Clinical value of ESTS guidelines on preoperative lymph node staging for NSCLC

In patients with non-small-cell lung cancer (NSCLC), mediastinal lymph node (LN) involvement is the most important prognostic factor and influences therapeutic strategies. Nowadays, several methods of mediastinal staging are available. In 2007, the European Society of Thoracic Surgeons (ESTS) published guidelines for preoperative LN staging for NSCLC [1]. According to these guidelines, invasive mediastinal staging is recommended in patients with positron emission tomography (PET)-positive mediastinal or hilar LNs. In patients with PET-negative LNs, invasive staging is recommended in computed tomography (CT)-enlarged mediastinal LNs (≥1.5 cm) and in patients with central tumours. Gunluoglu et al. [2, in this issue] very finely assessed the validity of these guidelines in 168 patients with potentially operable NSCLC. The prevalence of mediastinal LN metastasis was 29.2%, which is very representative for patients with potentially operable disease. In all patients, pathology of mediastinal LNs was available (mediastinoscopy 100% or thoracotomy 76%). Based on these data, the authors simulated the accuracy of the ESTS guidelines. When these guidelines were followed, unforeseen mediastinal LN disease was detected in eight patients (4.7%), the negative predictive value being as high as 94%. Their study well describes the results of invasive staging for the different indications as described by the ESTS guidelines. In patients with PET-positive hilar LNs, mediastinoscopy was positive in 25% of patients despite PET scan being negative on the mediastinal LNs. The positive predictive value of PET for mediastinal LN disease was 50%. This clearly illustrates the need for invasive staging of positive LNs on PET scan. The accuracy of mediastinal LN staging technique depends not only on the technique used but also on the completeness of intra-operative LN dissection. Unfortunately, either the technique of LN dissection or further details on complete respectability are not described in this article. In this study, all invasive staging techniques were performed by cervical mediastinoscopy. Data on complications of mediastinoscopy are not available.

In this study, invasive staging was always performed with mediastinoscopy. As described in the ESTS guidelines, less invasive techniques such as endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) and endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) can provide histology with less morbidity. If case of a negative result, they should be followed by surgical invasive techniques because the negative predictive value of invasive surgical staging technique is higher compared to EBUS or EUS-FNA. Implementation of these new techniques can reduce surgical invasive procedures by 68% [3]. The importance of mediastinal restaging after induction therapy is well known. Repeat mediastinoscopy and EBUS or EUS-FNA have a much lower accuracy compared to baseline staging [4]. Therefore, for primary staging, endoscopic staging techniques providing histology are more and more used preserving mediastinoscopy for restaging.

In conclusion, this study clearly validates the ESTS guidelines in preoperative LN staging for NSCLC. The negative predictive value was as high as 94%. In this study, mediastinoscopy was the technique used for invasive staging. Further studies need to prove whether similar results can be obtained when less invasive techniques are used.

References


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