

Contemporary Legal Issues in Forensic Cadaver Organ Donors: A Case Report

Adli Kadavra Organ Donörlerinde Karşılaşılan Hukuki Sorunlar: Olgu Sunumu

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ABSTRACT

Brain death is a clinical entity in which intracerebral circulation stops and characterized by irreversible loss of brain and brainstem reflexes. Some forensic and legal problems may arise during organ and tissue transplantations from forensic cases with brain death. In this case report, we aimed to present a case that could not be used as a transplantation donor owing to some legal problems despite presence of favorable organs and tissues, and draw attention to legal problems.

A patient without any previous disease was brought to emergency room with cardiac asystole, and any reason for her condition could not be determined during her follow up. Brain death was confirmed on the third day of her hospitalization, and her family was informed. The family's consent was obtained for organ and tissue transplantation, and the patient was given donor care. Forensic physician and district attorney on call were also informed. However, the forensic physician was convinced that the patient was "legally alive", and he prepared a written report indicating that the patient was not suitable as an organ donor. The organs of the patient could not be used although they were healthy and suitable for transplantation.

In conclusion, we suppose that new legal regulations are needed enabling the usage of suspicious forensic cases as organ donors for "high benefit of organ recipients".

Key words: brain death; forensic cadaver; organ transplantation

ÖZET

Beyin ölümü; beyin ve beyin sapı reflekslerinin geri dönüşümsüz olarak kaybı ile karakterize intrakraniyal dolaşımın durduğu klinik bir durumdur. Beyin ölümü gerçekleşen adli olgularda organ ve doku nakli işlemleri sırasında bazı adli ve hukuki sorunlar karşımıza çıkabilmektedir. Bu sunumda organ ve dokuları uygun olduğu halde birtakım hukuki engeller nedeni ile kullanılamayan bir olgunun durumu paylaşarak yasal sorunlara dikkat çekilmesi amaçlanmıştır.

Bilinen bir hastalığı olmadığı halde acil servise asistoli ile getirilen hastada izlem süresince ölümünü açıklayacak bir neden

bulunamadı. Yatışının 3. gününde beyin ölümü tespiti yapılarak aileye bildirildi. Görüşmelerde organ ve doku nakli için onam alınarak donör bakımına geçildi. Adli tabip ve nöbetçi savcılığa durum bildirildi. Ancak adli tabipçe yapılan muayene ve incelemeler sonucunda "hukuken yaşıyor" kanaatine varıldığından hastadan herhangi bir organ alınmasına izin verilemeyeceği yönünde kanaat belirten tutanak tutuldu. Organlar canlılığını korumasına rağmen olumsuz bu karar nedeni ile kullanılamadı.

Sonuç olarak; şüpheli adli vakalar nedeni ile "alıcı hastaların yüksek yararı prensibi" göz önüne alınarak yeniden yasal düzenlemelere gidilmesi gerektiğini düşünmekteyiz.

Anahtar kelimeler: beyin ölümü; adli kadavra; organ nakli

Introduction

Organ or tissue transplantation is replacement of non-functional organs with healthy organs or tissues obtained from live donors or cadavers¹. Obtaining organs from cadavers is safer when compared to live donors. In our country, legal regulations for transplantation are stated in the Act on Obtaining, Keeping, Vaccination, and Transport of Organs and Tissues (May 29, 1979, No: 2238). Article 11 of this Act states that "Death of a donor and time of death is decided unanimously by a committee composed of a cardiologist, neurologist, neurosurgeon, and anesthesiologist". The Act reported on January 2, 2014 (no: 6514) that the number of physicians in this committee had been decreased to two^{2,3}.

Brain death criteria have been regulated by Supplement Article 1 of Organ and Tissue Transplantation Regulation Service: "Brain death is a clinical diagnosis which can be described as total and irreversible loss of brain functions⁴. New York Task Force published a consensus on description and clinical development of brain death in 2011⁵. The first official description was provided by Harvard Medical School in 1968. Medical

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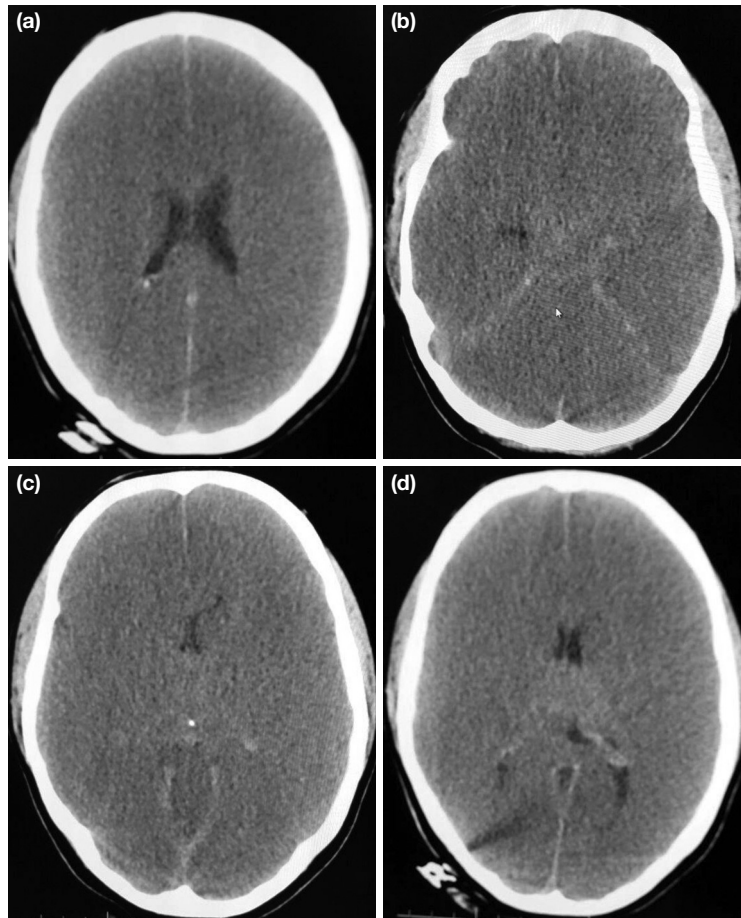


Figure 1. a–d. CT images. Gray and white matters could not be differentiated in any part of the brain.

Royal Collage improved this description in 1971 and brain death was described as “irreversible loss of all brainstem functions proven with performance of all valid tests that could determine brain death”^{6,7}. Since the procedures regarding donor organs are not clear in the Act for suspicious forensic cases, some problems have seen. There are contradictions between legal regulations and the “high benefit of organ recipients” stated in Art (Act number 2238, article 11) in case of a donor with an unknown cause of death. In this case report, we aimed to discuss legal regulations on the basis of a case in which we had encountered a dilemma.

Case Report

A 34-year-old female was brought to emergency room with cardiac asystole. There was no previously known disease in her history. Her cardiac rhythm was restored after cardiopulmonary resuscitation performed in the

emergency room, and she was admitted to intensive care unit. According to information from her relatives, she had chest pain for one year, but she did not seek any medical attempt. In addition, she tried to commit suicide two years before with some drugs. It was learned that she and her husband were previously treated to have a child (about 4–5 years ago).

On admittance to intensive care unit, the patient’s physical examination revealed bradycardia (44 beats/min), and her arterial blood pressure could not be measured. The patient was monitored, and appropriate medical treatment was administered. Blood and urine samples were sent to the laboratory to measure drug levels due to suspicion of drug intoxication. Routine blood tests were also ordered. The laboratory test results were negative for any drug or chemical toxicities.

On brain computerized tomography, the brain sulci were lost, basal systems were obliterated, lateral

ventricles were asymmetrically narrowed, and third and fourth ventricles were obliterated. Gray and white matters could not be differentiated in any part of the brain (Figure 1). Anti-edema treatment was administered due to diffuse brain edema. The Glasgow Coma Score (GCS) of the patient was 3/15, brain death was suspected, and the patient was consulted to relevant clinics. Apnea test was positive. Neurology Clinic performed transcranial Doppler ultrasound. There was no blood flow in the anterior system, and there was a high-resistance blood flow in the vertebral arteries. In control Doppler ultrasound performed 24 hours later, vertebral blood flow persisted despite a decrease. Third Doppler examination confirmed neurosonologic findings consistent with total cerebral circulatory arrest. Based on this report, brain death was confirmed by 4 clinicians on the 3rd day of hospitalization. The investigations to determine the cause of death continued. On abdominal ultrasound, there were no pathological findings except presence of fluid around liver, spleen, intestines, and in Morrison pouch. Echocardiography reported normal cardiac cavities and cardiac valve movements. The ejection fraction was 65%, and there was first grade mitral insufficiency. The findings of imaging modalities and the laboratory investigations could not put forward the cause of death. Consent was obtained from the family for organ and tissue transplantation. The district attorney on call and forensic physician evaluated patient in the intensive care unit since the cause of death could not be determined. Compatibility tests were performed for possible donors. The patient was given donor care.

Forensic physician and attorney recorded all physical examination findings. Although the patient was medically dead, she was accepted as “legally alive” as the cause of brain death was still not known. Thus, a written report was prepared for the patient that she was unsuitable as a donor for tissue and organ transplantation. The patient’s heart stopped beating on day 12 of hospitalization. The district attorney on call was informed about the patient’s death, and autopsy procedures were started. This process still continues up to date.

Discussion

The cases diagnosed with brain death are the most important sources for the patients in waiting lists for organ or tissue transplantation^{8,9}. In our country, the efforts for increasing awareness in organ donation

have increased in accordance with the world. The article 1 of Organ and Tissue Transplantation Services Regulation which had been published in Official Gazette on February 1, 2012 (no:28191) stated its aim as determining the rules for opening, running, and surveillance of organ and tissue source centers and tissue typing laboratories, as well as the rules for conducting the related services. However, the organ transplantation rules are not clear for forensic deaths. Relevant articles of the Act numbered 2238 has stated that transplantation may be performed in forensic cases that die after accidents or natural disasters without any need for consent in case of instancy and medical obligation, if the victim does not have any relatives. It has been stated that forensic autopsy will be performed after removal of the organs, and attached to the forensic and official report. On the other hand, decision, authority and responsibility of forensic physicians are debated in forensic cases who die due to causes other than accidents and natural disasters.

Turkish Criminal Law indicated that the organs of the cases that were reported as forensic cases might be removed after informing and obtaining the approval of the attorney¹⁰. However, it is clear that the organs may be damaged during this process. Therefore, a fast collaboration of attorney and forensic physician is needed. Obtaining approval of the forensic physician is easier in case of traffic accidents, gun shots and stabbing wounds, where the organs to be removed are not damaged¹¹. Arslan et al. analyzed 12,016 forensic cases in Istanbul Forensic Medicine Archives between 2009 and 2011, reported that there were 35 solid organ and 307 cornea donors, and their reasons of death were clear, such as blunt trauma and gunshot injuries¹².

On the other hand, transplantation process may become difficult when the cause of death cannot be determined in forensic suspicious deaths. Mustafa Demirer et al. have reported that removal of organs in case of suspicious death do not negatively affect the investigations to be performed in autopsy, so that kidneys and liver may be transplanted appropriately¹³.

In another case report from Turkey, the consent for removal of the organs was obtained from the family of a patient who fainted during meal, lost his conscious with cardiac arrest and diagnosed the brain death in the hospital. As the death was accepted as suspicious by forensic physician and the cause of death could not be determined, the attorney did not permit removal of the organs. The attorney decided that removal of

the organs before autopsy might cause problems later in this case¹⁴. The decision for this patient was similar to our case. Our laws about forensic cases have some shortcomings and open points, therefore different decisions may be made in similar cases¹⁵.

The prevalence of forensic deaths is 7–10% in France, and refusal rate of attorney for removal of organs is 4%¹⁶. French Forensic Medicine Society published an advisory guideline in 2013 for attorneys to help them to make their decisions. According to this guideline, agreement protocols are prepared for legal authorities, forensic pathologists, transplant teams and attorney. Thus, forensic physician and transplant teams can act in coordination and forensic pathologist may interfere the process before and after removal of the organs¹⁶.

In conclusion, organ and tissue transplantation is a treatment method saving lives, and it has been accepted in terms of ethics, religion, and law. However, there are some disagreements in some management details of forensic cases. Legal regulations must be clear for removal of organs in forensic cases when the cause of death cannot be determined. Institution of Forensic Medicine must put forward reliable criteria and prepare advisory guidelines to prevent change of decisions in the direction of initiatives of forensic physician and attorneys in the forensic cases. Incorporation of forensic physician and/or forensic pathologist into operation may be suggested during removal of organs. In this way, they may examine the organs, and may obtain biopsies for histopathological examination during surgery. We believe that preparation of stringent guidelines or new legal regulations are mandatory to incorporate the forensic cases into currently small cadaver donor pool in our country.

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