

Since the first successful lung transplantation reported by Toronto University Group in 1983, more than 70,000 lung transplants have been performed worldwide. In most of the Asian countries, lung transplantation has become an available treatment option. It is recognized as the last hope for patients with various end-stage lung diseases after failure of all current available medical treatments. Bed bound patients suffering from intolerable dyspnea may return to normal life after lung transplantation. They can walk, run, travel, and work. When we see such miracle recovery, we are convinced with the value of lung transplantation.

The lung is the unique organ which is directly connected to the outside air through airway. Furthermore, lung consists of various types of cells and carries high antigenicity, therefore, requires strong immunosuppression. It is for this reason that risk of infection is high after lung transplantation under immunosuppression. Despite aggressive immunosuppression strategy, nearly half of lung transplant recipients develop chronic allograft dysfunction in which no effective treatment has been established. Because of the above-mentioned obstacles, lung is known to be one of the most difficult solid organs for transplantation. A numerous number of investigators have made substantial efforts to improve the outcome after lung transplantation. Owing to their efforts, the prognosis after lung transplantation has improved slowly but steadily. However, it is true that long-term survival after lung transplantation remains to be inferior to other solid organ transplantations.

Another important unsolved issue is shortage of lung donor. In Asian countries, the number of brain-dead donors is limited due to various reasons such as religious reason. Marginal donors and living-donors have been used to expand donor sources. Regarding living-donors, Japan has the largest experience in the world. In USA and Europe, lung donation after cardiac arrest is now widely used in practice.

Meticulous postoperative management is mandatory after lung transplantation. In the early phase, primary graft dysfunction, various infections, acute rejection, airway complications are often encountered. In the late phase, chronic allograft dysfunction is the most important unsolved problem.

In this book *Lung Transplantation*, you will find up-dated medical and surgical information reported by experts from all over the world. The state-of-art knowledge contained within this book will help to find solutions for unsolved problems.



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