Analysis of organ procurement time data

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Background: Organ arrival time varies a lot depending on the location of donor hospital and allocation of organs. As cold ischemic time have great effect on the prognosis of transplantation, all transplantation team should share expected organ arrival time. We need some tools of organ arrival time. So, we make the tool and we examine the tool with our hospital data.

Methods: In the case of donation only the liver and kidneys, the time from the start of harvest surgery to the departure time of the donor hospital was set at 3 hours. Donation of heart or lungs added 1 hour, pancreas added 1 hour, and split liver added 2 hours. Also, we added 1 hour if both heart and lung were harvested. The transport time was set at 1 hour in Seoul, Gyeonggi-do, 2 hours in Chungcheong-do and Gangwon-do, and 3 hours in Gyeongsang-do, Jeolla-do, and Jeju-do.

Results: From August 2019 to August 2021, the average time difference between the expected organ arrival time and the actual organ arrival time of 110 cases was 36.4 minutes, with 19 cases over 1 hour difference and no case over 2 hours difference. The reasons for 19 cases over 1 hour difference were transportation & location of donor hospital (seven cases), organ discard (four cases) natural disaster such as heavy snow (two cases), additional biopsy such as r/o cancer (three cases), and difficult operation such as adhesion (three cases).

Conclusions: These days, due to the COVID 19 situation, the number of brain death donor is decreasing and the work intensity of transplantation team is increasing. With the tool of organ arrival time, communication is expected better and smoother. We wish this tool helps progress of transplantation in this situation.

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