estrategias para mejorar el aprovechamiento de órganos*",[8] which increased the number of lung transplants and shortened the pulmonary waiting list in Spain after its application, despite an increase in the percentage of expanded criteria donors (aged, smokers, etc.). Despite being at the forefront of the world in obtaining deceased donors, in the case of the lung, the problem of organ shortage is aggravated because this organ is obtained in only 15-20% of donors in Spain. Among the strategies to obtain a greater number of lung donors, we are working on specific management of the multiorgan donor on ventilation, as well as on standardized hemodynamic management and the use of hormone therapy. The protocol has already yielded excellent results in the Hospital Marqués de Valdecilla (Santander, Spain), quadrupling the number of lung donors, without affecting the procurement of kidneys and their results,[9] so this protocol is to be tested in a larger number of Spanish hospitals.

In summary, the care of individuals entering intensive care units does not end with the death of the patient. Once treatment fails to maintain health and life, it is the responsibility of intensivists or their healthcare collaborators to diagnose brain death with absolute certainty, based on internationally accepted criteria. Subsequently, if the deceased individual has medical contraindications for donation, all supportive measures should be withdrawn. Otherwise, donor maintenance protocols should be immediately enacted to obtain the highest quality transplantation results and thus guarantee restoration of the health of the recipients. Additionally, the relatives of the deceased should be accurately informed during the entire process in the most compassionate manner - thereby gaining the confidence not only of a particular patient's family but also of the entire population.

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