More than a quarter century has passed since the first report of a thoracoscopic minimally invasive esophagectomy (MIE) for the treatment of esophageal cancer. The introduction of MIE marked the beginning of a new epoch in esophagectomy. Because MIE has the potential to lower the morbidity and to enable a quicker return to normal function, MIE has been attracting attention as a less invasive approach and many surgeons have been interested in performing the procedure. By the late 1990s, several reports had demonstrated the safety and feasibility of the technique. After these exploratory investigations, reports from large-volume centers began to reveal improvements in the surgical results associated with MIE and have demonstrated that the results of MIE may be comparable with those for open transthoracic esophagectomy. Recent meta-analyses and randomized control trial comparing MIE with open transthoracic esophagectomy have shown that MIE is associated with a lower operative blood loss, a shorter intensive care unit and hospital stay, and a reduction in postoperative respiratory complications. Finally, it has become the first choice of surgical procedures for esophageal cancer around the world.

Although MIE is now popular and common procedure for esophageal cancer, it includes several different approaches: thoracoscopic, laparoscopic, mediastinoscopic, and robotic. Generally, thoracoscopic approach has been considered as standard procedure of MIE. However, some investigators demonstrated the advantages of laparoscopy-thoracotomy approach compared to laparotomy-thoracotomy approach, and some investigators carried out mediastinoscopic approach exclusively. Position of the patient; left lateral decubitus or prone position, is still controversial. MIE had been performed while the patient is in a left lateral decubitus position. Left lateral decubitus position requires the total collapse and retraction of the lung and also requires a special team consisting of an expert surgeon and an expert assistant. On the other hand, prone position does not require the manipulation of the lung, so that the incidence of respiratory complications might be able to decrease in a prone position. Prone position also gives us both excellent operative field and the better ergonomics of the surgeon's stance. Besides the approach and patient position, extent of lymph node dissection has not been solved, even in the MIE.

MIE has been initially started using laparoscopy and thoracoscopy, but in recent years many centers have started using robotic surgical systems, da Vinci surgical system. The recent advances in robotic esophagectomy have been astonishing, and several reports have demonstrated improvements in the procedure and the clinical results. However, the published reports describe a variety of techniques, and the oncological adequacy of the resection seems to vary widely. The apparent benefits of robotic esophagectomy for patients with esophageal cancer have not yet been confirmed. Given the very rapid advances in science and technology, it is no doubt that much easier-to-use and cost friendly instruments will appear in a near future.

In this book, Minimally Invasive Surgery for Esophageal Cancer, the experts from the world in the field of MIE will exhaustively discuss and review the MIE that includes robotic esophagectomy, approaches, implementation, and clinical outcomes. Current status of the MIE can be recognized by reading this book. We hope this book will help not only young surgeons but also the expert doctors to acquire the new knowledge about MIE.

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