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Terminology Issues in Thoracoscopic Surgery

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Thoracoscopic surgery is being increasingly performed in the field of general thoracic surgery. Most of the thoracic surgical procedures, including pulmonary resection [1], esophagectomy [2], and surgical treatment of other thoracic disorders [3], that used to be performed by thoracotomy can now be performed by thoracoscopic surgery. Thoracoscopic surgery is still an evolving surgical technique, and its role in thoracic disorders is becoming increasingly important.

However, it is also true that there is no rule for naming each type of specific modification of thoracoscopic procedures. Video-assisted thoracic surgery (VATS) lobectomy has been traditionally used as a term for lobectomy performed by thoracoscopy and video monitor guided surgery. Further, the term 'VATS' has been used as a generic name and prefix for all other minimally invasive surgical procedures in general thoracic surgery. However, whether the term 'VATS' appropriately describes thoracoscopic surgery and will be an adequate and adaptable term for naming future developments of new surgical technology has not been questioned.

In the early era of minimally invasive surgery, the concept of video-assisted surgery was very new and was included as a main feature in the category of minimally invasive surgery. However, currently, video-assisted surgery is not a representative feature of minimally invasive surgery because video monitor guided surgery is now also being used in open thoracotomy. Some surgeons use a hybrid technique for thoracic diseases, with the surgery partially done by the thoracoscopic technique and partially by the open technique. Therefore, the concept of 'video-assisted surgery' is no longer a representative concept of minimally invasive surgery.

The most important feature of minimally invasive surgery in the current era is endoscopic vision and the endoscopic surgical technique. Most of the benefits of minimally invasive surgery are due to the lesser degree of trauma to surgical entry sites and the preservation of skin, muscle, rib, and intercostal nerves. Further, 'video-monitor assistance' is one of the accompanying features of thoracoscopic surgery. Therefore, the concept of 'endoscopic surgery' should be included in the category of minimally invasive surgery.

The second issue related to terminology is about the definition of thoracoscopic surgery because in clinical practice, thoracoscopy is used as an adjunctive procedure in open surgery. Lobectomy performed by relatively small thoracotomy with thoracoscopic assistance has also been described in reports as 'thoracoscopic lobectomy.' Although spreading of the ribs has been suggested as an important criterion in denoting thoracoscopic lobectomy, it cannot be a definitive criterion for thoracoscopic lobectomy because some surgeons prefer resecting a segment of the rib when removing a large mass and temporary rib spreading is relatively common in difficult situations including tumor removal.

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Furthermore, some surgeons prefer performing the whole procedure with the naked eye through a small utility thoracotomy without rib spreading. Should we call them all ‘thoracoscopic lobectomy’ or not? This is a difficult question to answer.

Although it is difficult to formulate a new definition of thoracoscopic lobectomy, I think that we can suggest several features and requirements of thoracoscopic surgery. The first one is that the operation should be performed using thoracoscopic techniques. The surgeon should have the ability to perform monitor-guided operations; most of the techniques should be performed using endoscopic techniques rather than the open technique; and only a small thoracotomy wound should be made. The second requirement is that efforts to minimize chest wall damage should be made. Rib spreading or chest wall resection can be performed during thoracoscopic surgery for inevitable reasons; however, intentional spreading or cutting of the ribs, which can damage the ribs and the intercostal nerves, should be avoided. The last requirement is that all the operative methods to be performed during thoracotomy also be performed in thoracoscopic surgery. Incomplete minimally invasive surgery is not a true minimally invasive surgery. For example, mediastinal lymph node dissection should be performed completely as in thoracotomy. If this is not possible technically, conversion to open surgery can be justified rather than performing incomplete surgery.

Decades have passed since the beginning of thoracoscopic lobectomy, and this procedure has become one of the main surgical treatment options for many kinds of thoracic diseases. However, the unclear terminology and definitions for the procedure have been an obstacle for the education, communication, and outcome evaluation of thoracoscopic lobectomy. Better definitions and clearer terminology will be helpful for the future advancement of thoracoscopic surgery and for obtaining better outcomes for our patients.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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