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Urgent Organ Retrieval from Non-Heart-Beating Donor with Declared Brain Death: Harvest at Arrest

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Abstract
Objective: Due to insufficient donor number to meet the needs of organ transplantation, new researches are ongoing. In this context, the cases with cardiac arrest and brain dead are assessed as probable donors in recent years. The aim of this study is to discuss the healthfully techniques of organs retrieval with minimum damage and maximum rapidity in conditions of our center and to present our own experiences.
Material and Method: A total 4 of 13 patients brain dead declared and developed cardiac arrest while awaiting for laboratory test results in our center between 2015 and 2016, were urgently taken into operation under external heart massage and urgent organ retrieval were performed. The clinical data of this specific group were analyzed.
Results: Thirteen donors with brain dead organ procurement were performed in our center between 2015 and 2016. Of the 13 cases, 9 had undergone urgent laparotomy and cannulation, and the organs were retrieved after in-situ cold perfusion and no problems occurred in these cases. However, in 4 cases who developed cardiac arrest ex-vivo cold perfusion was performed due to lack of facilities in operation room,vascular and paranchimal damage occurred in 2 livers and the 2 kidneys. With this technique, four liver and eight kidneys were removed and transplanted.
Conclusion: Urgent laparotomy, cannulation, and in-situ cold perfusion is ideal approach for shorter warm ischemia time and less organ damage in cadavers in difficult conditions such as sudden cardiac arrest in hospital, however ex-vivo cold perfusion technique should be kept in mind to meet the increasing of more and more organ needs.
Key words: transplantation, kidney transplantation, organ procurement, non-heart-beating-donor