Thoracoscopic anatomical segmentectomy for further advancement

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Anatomical segmentectomy for lung cancer is one of the most complicated surgeries.

As the author describes (1), thoracoscopic lung segmentectomy includes various types of procedures. Additionally, anatomy of the intra-lobar construction is different in every patient, and also oncological consideration is required for cancer surgery.

Segmentectomy requires complicated procedures and high-level skills even in open thoracotomy. Recently, many chest surgeons have challenged to more inconvenient thoracoscopic approach.

The author described his first manuscript concerning thoracoscopic segmentectomy in 2009 (2), and several has followed. He and his colleagues consistently prove that thoracoscopic segmentectomy is feasible, under many experiences, who are the most aggressive chest surgeons in Japan.

There have been many technical considerations published so far.

The author consists his own several knacks and tips in order to perform successful thoracoscopic segmentectomy. One is using 3D image by computed tomography (CT) angiography, which enables precise understanding the complicated individual anatomy of pulmonary vessels (3). Second is an effective use of energy devices and staplers. He uses energy device to divide intersegmental plane in the center of lung, referring intersegmental veins. On the other hand, endo-stapler is used in the peripheral lung. Third is a slipknot on the resecting small bronchus, which closes the resecting bronchus in a moment, while using inflationdeflation method to show intersegmental line (4).

I mostly agree with his policy because of good achieving the procedure securely. Especially, intersegmental division is the most variously discussed (5), and primarily, I agree with his procedure due to technical inconvenience of thoracoscopic segmentectomy.

The author also shows excellent video. His procedure is characterized by good view based on anatomy by 3D image, meticulous skills, unique usage of energy device and staplers, and successful result.

Segmentectomy aims to preserve better residual lung function and to obtain better quality of life (QOL). This is the same vector of less invasive thoracoscopic surgery.

So, lung segmentectomy had better be performed through thoracoscopy.

In Japan, requirement for operation procedure for cancer seems somewhat strict than other countries.

Comparatively in Asia, thoracoscopic segmentectomy seems better accepted, and even single incision segmentectomy is performed (6).

Above all, the importance of safe surgery due to precise and spatial understanding of anatomy cannot be overemphasized. And as a cancer surgery, no inferior survival outcome is necessary, as well as better postoperative QOL and less morbidity.

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Footnote

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