The Complete Hilar-Mediastinal Lymph Node Dissection

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R. TSUCHIYA

Division of Thoracic Surgery
National Cancer Center Hospital
Tokyo, Japan

Cahan published "Radical Pneumonectomy for Lung Cancer" in 1950 and "Radical Lobectomy for Lung Cancer" in 1961. Cahan described the extent of hilar-mediastinal lymph node dissection with lobectomy according to the location of primary tumor. S. Ishikawa introduced the dissection proposed by Cahan. T. Naruke reported the results of patients undergoing pulmonary resection with hilar-mediastinal lymph node dissection performed by S. Ishikawa and his team. According to these results, T. Naruke made his map of hilar-mediastinal lymph nodes in 1974. The Japanese Lung Cancer Society (JLCS) introduced Naruke's lymph node map to distribute the standard hilar-mediastinal lymph node dissection. JLCS made a general rule of standard procedure of pulmonary resection and hilar-mediastinal lymph node dissection for Lung Cancer in 1980. E. Hata proposed the super-radical lymph node dissection for Lung Cancer. In the case of Lung Cancer located in the right upper lobe, upper mediastinum, subcarinal, interlobar and upper lobar lymph nodes should be resected according to general rule of JLCS. In the case of middle lobe, the same areas as those of upper lobe should be dissected. In the case of right lower lobe, in addition to the lymph nodes dissected in the case of upper or middle lobe, lymph nodes located in lower mediastinum should be dissected. In the case of left upper lobe, upper mediastinum except pre- and paratracheal lymph nodes, subcarinal, interlobar and lobar lymph nodes should be dissected. In the case of left lower lobe, in addition to the lymph nodes dissected in the case of upper lobe, lymph nodes located in lower mediastinum should be dissected. Super-radical dissection is performed for left Lung Cancer through the median sternotomy to dissect pre- and paratracheal lymph nodes.
Japanese standard hilar-mediastinal lymph node dissection proposed by JLCS and super-radical dissection will be presented with slides and video.

Abstract

Starting from Cahan's "radical pneumonectomy" and "radical lobectomy", mediastinal lymph node dissection was introduced in Japan by Ishikawa and survival results analyzed by Naruke. Japanese Lung Cancer Society (JLCS) introduced Naruke's lymph node map to standardizing dissection. Upper mediastinum, subcarinal, interlobar and upper lobar lymph nodes are to be dissected for tumors located in the right upper lobe, and the same areas in the case of middle lobe. In tumors of the lower right lobe, also nodes of the lower mediastinum should be dissected. When the tumor is in the left upper lobe, upper mediastinum (except pre and paratracheal lymph nodes), subcarinal, interlobar and lobar nodes should be dissected. Finally, in left lower tumors, lower mediastinum is to be dissected. Super-radical dissection is performed through a median sternotomy to reach pre and paratracheal nodes in tumors affecting the left upper lobe.
Key words: Lung cancer, mediastinal node dissection, super radical dissection.

Riassunto

La linfoadenectomia mediastinica venne introdotta in Giappone da Ishikawa sulla base delle tecniche di pneumonectomia e lobectomia radicale proposte da Cahan. I risultati di sopravvivenza sono stati analizzati da Naruke. La Società Giapponese Cancro del Polmone (JLCS) ha introdotto la mappa linfonodale di Naruke allo scopo di standardizzare le procedure di linfoadenectomia. Nei tumori posti nel lobo superiore destro, devono essere asportati i linfonodi mediastinici superiori, sottocarenali, interlobari e lobari superiori, così come per le neoplasie del lobo medio. A queste stazioni vanno aggiunti i linfonodi mediastinici inferiori quando il tumore abbia sede nel lobo inferiore destro. Per i tumori del lobo superiore sinistro, la dissezione riguarderà il mediastino superiore (escluso i linfonodi pre e paratracheali), sottocarenali, interlobari e lobari. Infine, per i tumori a sede inferiore sinistra, anche i linfonodi del mediastino inferiore dovranno essere asportati. Nell'approccio super-radicale a tumori posti nel lobo superiore sinistro, la dissezione delle stazioni pre e paratracheali si ottiene attraverso un accesso sternotomico mediano.
Parole chiave: Carcinoma del polmone, dissezione linfonodi, mediastinici, dissezione super-radicale.