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Session Title : Lung transplant program in Asia

Korea

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Lung transplantation has been considered the last resort for patients with various end-stage lung diseases. Transplantation is mainly indicated for patients with refractory chronic lung diseases such as idiopathic pulmonary fibrosis, idiopathic pulmonary hypertension, and chronic obstructive pulmonary disease. In the 2021 OPTN report, the number of lung transplants has been rising in the recent decade. In line with this trend, the number of lung transplants in Korea also has been on the rise despite many hurdles like donor shortage, lack of public understanding, and steep learning curve. The steep rise in lung transplant cases has led to many issues and characters in the Korean lung transplant program. In this context, this lecture will introduce the lung transplant program in Korea and discuss the domestic issues of the current status of the program.

Since the first lung transplant in 1996 in Severance Hospital, Seoul, lung transplants have been sporadically conducted for the following decade. With the advent of extracorporeal membrane oxygenation (ECMO), critically ill patients with chronic end-stage lung disease could be bridged to transplantation. As ECMO has been getting popular, highly urgent cases of lung transplants had performed and increased. Considering the urgency-based lung allocation system in Korea, the popular use of ECMO for bridge-to-transplant led to a vicious cycle of high urgent transplants, donor shortage, and poor post-transplant outcomes. In this context, the National Institute of Organ, Tissue and Blood Management revised the lung allocation system to improve the performance of lung transplant in Korea. However, the revision did not fully affect the performance of Korean lung transplant program, in 2017. The rising cases of lung transplant and following severe donor shortage cause high waiting list mortality under urgency-based allocation policy. Recently, the revision of allocation policy to limit the waiting time on status 0, which is bridged to transplant has been adopted. In addition, the policy facilitating to find a presumed brain dead adopted to increase donor pool. Therefore, following changes in the performance of Korean lung transplant program is positively expected to decrease wait-list mortality, waiting time on list and finally 1 year mortality after lung transplant.