Dr Haam: One lobe or two lobes in the right lung?

Dr Dusmet: I think it's a small issue and I'd rather the room have the opportunity to ask other questions. So let's move on, please.

Dr Y.T. Kim (Seoul, Korea): I am Dr Kim from Seoul National University, Korea. I'm working at a different institution from him. I have comments on the pneumonectomy with regard to adjacent lobe invasion. I had the opportunity to analyse our own data of those who underwent pneumonectomy because of the adjacent lobe invasion, and what I found is that the prognosis was dramatically poorer if the patient had a direct invasion into the other lobe. I think it's a very important point, and we may consider T2 as a T3 for that reason if it is invading an adjacent lobe. Those are my comments.

Dr A. Dokhan (Cairo, Egypt): You said that immediately postoperatively you had a high percentage of morbidity and mortality. What's your percentage of early mortality?

Dr Haam: After pneumonectomy?

Dr Dokhan: Yes.

Dr Haam: I don't know the exact ratio, but morbidity, about 5% and 10% occurred after pneumonectomy. Mortality is 2% to 3% after pneumonectomy.

EDITORIAL COMMENT

Revisions to the 7th edition of TNM for lung cancer: data are good but prospective data are better!

Peter Goldstraw

Department of Thoracic Surgery, Royal Brompton Hospital, London, UK, and, Department of Thoracic Surgery, National Heart and Lung Institute, Imperial College, London, UK

* Corresponding author. Royal Brompton Hospital, Sydney Street, London SW3 6NP, UK. Tel: +44-207-3518558; e-mail: p.goldstraw@rbht.nhs.uk (P. Goldstraw).

The 7th edition of the TNM Classification for Lung Cancer was enacted on 1 January 2010 [1]. The changes in this edition were the product of the International Staging Project of the International Association for the Study of Lung Cancer (IASLC) [2]. The database developed for this project contained over 100 000 cases of lung cancer, 20 times the size of that which had informed earlier revisions, and for the first time it included cases from around the globe, treated by all modalities of care. However, even this data source could not validate all of the descriptors which had been accumulated within the TNM classification over the previous 30 years. Indeed, many of the finer points of classification which were carried over into the 7th edition had little or no statistical basis but were established by consensus to ensure uniform use and to facilitate data analysis in the future. Invasion of the visceral pleura (VPI) has been a T2 descriptor since the 4th edition, published in 1987, and in the 3rd edition of the TNM Supplement: In A Commentary on Uniform Use [3], published in 2003, we are provided with the additional advice that a 'tumour with local invasion of another ipsilateral lobe without tumour on the visceral pleural surface should be classified as T2 also'. In the 7th edition the T2 category was split into T2a and T2b by the introduction of a new size cut-point of 5 centimetres. Hence, in the IASLC Staging Manual in Thoracic Oncology [4], published to accompany the 7th edition, the situation is clarified by the statement that a 'tumour with direct invasion of an adjacent lobe, across the fissure or by direct extension at a point where the fissure is deficient, should be classified as T2a unless other criteria assign a higher T category'.

The data provided in this edition of the journal by Haam *et al.* [5] is therefore to be welcomed, They retrospectively assessed the prognostic impact of direct invasion to an adjacent lobe in resectable non-small-cell lung cancer by comparing the survival of 46 cases with this feature with that of 499 T2a and 91 T2b cases, combined in the analysis into 590 T2 cases, and 201 T3 cases resected over the same 18-year period in a single centre in Korea. They conclude that direct invasion of an adjacent lobe should be reclassified as a T3 descriptor.

Is this sufficient evidence to make this change in the 8th edition? Unfortunately, no! In any retrospective database it is impossible to untangle the relative impact of multiple prognostic factors. We could not quantify the competing prognostic impact of VPI and the increasing size in our database of over 100 000 cases and it is unrealistic to expect Haam *et al.* to produce an unequivocal answer to another question of classification with 837 cases, of which only 46 had the feature under study. Whilst their series is larger than previous papers on this topic and more homogeneous by the exclusion of node-positive cases, the study groups remain heterogenous, conflating size with VPI, and other T2 and T3 descriptors such as the proximity of bronchial involvement, invasion of other structures and the extent of atelectais/obstructive pneumonitis. In addition, an internationally accepted definition of VPI was established only in the 7th edition [6] and one doubts if this feature was retrospectively reviewed by their pathologists. Significantly, there were far more pneumonectomies in the group with direct invasion and we know that this operation has an adverse impact on survival independent of stage. Indeed, the authors looked at this aspect in their study and in 154 pneumonectomies found no difference in the survival between the three study groups.

To properly assess the independent prognostic impact of each descriptor and to study their inter-relationships, we need a

detailed prospective study in which the presence and the absence of each feature is recorded. The IASLC Staging Project has initiated such a database [7] and any institution which wishes to contribute data towards future revisions of the TNM classification need only email to information@crab.org with 'IASLC Staging Project' in the subject line to automatically start a dialogue with our data centre. We hope that surgical colleagues around the world will continue to support this project.

Conflict of interest: none declared.

REFERENCES

[1] Sobin LH, Gospodarowicz MK, Wittekind C. UICC TNM Classification of Malignant Tumours, 7th edn. New York: Wiley-Liss, 2009.

[2] Goldstraw P, Crowley JJ, Chansky K, Giroux DJ, Groome PA, Rami-Porta R et al. The IASLC Lung Cancer Staging Project: proposals for revision of the stage groupings in the forthcoming (seventh) edition of the TNM classification for lung cancer. J Thorac Oncol 2007;2:706–14.

[3] Wittekind C, Greene FL, Henson DE, Hutter RVP, Sobin LH. TNM Supplement: A Commentary on Uniform Use, 3rd edn. New Jersey: Wiley-Liss, 2003.

[4] Goldstraw P. IASLC Staging Manual in Thoracic Oncology, 1st edn. Florida, USA: EditorialRx Press, 2009.

[5] Haam SK, Park IK, Paik HC, Kim DJ, Lee DY, Lee JG et al. T-stage of non-small cell lung cancer directly invading an adjacent lobe. Eur J Cardiothorac Surg 2012;42:807–11.

[6] Travis WD, Brambilla E, Rami-Porta R, Vallieres E, Tsuboi M, Rusch V et al. Visceral pleural invasion: pathologic criteria and use of elastic stains: proposals for the 7th edition of the TNM Classification for Lung Cancer. J Thorac Oncol 2008;3:1384–90.

[7] Giroux DJ, Rami-Porta R, Chansky K, Crowley JJ, Groome PA, Postmus PE et al. The IASLC Lung Cancer Staging Project: data elements for the prospective project. J Thorac Oncol 2009;4:679–83.