

## Training of Basic Surgical Technique

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It has become obvious that cancer is a genetic disease, and the reality of genetic disorders and the mechanisms of metastasis are being elucidated. The medical implication is the development of gene therapy to be the medical care of the 21st century, but it appears to be taking a long time before it is commonly used.

Lung cancer is a typical disease which is the hardest to treat among malignant tumors, and represents the highest rate of mortality in males, and is continuing to increase in Japan. It is correct to say that nowadays surgical excision is the first choice of treatment given the stage and pathological type of cancer.

On the other hand, selective treatment is conducted to reduce invasion and burden to the patient. A typical one is thoracoscopic surgery. Some active researchers think that video-assisted thoracoscopic surgery (VATS) will be made available in the field of respiratory organ surgery and conducted at a high rate in the near future.

Below is part of the respiratory organ surgery session in the consensus meeting held at the 100th Japanese Association of Surgery Meeting during this session, each theme was discussed by two speakers respectively and participants answered the same question about the choice of approach in; a) standard thoracotomy, b) small thoracotomy, and c) thoracoscopic surgery in small lung cancer surgery, before and after the speech. Answers to this question were 48% before and 47% after the speech respectively for approach a), 38% and 46% for approach b), and 14% and 7% for approach c). The initial uneasiness about VATS decreased after they listened to the influential speech. Although the question is limited, the answer reflects the current thought of respiratory surgeons. It is understandable that VATS has attractive merits such as being less invasive, less painful, a shorter hospital stay, reduced medical costs, etc. As for demerits, it has the issue of the radical cure of lymph node dissec-

tion, and the method of treating massive bleeding complications is not resolved.

When the result of standard surgery is regarded as “a” and that of VATS as “b,” the relationship between them is  $a \geq b$  from the viewpoint of the radical cure. The question is how it could be brought close to  $a = b$ . It cannot become  $a < b$ . As in the case of pulmonary tuberculosis surgery which has completely changed, there is a possibility that the subject of lung cancer operation will extend to the complicated diseases of bronchopulmonary fistula, bronchial cavitation, empyema, etc. as advanced medical treatment is performed in the future.

In regard to the surgical operation and procedures which are handled by the respiratory surgery department, there are many cases that require prompt procedure, quick decision, experience and habituation in treating atypical conditions of chest trauma and infection as well as in conducting thoracotomy for mediastinal tumor. We must firmly acquire basic surgical techniques.

However, in view of the characteristic of VATS where only surgeons are the main operators while others just watch a video, there is a concern that surgeons will not get enough hands on experience and get out of touch with basic surgical techniques. This does not mean to deny VATS.

Although the devices will become more user-friendly in the future as the technology progresses, it is obvious that it will not supercede the standard procedure. Subjects of VATS should be selective cases.

The important things for surgeons are to see the lesion with their own eyes, be hands on, decide the range of dissection and ensure anastomosis. Going back to this starting point, it is necessary for them to make efforts in putting much importance on the basics of surgical technique.

### Reference

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